PN Course Review

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Introduction

This text has been developed to assist and prepare the prospective licensee to take the National Council for Licensure Exams for Licensed Practical Nurses (NCLEX-PN). The author has compiled various references that he has used in his healthcare experience as a clinician and nursing educator. The material presented in this text reflect the test plan outlined by the National Council on State Boards of Nursing (NCSBN)[[1]](#footnote-2) It is the authors strong assertion and desire top facilitate cohesion of nursing theoretical and clinical concepts, to help learners to become safe and effective nurses, and to pass the National Council for Licensure Exams for Practical Nurses (NCLEX-PN).

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# TEST TAKING SKILLS

# **Student3**

# Test taking strategies[[2]](#footnote-3)

The NCLEX-PN is designed to measure the graduate vocational nurse’s level of knowledge acquisition and ability to effectively and critically think in the context of nursing concepts and incorporate them into clinical application. In addition to theoretical knowledge the vocational nurse must also employ test taking skills to effectively answer questions. This review course incorporates helpful hints in taking the NCLEX-PN.

I. Test Taking is Important

A. It is a skill which can be learned and improved with practice

B. It is the manner in which to validate if learning has occurred

C. It can provide important feedback to the student

1. Identifies gap in knowledge

2. Points out test taking errors

II. Overview of Objective Test Taking Strategies

A. Will cover a variety of testing techniques

1. Multiple choice tests

2. True/False tests

3. Fill-in-the-blank tests

4. Standardized tests

5. General test taking tips

B. Goal of this presentation

1. To help the student become a more effective, efficient scholar

2. To make things easier for the student, not more difficult

3. To assist the student to build on skills they already possess

C. Remember

1. Test taking can be a game; you just need to know the rules!

III. Multiple Choice Tests

A. An excellent way to measure a student’s ability to apply knowledge

1. Primary type of questioning used in NCLEX and other standardized tests

2. This type of testing is used routinely in U.S. and Canada

a. Oral exams and essay exams are common elsewhere

3. This American phenomenon fits our democratic character

a. Eliminates possibility of bias/prejudice against the test taker for

misspellings, poor grammar or punctuation, and/or sloppy penmanship

b. Multiple choice, true/false, fill-in-the blank tests are more fair/”democratic” because only one answer should fit

c. Correct answer is there for all to choose, regardless of “race, creed, color,” penmanship, etc.

B. Some information about multiple choice tests

1. It is a learned skill and requires practice

2. Can be hampered by test anxiety

a. “I studied the material; what happened?”

3. Not born knowing how to take tests

a. It is an acquired skill, seldom intuitive

b. Most learn by trial and error

c. Serious “game”, but rules exist to help you “win”

4. Fallacy among educators

a. Teachers think if you participate in class, take good notes, and study you will do well on their tests – this is not necessarily true

i. When the teacher makes a multiple choice test question, they write the stem of the question and then places the correct response in a position of A, B, C, or D.

ii. The teacher then tries very hard to think of good “distractors” to complete the other option slots

iii. This process automatically becomes a very serious game, and the student should think of it as such

5. A four-option question give you a 25% chance of guessing correctly

a. Every time you are able to eliminate an option your chances increase – to 33% and then to 50%!

b. If you get it narrowed to two options

i. Go back to the question and make sure you understand exactly what it is asking or asking for

ii. Review each of the two options to see which one give you the exact answer

a. There will be a hint in either the question, the option, and sometime both that will lead you to the right answer

b. There is only one right answer to each question

1. Why is one option better than the other?

c. Learn the question characteristics and rules that will help you answer correctly

i. There are 19 multiple choice test taking skills that will help you become a better test taker

C. 19 Multiple Choice Test Taking Skills

1. Absolutes

a. These make “false” statements

b. Avoid using options that contain absolutes

i. In the spiritual world, absolutes exist; not in the physical, real world

ii. Teachers run out of good distractors and turn to forms of the absolute

a. When the teacher writes distractors, they can run out of ideas and take a perfectly good answer and add an absolute

b. This makes the option a false statement: it there is one exception, it is false

1. Absolutes imply that there are no exceptions

c. Words such as always, all, never, forever, only, must are absolutes and are clues that the option is not correct – so, skip over it

i. Remember, it is a game of odds, eliminating options that contain absolutes can increase your chances of getting a question correct

ii. Because you actually study the information, your odds are even greater

2. Qualifiers

a. These are words that wave flags at you saying, “Look at me, consider me carefully”

b. Words such as: *more, less, most, least, best . . .*

i. Example: She is a bright student, but is she the brightest student in the class?

a. She may or may not be

c. Clue: qualifiers often end in suffixes such as –er, -ier, -est

i. Such as prettier/prettiest or bigger/biggest

d. A qualifier can make an option either true or false

i. The whole item rests on the truthfulness of that one qualifier

e. Qualifiers force you to make a value judgment

f. Consider qualifiers carefully

3. Item Length

a. Can sometimes provide a helpful clue

b. Generally, an average length option is best because it does not stand out – it blends with the others

i. Teachers do not want the correct one to stand out too much

c. However, some teachers have a tendency to make the correct option longer in an effort to provide more information

i. When possible, review old tests for a look at a teacher’s style and particular habits

ii. If they routinely have the longest option as the correct answer, this can make it easier if you need to rely on a lucky guess on a particular question

4. Position of the Option

a. Correct answers are most often B or C on teacher-written tests

i. Knowing the answer, teachers are often hesitant to put it in the first or last position

ii. May also hesitate about dead-center on a five-option question – so, would avoid C when there are five options

5. Umbrella Option

a. This is the most inclusive option

i. The umbrella is a larger focus that covers the smaller details offered in one or more of the other options

b. Tricky because two or more options may be correct

i. The one that includes the other correct options is the best response

ii. The others just offer a portion of the correct answer

iii. Remember, on a multiple choice test, you must pick the best response

c. Not a guessing game, when several options seem correct; you must carefully discern which is most inclusive

6. Priority Questions

a. These questions define something that comes first or has the *highest importance*

b. Also considered “direction” words, which guide you to the correct response

c. As in the umbrella option, all responses may be correct, but which is the “first,” “last,” or “next,” etc.

d. Remember, a true statement may not be the correct option

i. It is only correct if it answers the question specifically

7. Negative Words, Prefixes, and Phrases

a. These change the direction of the question – you thought it was a multiple choice test and suddenly it becomes a true/false

b. You are placed at psychological disadvantage when asked to find the false option among four or five true statement/options

i. We are conditioned to look for the true response

ii. Must think clearly

a. As in algebra, two negatives can make a positive

b. If the question stem has a negative in it and an option has a negative in it – a positive and unviable option may result

c. If allowed to write in the test booklet, circle negative words to focus your attention on them

i. Next to each option, write whether it is “True” or “False”; “Right” or “Wrong”

d. Examples of negative words

i. Not, least, unlikely, inappropriate, unrealistic, lowest priority, contraindicated, false, except, inconsistent, untoward, all but, atypical, incorrect

e. Examples of negative prefixes

i. Un-, in-, im-, non-

f. Example of negative phrases

i. “you know that additional teaching is needed when the client states . . .”

ii. “additional information is necessary if the client selects which of the following . . .”

8. The “Different” Option

a. Look at the option that is different very carefully

i. That option will either be correct or incorrect

ii. If all the options cite grams except for one, which is milligrams, then go back to the question – what is it asking for?

a. If it asks for milligrams – you lucked out – the different option is correct

b. If it asks for grams – you know the milligram option is wrong and you must carefully discern which of the remaining three options is correct

iii. The teacher may think the different option is too obvious to be the correct answer

a. Test writer’s goal is to make the correct answer “blend in”

b. However, the opposite could be true

1. Again, pay very special attention to this situation

9. Don’t Look for Answer Patterns on Teacher-Made Tests

i. Do not be distracted by too many A’s in a row or not enough D’s

a. Teachers don’t take the time to do this with answer sheets

b. Not a reliable trick

10. Go with What You Know

a. All things equal, select the response you best understand

i. The tendency of students is to select the answer they do not understand

a. This is a greater possibility when the material is not thoroughly known

b. Sometime think, “I don’t know what this is so, it must be the right answer.”

c. Have faith in yourself

1. Go with your gut

2. Trust that you know what you know

b. Teachers try to be fair and not deliberately tricky – in general, they want all options to be viable

c. In general, do not be enticed by an option that is foreign to you

11. Take the question at face value – it is what it states – no more and no less

a. Do not “read into” a question

i. One of the greatest, gravest errors among test takers

b. Do not personalize the question

i. Huge mistake to think, “When I took this medicine . . . “or ‘My patient . . .” or “My mother has these symptoms with this disease . . .”

c. Be careful about assumptions

i. If the question does not give you the information, it is not known

d. Do not think the instructor is trying to trick you

i. They are just trying to measure whether you know the material

ii. The nature of a multiple choice test can just seem tricky

e. Rule of thumb: aim for taking 1 minute per multiple choice question

i. Longer than this and you may be reading into the question

12. Trust Yourself

a. Perhaps the most valuable test taking tip

b. If studied, taken good notes, annotated your textbook – you know more than you think you do

i. Trust that you know what you know

c. Even men can have “woman’s intuition”

i. Go with your gut feeling

d. Most of what we know (eight-ninths, or nearly 90%) is at a subliminal level

i. Like an iceberg, mostly submerged or under water

ii. We have to put things in the subconscious in order to concentrate on any one thing, at any given moment

iii. Cliché’s like putting something on the “back burner”, “out of sight, out of mind,” or Scarlett O’Hara’s method of putting off her worries until tomorrow – these things, just like knowledge, just don’t go away

iv. “Moment of awareness” relates to memory

a. When you process information, amino acids etch that on brain cells, where it is stored forever; nothing else will be written on that brain cell

e. Don’t talk yourself out of an answer

i. And, never change answers unless you are absolutely certain that it is wrong!

13. Pace yourself

a. Allow, roughly, one minute per question

i. Make sure that you read the entire question and all the options thoroughly

b. Look at the number of question and then divide your time

i. Mark the halfway point of the test as a visual clue

ii. Wear a watch and be alert to the progression of time

c. You must finish the test

i. However, do not rush

ii. If you have an hour, plan to use all of that hour

iii. Do not be distracted by other students finish before you

a. Everyone works at their own speed

b. The first person done is not necessarily the best student

1. They may finish first because they do not have the answers

iv. It is better to hand your paper in last and get an A!

d. Remember, the questions at the end may be as easy as the questions at the start of the test

i. Instructors do not deliberately write questions in graduating order of difficulty

ii. Sometimes, however, they will kindly place an easy question or two at the beginning to help you relax

14. Penalty for Guessing

a. An educated guess is better than no guess at all

i. At the very least, you have a 25% chance of guessing correctly

b. Test instructions will tell you if there is a penalty for guessing

c. Questions at the end of the test are worth as many points as the others

i. Allow equal time for all questions

d. Record an answer for every question (even fill-in-the-blank)

i. May get you at least partial credit

e. And again, do not go back and change answers

i. First hunch or intuition was probably right – trust yourself

ii. Approximately 3 out of 4 times, you will change it to the incorrect response: reading into the question and second guessing yourself.

15. Dealing with lengthy selections such as long paragraphs or case studies

a. Read the stem(s) or the question(s) first but, do not look at the options at this point

i. You need to know the reason for reading the passage

a. Does it provide important information?

1. If so, underline it or make special note of it

b. Do you know exactly what the question is asking you?

1. Cut through all the extra information and rephrase a shorter, more precise question if you can

c. This will provide you with improved comprehension

b. Allow your subliminal knowledge to come into play

i. Formulate some idea of the answer(s) you are look for

ii. Seek the correct answer among the options

c. This process saves time

i. You will need to refer to the passage less frequently when answering the questions

16. Challenging options/answers

a. Don’t get emotionally involved in the test, a question, or how it is written

b. The question is not meant to evoke an emotional response in you

i. However, if it did, you may want to voice a specific criticism or concern to the instructor after the test

c. Do not try to evaluate a teacher’s reason for asking a specific question

i. The teacher obviously feels that the question will enable them to measure some element of knowledge in their students

d. Do not challenge the teacher because you do not agree with their selected answer

i. Causes defensive reactions

ii. Questions should be asked professionally

a. Allows your opinion to be heard

b. May or may not sway the teacher’s decisions

iii. Remember, the teacher has already passed his/her exams

a. Your focus should be on learning not on judging or evaluating the teacher’s test

17. Read all the options before deciding on an answer

a. Umbrella options may exist

i. One answer will be inclusive

b. Question may ask for a priority

i. Will need to recognize the first or most important option

c. Will help identify a “different” option

i. Will need special consideration

d. Will help remind you if you are looking for a negative stem answer

i. If there are too many right options you may need to make sure your focus is correct

a. Can only be one right answer to a question

18. Write legibly

a. Use capital letters when required – eliminates confusion

b. Make choices clear – no need to play games

D. Approaching the Multiple Choice Question/Test

1. Look at the questions one at a time

a. If you honestly do not know the answer

i. Mark the question clearly and move on

b. Answer all the questions you know

i. Go back to the marked questions and concentrate on them

* Look for hints; circle key words, rephrase the question if necessary

ii. You will feel more confident because of all the questions that you were able to answer

* Helps to reduce stress and anxiety
* May have found a hint in the test that helped to jog your memory

2. Hint of caution

a. If you are using a “fill in the bubble”, make sure you leave the skipped question space unmarked

E. Testing Hints Specific to Nursing Exams

1. Remember to use the concepts related to nursing when answering multiple choice questions on a nursing exam

a. Consider the ABCs (airway, breathing, circulation)

* Airway always takes priority

b. Utilize the Nursing Process

* Assessment, planning, implementation, evaluation

a. Need to be considered in this order

b. Do not give an evaluation answer to an assessment question

c. Safety is always an important issue

* When considering care choices, safety is always a priority

d. Be sure to identify who your client is (who the question is about)

* It may be the patient, a family member, or a health care giver

e. Maslow’s Hierarchy of Needs

* Plays a huge role in when interventions are appropriate

a. Cannot teach a client about self-care if they are concerned about their safety

b. A client is not concerned about their safety if they cannot breathe

f. Therapeutic communication questions

* Very difficult
  + a. Many of the correct options do not sound like what you would personally say
  + b. Analyze each option and determine if it is something you would not say and why not
    - 1. Be especially aware of statements that are judgmental, offer false hope, do not address the client’s concerns, or avoid the client’s needs

g. Think like a nurse

* Ask yourself, “What would a nurse do?”
* Ask yourself, “Why?”
  + Why is a particular answer either right or wrong?
* Helps to develop the critical thinking skills so important in nursing

2. Alternative Questions

a. Beginning to show up on many standardized tests and NCLEX

b. Purpose

* To test the knowledge of the student while minimizing the possibility of guessing correctly

c. Examples

* All That Apply questions
  + Student is asked to select all the options that apply correctly to the question
    - Must strongly consider each option as a possible answer
      * May need to ask if each option is either a “yes” or “no” or “true” or “false” answer
      * If a correct option is not selected, the answer is considered wrong
* Fill In The Blank
  + a. This will most likely involve the answer to a math question
  + b. Measures the student’s ability to perform a math function independent of 4 hints which can assist in guessing
  + c. Be sure to write the answer clearly, in block-like numbers
    - 1. If the question wants to know how many milliliters, do include the ml. in your answer – just the number – and do not use another abbreviation such as cc
* d. If the answer is a word, just print the word in clear, block, capital letters
* Designate the Spot or “Hot Spot” questions
  + a. Student will need to designate with an “x” on a diagram/picture, the spot the question is asking the student to locate
  + b. Be as precise as you can, the correct answer must lie within a designated parameter
    - 1. Hopefully, only poorly marked answers will be counted wrong
    - Computerized Testing

a. NCLEX is now completely computerized

b. Many standardized tests are also computerized in effort to provide students with experience with this type of testing

1. Must learn a few new test taking strategies

a. Cannot mark key words, phrases, etc. on the test question

* Must practice reading test questions carefully
* Make sure you know what the questions is asking
* Pay special attention to the test taking strategies discussed earlier in this session
* Practice taking as many questions and/or tests on the computer in preparation for this experience

a. Cannot mark out wrong answers

1. It may help to keep track of possible correct answers on your fingers

* If you think option “A” is possible, put up one finger on your left hand
* If you think option “D” is also possible, put up four fingers on your right hand
* Only go back and consider only those two options

2. Again, practice, practice, practice

Cannot go back to questions that you are unsure of and answer them later

* Give each question your complete attention and your best shot

3. If you truly do not know the answer, go with your gut or make the best educated choice you can

4. Preparation to avoid this problem is to make sure that you study and review!

* Must become use to a new test taking “posture”

1. If you have taken only pencil-paper tests, you are accustomed to posturing in a head down position and reading material from a flat surface

2. On a computer, you must learn to sit upright and read from a vertical screen

a. Some people actually find that they will initially have some difficulty with this change

3. Solution is to do as many computerized questions and practice tests as possible

4. Practice takes long practice tests so that you acquire some stamina

a. Like training for a marathon

* True/False Tests

A. Critical to watch for negative words or prefixes

1. Look for the negative words that focus or structure the question

a. As in algebra, two negatives can make a positive

b. Example: “John is not the boy I do not like”

2. If able to write on the test, circle the negative work or prefix to help concentration

3. Finally, decide if the statement is true or false

B. Item length is important to consider

1. Longer items tend to be true

a. The instructor tries to cover all bases to avoid argument

b. Doesn’t want to leave anything out

2. Shorter items tend to be false

3. Average length items are “up for grabs”

4. Please note, and individual teacher’s pattern or style may prove opposite to this rule of thumb

C. Use capital letters

1. Eliminates guessing and scoring error

2. Do not want to frustrate your teacher and jeopardize your grade

3. Better to use block letters, not cursive – and don’t get fancy

D. Watch for qualifiers

1. Words such as more, less, last, first, etc

2. Qualifiers suggest direction and should provide focus

3. Qualifiers help to establish the truth or falsity of a question –question hands on these words

E. Watch for absolutes

1. Absolutes are signal words; they establish a false statement

2. Example: Students always take good notes. Always? True or false?

* Matching Questions

A. Used on definition, vocabulary, or identification test

B. Learn to handle these in less time

1. You can save time for more consuming multiple choice or essay questions

C. Give consideration to the item length the longer entries

a. Usually, the shorter entries are on the left

b. Longer entries are usually the definitions are on the right

c. This placement is probably out of habit and has no special significance

D. Put your finger on the first lengthy item

E. Scan down the column with the shorter items because you can review them much more quickly

F. Mark your item or response

G. Put your finger on the second item in the long column and repeat the process

* If the match is not found

1. Skip to the next long item

a. Eventually you will find the match through the process of elimination

2. Don’t waste time by going up and down the list repeatedly

* May be helpful to group items in the columns by topic to reduce the number of viable choices
* Standardized Tests

A. Printed by professional publishers

* + - 1. Have been evaluated in terms of reliability and validity

B. Read all the instructions carefully

1. Be sure you understand the instructions

a. They may actually change with each section of the test

b. If you miss a directive such as “do not guess,” you may be doomed

C. Read the question carefully, and read all possible options before recording your answer

D. Don’t challenge/quarrel with a question and waste time

1. Just react to the question with your best possible means

2. Use the test taking strategies we discussed earlier

E. Questions are not organized in graduated order of difficulty

F. Assess the number of questions and average the amount of time you have per question

1. Mark the center of the test and the time at which you should be there

G. Trust yourself and your intuition

H. Don’t be an “artist” when filling in an answer sheet, or bubble

1. Don’t darken the space until it’s absolutely black

a. Shown that you can waste as much as 10% of the allotted time just completing the answer sheet

2. Likewise, don’t just sketch it in

a. Mark very firmly, precisely, then move on

* Most often these are computer scored

3. Use a dull pencil, not a sharp one

* Broader point is more efficient/time saver
* Attempt to wear down the point on scratch paper before the test begins

I. Option length

1. The average length is still best when you are unsure of the correct answer

2. Pay special attention to that “different” or “odd” option

a. If it is definitely not correct, choose carefully among those that blend or are similar

b. Careful because this can actually work in either direction

J. Option position and/or frequency of computer tests

1. Correct answers are distributed randomly to ensure even distribution

a. Thus, B or C should not be correct more often than the other positions

* Ideally, A will be correct 25% of the time, B 25% of the time, and so on . . .
* Analyze Your Test Performance

A. After the test, if there is an opportunity to review, try to figure out why you missed the questions

1. Did you not know or recognize the material?

a. Need to study more

2. Did you not understand the rationale or use the wrong rationale?

a. Need to ask yourself “why”

b. Think like a nurse

c. Improve critical thinking skills

* + - * + Read all the rationales for all the options for the questions if you study from a NCLEX Review book

3. Did you miss key words, not read the question or options carefully, or change your answers

a. Work on improving your test taking skills

B. This exercise will help your recognize what you are doing wrong and direct you toward making positive changes

C. This analysis can be performed on practice tests/questions to strengthen your test taking ability before an exam

1. Practice, practice, practice!

* Other Tips for Test Success

A. NCLEX Review books with rationales for all distractors and/or old tests (when available) are helpful study tools

1. Help to formalize the content and desensitizes you to testing

2. Change the questions around – substitute the word “best” for “worst,” “first” for “last”

a. Gets more bang for your buck

3. Be sure to read all the rationales for all the options in NCLEX Review books

a. You learn as much from why an answer is wrong as you do from why it is right

B. Participate in a study group for different perspectives on content

1. Be selective about the members of the group

a. Members should share a similar frame of mind and orientation about studying with you

b. Ideal number of participants is four to six

i. Larger groups are difficult to manage

c. May need to ask a difficult group member to leave

d. Have each group member prepare a particular section (or questions) for each session

i. Generally, meet once or twice a week

ii. Prevents, What-are-we-going-to-study-tonight syndrome

iii. Ensures more organization and in-depth study

iv. Encourages questions, thereby reinforcing content

2. Limit length of study session – and stick to it

a. Long sessions should be broken up with short breaks every 45 to 60 minutes

C. Management of Test Anxiety and/or Stress

1. May use controlled breathing and imagery (must be practiced)

a. University of Georgia researchers have found that people felt more alert and relaxed when they thought about a recent positive outdoor experience than when they followed a meditation tape

b. Take what I call a “Ten Minute Vacation”

* + - * + Sit in a comfortable position with your feet on the floor
        + Pretend that a string has been painlessly attached to the top of your head to hold you upright
        + Close your eyes and take several deep breaths

1. Each time you exhale, let your body become more and more relaxed
2. Now picture yourself standing at the top of a staircase and with each breath – as you exhale, step down a step and relax – starting with 10 until you reach the bottom
3. Visualize that you are walking through a door and into a beautiful meadow --- Or any place that makes you feel calm and relaxed.
4. Visualize yourself successful

c. Some students like to use the above methods to see themselves taking the test

* They visualize themselves answering the questions without problems
* And finishing the test on time and without distress
* And of receiving a good grade in the end

2. Positive self-talk will help boost confidence

a. What we say to and think about ourselves can be a self-filling prophecy

i. Therefore, we must not say negative things to ourselves

ii. Instead, concentrate on how well prepared you are, on how much of the material you know, about how much time you have put into being successful

iii. Look at yourself in a mirror

a. Looking straight in your eyes, say positive things about yourself and your preparation for the test

b. Gives you a positive boost and helps diminish self-doubt

3. Controlling test anxiety during a test

a. What happens

i. You become tense

a. You grip your pencil tightly, you begin to hunch up your shoulders and tighten the muscles in your neck, shoulders, and back

ii. Negative thoughts begin to creep into your head

iii. You loose your focus and concentration

* What to do?
* Put your pencil down and close your eyes
* Take several deep breaths while letting your arms hang at your sides

1. With each exhalation, think about relaxing your entire body – use that invisible string attached at the top of your head to hold you up like a rag doll

iv. Think positive thoughts

a. Remind yourself about how well prepared you are

b. Remember that this test is your chance to prove what you have learned

c. If it was a difficult question that caused your panic, remind yourself that you don’t have to be perfect, just do your best

1. Give yourself permission to “miss one”

2. Give yourself permission to skip a question and come back to it later

v. Pick up your pencil and refocus on the test

4. Best way to avoid stress is be prepared

a. Don’t cram

5. Have a diversion from the content and study routine

a. Plan a little time for exercise, social events, or quality family time

i. But, don’t get careless – PLAN this time carefully

* Night Before a Test

A. No movie

1. Especially one that could cause emotional distress

B. No exotic food

1. Not a good time to be sick or suffer from GI upsets

C. Review the key concepts, formulas, lists, etc

1. the major studying should be complete

D. Get to bed at a reasonable hour

1. Rest does not equal sleep

2. Do not take sleep aids

a. May result in feeling fuzzy in the morning

3. Shut your brain off before bedtime

a. Do not study right up to the last minute

b. Read something light so that you are not “studying” all night

4. Plan your wardrobe and your morning routine so that you can relax and sleep

* Day of the Test

A. Eat breakfast

1. Select foods high in protein and complex carbs

2. Avoid caffeine and foods high in sugar

3. If you have special metabolic problems, be prepared

a. Diabetics and/or hypoglycemics may need to get permission to have food available during a test when anxiety can complicate their condition

* Select high protein and complex carb snacks
* Peanuts, peanut butter and jelly sandwich on whole grain bread, cheese sticks, etc.

b. Avoid excessive intake of your special diuretics

* + - * + Nothing can distract you more during a test than a full bladder
        + Bathroom trips burn up test time and disrupt your concentration

C. Arrive early

* Prevents feeling rushed
* Gives you a cushion of time in case of an unexpected delay

D. Wear a watch

E. Avoid changing your answers – trust your intuition

F. **Be confident -- you studied!**

1. If you feel anxious, lay your pencil down, close your eyes, take a couple of deep breaths and talk positively to yourself

a. Will help to regain your confidence and focus

* Conclusion/Summary

A. Three most important reminders

1. Be prepared

a. Plan Your Work and Work Your Plan

2. Trust yourself and your intuition

a. Trust That You Know What You Know

3. Don’t read into the question

a. The Question Is What It Is

B. Look forward to the test!

1. It’s an opportunity to show your knowledge and to practice your test taking skills

2. Every successful test puts you one step closer to your career goal

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BASIC CLINICAL PHARMACOLOGY[[3]](#footnote-4)

Basic Principles of Pharmacology

A. General Information

1. Use of both trade and generic name- meperidine hydrochloride (Demerol)

2. Test on side effects, nursing implications and pharmacologic effects

*a) focus on commonly used medications, not obscure ones (i.e. Lasix,*

*Digoxin)*

*b) side effects focused on untoward effects*

*c) nursing implications: vital signs for particular medications,*

*dietary considerations, contraindications*

*d) desired effect and evaluation of effectiveness of medication-should*

*dose be changed*

3. Calculation

*a) may have to figure dosages, convert from one system to another*

*b) may have to figure IV drip rate*

*c) may have to determine Pediatric safe dose*

B. Assessment of variables that affect action

1. Amount of dosage- higher doses tend to produce faster actions

2. Route of dosage- which is most rapid

3. Medication/diet- interactions can affect actions in positive or negative ways

4. Concurrent medication use- interactions can enhance or block actions

5. Age — can affect actions hi positive or negative ways; compare geriatric

with pediatric

6. Weight — smaller body tends to produce faster action

7. Body build - gender differences may produce differences in actions due to

size and composition of body mass

8. Pregnancy - effects on mother and baby both may be altered

9. Pathologic conditions- damage to organ systems may produce greater or

lesser effects

C. Implementations

1. Irritating medications- may be dissolved, diluted, or given with food

2. Distasteful

a) can be given with food to disguise (must tell client)

b) can be given after client numbs mouth with ice

c) refrigeration often masks taste

3 Difficulty swallowing

a) Crush the medication and add to a small amount of food or liquid

(must tell client)

b) Cannot crush enteric-coated medications since it alters absorption

4. Reduce discomfort of injections

a) Use sharp needles for injections — use visual inspection

b) Use appropriate gauge needle - match consistency of medication

to size

c) Sites must be appropriate - free of scars, bruises, nodule

d) Holding skin taut reduces pain on entry

e) Relaxed muscles are less sensitive to injection and pain

**CENTRAL NERVOUS SYSTEM MEDICATIONS \***

1. ANALGESICS

**Narcotic** *-* (i.e. Morphine sulphate)

a) Effects: reduces fear and anxiety, induces sleep, depresses

respiratory and cough centers, inhibits gastric secretions,

hypotensive effects

b) M.SO4 contraindicated in head-injured clients because it masks

diagnostic signs of pupillary response

c) Harrison Narcotic Act - first Federal Act designed to prevent abuse

of Narcotic drugs

**Non-narcotic** - prescription and over- the- counter

a) Aspirin - GI irritant*,* tinnitus , anticoagulant properties.

2. SKELETAL MUSCLE RELAXANT: drowsiness side effect

a) Baclofen, carisoprodol (Soma), diazepam (Valium), methocarbamol

(Robaxin)

3. ANTICONVULSANT- client teaching very important.

Phenobarbital **(SODIUM LUMDVAJL ): PO,** IM, IV, rectal

Primidone (MYSOLINE ): PO

SE: drowsiness, ataxia, excitation in children and in elderly.

NURSING IMPLICATIONS:

**1. client** should avoid potential hazardous activities requiring

mental alertness.

2. sudden withdrawal may precipitate symptoms.

3. close observation of response in children and elderly.

4. used to treat grand mal and focal seizures.

Phenytoin (DILANTIN): PO, IV

SE: gingival hyperplasia, skin rash, hypoglycemia

visual changes: nystagmus, diplopia, blurred vision,

dysrythmias.

NURSING IMPLICATIONS:

1. administer PO preparations with meals or milk to decrease

gastric irritation. •

2. frequently used with Phenobarbetal for control of grand mal

seizures.

3. IM injection not recommended.

4. do not mix with any other medications when administering IV

solution.

5. promote good oral hygiene.

4. SEDATIVES AND HYPNOTICS- calms and reduces anxiety

a) Elderly clients may require smaller hypnotic doses; sedative may be

enough.

b) Do not administer shortly before or after giving a narcotic

c) secobarbital ( Seconal), fhirazepam (Dalmane), temazepam

(Restoril), triazolam (Halcion

5. ALCOHOL

a) Causes sedation, disinhibition, anesthesia, vasodilation, GI irritation

b) Need careful client assessment due to risk for medication

interactions or injury

c) Withdrawal signs and symptoms: tremors, anxiety, diaphoresis,

anorexia, insomnia, seizures, hallucinations

6. CHOLINERGIC (anti-cholinesterase); Intensify transmission of impulses

throughout the CNS, where the acetylcholine is necessary for transmission.

Neostigmine bromide **(PROSTIGMIN ): PO,** SQ, IM

Pyridistigmin bromide (MESTEVON): PO, IM, IV

Edrophonidium chloride **(TENSILON ): IM,** IV

SE: excessive salivation, increased GI motility, urinary urgency,

bradycardia, visual problems.

NURSING IMPLICATIONS:

1. primary group of medications used for treatment of myasthenia

gravis.

**2. Atropine** is the antidote treatment for overdose.

3. In treatment of myasthecic gravis, medication is frequently

administered 30 to 45 minutes prior to meals.

**4. MESTINON**: PO, IM. IV- is given for maintenance of the

myasthenia client.

**5. TENSILON** is utilized for diagnostic purposes; not recommended

for maintenance therapy.

6. teach client symptoms of side effects and advise them to call the

doctor if present

7. ANTI-PARKINSONAGENTS

ANTI-CHOLINERGIC: decreases synaptic transmissions hi CNS.

Benztropine mesylate **(COGENTEV ): Pt),** IM, IV

Trihexyphenidyl hydrochloride (ARTANE): PO, IM, IV

Procyclidine **(KEMADREV**): PO

SE: paralytic ilius, urinary retention, cardiac palpitations, blurred vision,

nausea and vomiting, sedation, dizziness.

NURSING IMPLICATIONS:

1. administer PO preparations with meals to decrease gastric irritation.

2. medications have cumulative effect.

3. should not be used in clients'with glaucoma, myasthenia gravis, GU

or GI tract obstruction, or children under 3 years old.

4. monitor client carefully for bowel and bladder problems.

5. may be used to treat side effects of Thorazine.

8. DOPAMINERGIC: assist to restore normal transmission of nerve impulses.

Levodopa (L-DOPA, LARODQPA): PO

SE: Early: anorexia, nausea and vomiting, abdominal discomfort, postural

hypotension.

**Long term:** abnormal, involuntary movements, especially involving the

face, mouth and neck; behavioral disturbances involving confusion,

agitation, and euphoria.

NURSING IMPLICATIONS :

1. administer PO preparations with meals to decrease GI distress,

2. almost all clients will experience some side effects which are dose

related; dosage gradually increased according to client's tolerance and

response.

3. onset of action is slow; therapeutic response may require several weeks

to months.

4. Vitamin B6 (pyridoxine) is antagonistic to the effects of the medication;

decrease client's intake of multiple vitamins and fortified cereals.

Carbidopa/Levodopa **(SINEMET ):** PO

SE: same as for Levodopa

NURSING IMPLICATIONS:

1. same as for Levodopa.

2. utilization of carbidopa significantly decreases the amount of Levodopa

required for therapy.

3. prevents the inhibitory effects of Levodopa on vitamin B6.

Amantadine hydrochloride (SYMMETREL): PO

SE: orthostatic hypotension, dyspnea, dizziness, drowsiness, blurred vision,

constipation, urinary retension (side effects are dose-related).

NURSING IMPLICATIONS:

1. less effective than Levodopa; produces a more rapid clinical response.

**RESPIRATORY MEDICATIONS**

1. ANTI-HISTAMINES -blocks histamine release at HI receptors.

Diphenhydramine HCL **(BENADRYL** ): PO, IV, M

Clemastrne **(TAVIST**): PO

Chlorpheneramine **(CHLORTRIMETON ): PO**

Lorataduie **(CLARTTIN): PO**

Terfenadine **(SELDANE ): PO**

SE: sedation, dysrhythmias, dry mouth.

NURSING IMPLICATIONS:

1. used to treat mild allergic disorders.

2. Loratadine and terfenadine are non-sedating.

3. antihistamines should not be taken during the third trimester of

pregnancy.

4. may be found in numerous OTC combination medications.

5. due to excessive drying effect, asthmatic clients should take medications

only on recommendation of physician.

6. Seldane should not be taken with the macrolide antibiotics or the "azole"

family of antifungals.

*2. DECONGESTANTS:* produces decongestion by acting on sympathetic nerve

endings to produce constriction of dilated arteries.

Ephedrine hydrochloride (BRONKOTABS, TENDRAL, MINI-THINS):

PO.

SE : tremors, tachycardia, palpitations, nervousness, headache,

GI upset

NURSING IMPLICATIONS:

1. caution client regarding use of OTC medications (cough syrup, cold

Medication, & allergy medications) as ephedrine is a common ingredient in

all of these.

2. cardiac and hypertensive clients should check with their physician prior to

taking the medication.

3. may be abused by people seeking the increased CNS stimulants

Phenylephrine hydrochloride (SINEX, NEOSYNEPHRINE, RHEVALL,

SINAREST, NASAL ): PO, SQ, infra-nasal.

SE: increased blood pressure, tachycardia, palpitations, trembling, light

headedness.

NURSING IMPLICATIONS:

1. with infra-nasal preparations, rebound congestion may occur.

Phenylephrine PO, nasal aerosol spray (SUDAFED )

SE: CNS stimulation, anxiety, insomnia.

NURSING IMPLICATIONS:

1. will cause rebound congestion; caution clients to limit use of aerosol nasal

spray to 3 to5 days.

2. medications are frequently found in OTC combination decongestants.

**3. EXPECTORANT:** stimulates secretions. Reduces the viscosity of the mucus

Guaifenesin ( ROBITUSSEN): PO

SE: nausea, GI upset.

NURSING IMPLICATIONS:

1. increase fluid intake for effectiveness.

**4. ANTITUSSIVES** - suppresses cough

**5. *MUCOLYTIC***-facilitates expectoration

***6. BRONCHODILATORS*** *-* relax smooth muscle of the bronchi promoting

bronchodilation and reducing airway resistance. Also

inhibits the release of histamine.

**GENERAL NURSING IMPLICATIONS**

\* Metered doge Inhalers (MP) - hand held pressurized devices that

deliver a measured dose of drug with each "puff". When two

"puffs" are needed, one minute should lapse between the two

"puffs". A spacer may be used to increase the delivery of the

medication.

\* Bronchodilators- Beta 2 agonists and theophvlline are given with

caution in the cardiac client, since tachydysrhthmias and chest pain may occur.

\* Aerosol delivery systems have less side effects and are more

effective.

*Common side effects*: dysrhythmias, tachycardia and ventricular

fibrillation, hypotension, nausea and vomiting, CNS irritability,

insomnia, headaches.

1. Epinephrine (ADRENALIN): aerosol, SQ, IV

SE: headache, dizziness, hypertension, tremors, dysrhythmias .

NURSING IMPLICATIONS:

1. do not use in clients with HTN or dysrhythmias

2. primarily used to treat asthma attacks and anaphylactic

reactions.

2. Theophylline **(AMINOPHYLLINE): PO,** rectal, IV

SE: tachycardia, hypotension, nausea/vomiting, seizures.

NURSING IMPLICATONS:

1. theophylline blood levels should be drawn for long term use;

therapeutic levels between ***10-20 meg/ml; above 20mcg/ml***

are toxic.

2. IV administration may cause rapid changes in vital signs.

3. BETA-2 AGONIST: Albuterol **(PROVENTIL, VENTOLEV ):** aerosol (MDI) and PO; MetaproterenoI(ALUPENT): aerosol, PO; Terbutaline **(BRETHINE** ) : aerosol, PO

NURSING IMPLICATIONS:

1. used for short term relief of reversible airway problems.

2. not used in continuous basis in absence of symptoms.

3. client teaching regarding use of MDI.

4. ANTICHOLINERGIC: Ipatropium bromide (ATROVERT)

NURSING IMPLICATIONS:

1. frequently used for COPD clients and severe asthmatics for

treatment of acute airway problems.

2. should not be used prior to beta-2 agonist inhalers.

5. CORTICOSTERODDS: Beclomethasone (BECLOVENT) aerosol

Cromolyn sodium (INTAL) aerosol

Works well with seasonal and exercise-induced asthma (EIA).

Prophylactic use decrease number and severity of attacks.

May be used with beta-2 agonist.

7. ANTITUBERCUIAR: broad- spectrum antibiotic specific to tubercle bacilli

GENERAL IMPLICATIONS

Client is not contagious when sputum culture is negative

- Respiratory isolation when sputum is positive for bacilli

Treatment includes combination of medications for about 6 to 8

months.

Monitor liver function studies for clients on combination therapy.

Teach clients they should not stop taking the medications when they

begin to feel better.

- Advise client to return to the doctor if he notices any yellowing of his

skin or eyes, or begins to experience pain or swelling in joints,

especially the big toe.

a) Isoniazid (INH): PO,IM

SE: peripheral neuritis, hypersensitivity, hepatotoxicity, gastric

irritation.

NURSING IMPLICATIONS:

1. administer with (pyridoxine) Vitamin B6 to prevent peripheral

neuritis.

2 primary medication used in prophylactic treatment of

tuberculosis.

b) Rifampin(RIFADIN):PO

SE: peripheral neuropathy, hypersensitivity, gastric upset, hepatitis.

NURSING IMPLICATIONS:

1. medication most commonly used with isoniazid.

2. may negate the effectiveness of birth control pills.

3. body secretions may turn orange-urine, perspiration, tears.

c) Ethambutol (EMG or MYAMBUTOL): PO

SE: skin rash, gastric upset, peripheral neuritis, optic neuritis,

increased uric acid levels.

NURSING IMPLICATIONS:

1. frequently administered with Rifamfin and INH.

d) Pyrazinamide **(PZA, PYRAZEVAMCDE, BTBRAZID):** PO

SE; hepatotoxicity, increased uric acid levels,

NURSING IMPLICATIONS:

1. should be taken concurrently with another antituberculosis

agent

CARDIOVASCULAR MEDICATIONS

**1. NITRATES** : increases blood supply to the heart by dilating the coronary arteries;

cardiac workload is reduced due to decrease in venous return

because of peripheral vasodilation.

Isosorbide dinitrafe (ISORDIL, SORBIDE) PO

Nitroglycerin (NTG, **NTTROSTAT**): sublingual

Nitroglycerin **(NITRO-BID, NITROL):** topical

SE: headaches (will diminish with therapy), postural hypotension,

syncope, blurred vision, -dry mouth, reflex tachycardia

NURSING IMPLICATIONS:

1. Advise client that alcohol will potentiate postural hypotension.

2. Educate client regarding self-medication.

3 Report to physician continuous headaches, blurred vision, or

dry mouth.

4. Topical application is used for sustained protection against

anginal attacks.

5. Avoid skin contact with topical form; remove all previous

applications when applying topical form.

**2. CARDIAC GLYCOSIDES (digitalis):** Increases myocardial contractility and

cardiac output; decreases conduction of impulses through the AV node.

Digoxin (LANOX3N) PO, IV

Digitoxin **(CRYSTODIGIN) PO - *effects of medication last much longer***

***than digitoxin, more difficult to adjust***

SE: anorexia, nausea, vomiting, visual disturbances, fatigue, drug -induced

dysrhythmias.

NURSING IMPLICATIONS:

a. therapeutic plasma levels of digoxin are 0.5- 2.0 ng/ml.

b. first sign of toxicity is usually GI symptoms.

c. Uses: supraventticular tachycardia, CHF

***GENERAL NURSING IMPLICATIONS:***

1. take the apical pulse for a full minute, if the rate is below 60 in an adult,

below 90 in a child, hold the medication and notify the physician.

2. evaluate for tachycardia, bradycardia, and irregular pulse. If there is

significant change in rate and rhythm, hold the medication and notify the

physician.

3 evaluate serum potassium levels and response to diuretics, hypokalemia

potentiates action of digitalis. Gastrointestinal symptoms are frequently the

first indication of digitalis toxicity.

4. teach client not to increase or double dose for missed doses.

5. Quinidine and Verapamil both increase plasma levels of digitalis.

6. to achieve maximum result rapidly, a loading dose is administered, then

reduced to a maintenance dose.

***GERIATRIC PRIORITY:*** elderly clients are more sensitive to digitalis and are

more likely to experience digitalis toxicity.

**3. CALCIUM CHANNEL BLOCKERS:** blockade of calcium channel receptors in

the heart causes decreased cardiac contractility and a decreased rate of sinus and

AVnode.

Diltiazem **(CARDIZEM }** PO, IV

Nifedipine **(PROCARDIA)** PO

Verapamil **(CALAN, ISOPTIN ): PO, IV 4**

SE: constipation, exacerbation of CHF, hypotension, bradycardia, peripheral edema.

NURSING IMPLICATIONS:

**1. Uses:** chronic stable angina, hypertension, and supraventricular dysrhythmias.

2. Nifedipine is less likely to exacerbate pre-existing cardiac conditions; is not

effective in treating dysrythmias.

3. intensifies cardio suppressant effects of beta blocker medications.

**4. BETA-ADRENERGIC BLOCKING AGENTS:** blockade of betal receptors the

heart causes: decreased heart rate, decreased force of contraction,

and decreased rate of AV conduction.

Nadolol **(CORGARD):** PO

Propranolol (**INDERAL) : PO,** IV

Metoprolol ( **LOPRESSOR):** PO, IV

Timolol **( BLOCADREN): PO**

Atenolol(TENORMIN)

SE: bradycardia, CHF, hypotension, depression, lethargy and fatigue.

NURSING IMPLICATIONS:

1. evaluate client for precipitation of and/or increase of CHF, or dysrhythmia

involving heart block.

2. may increase effectiveness of calcium channel blockers.

**3. Uses:** angina, hypertension, and cardiac dysrhythmias.

4. teach, clients how to decrease effects of postural hypotension.

5. leach clients not to stop medication when they feel better.

6. bradycardia is common adverse effect

. 7. check pulse prior to administering.

8. if diabetic, monitor blood glucose levels, hypoglycemic symptoms may be

blocked.

**5. ANTIDYSRHYTHMIC MEDICATIONS:** decreases cardiac excitability, delays

cardiac conduction either in the atrium or ventricle. Atropine is

cardiac stimulant for bradycardia.

GENERAL NURSING IMPLICATIONS:

Assess client for changes in cardiac rhythm and impact on cardiac output.

Evaluate effect of medication on dysrhythmia and resulting effects on cardiac

output.

Have atropine available for cardiac depression resulting in symptomatic

bradycardia.

All cardiac depressant medications are contraindicated in clients with sinus

node or AV node blocks.

Digitalis will enhance cardiac depssant effects.

Closely monitor for dysrhythmias that are precipitated by the treatment

Quinidine sulfate **(QIUNIDINE SULFATE, QUINIDEX): PO**

SE: vertigo, nausea, vomiting and diarrhea; progressive AV block, cinchonism, tinnitus, visual problems, headache.

NURSING IMPLICATIONS:

1. Use: supraventricular dysrhythmias and to convert client to sinus rhythm.

2. medication is not recommended to be administered parenterally.

Disopyramide **(NORPACE ): PO**

SE: anticholinergic- urinary retension, dry mouth, constipation, bradycardia,

hypotension.

NURSING IMPLICATONS:

1. high incidence of urinary retention.

2. contraindicated for use in clients with CHF.

3. Use: ventricular dysrhythmias.

Lidocaine hydrochloride **(XYLOCABVE ) ; TV**

SE: drowsiness, confusion, seizures, severe depression of cardiac conduction.

NURSING IMPLICATIONS:

1. Use: ventricular dysrhythmias

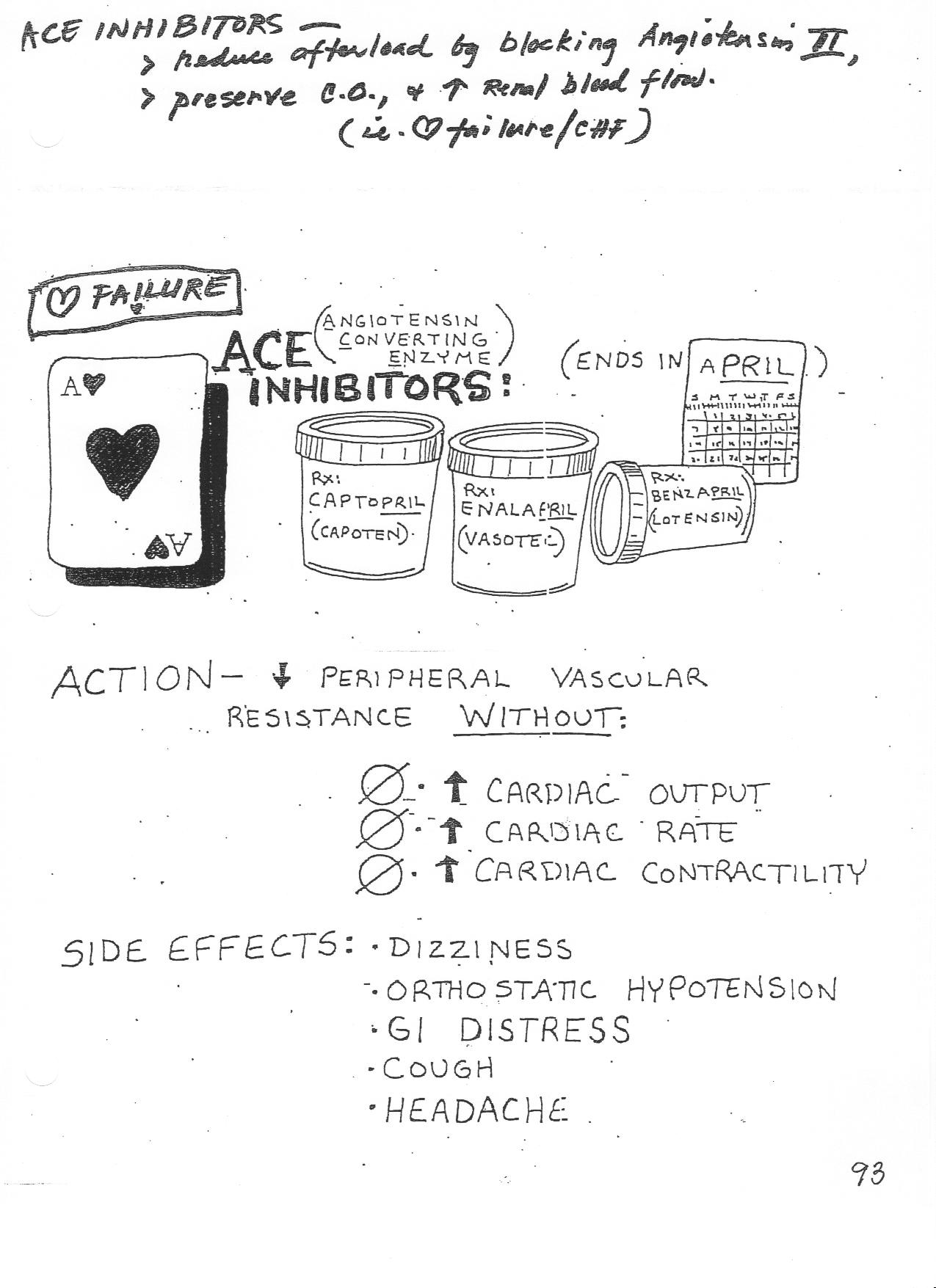
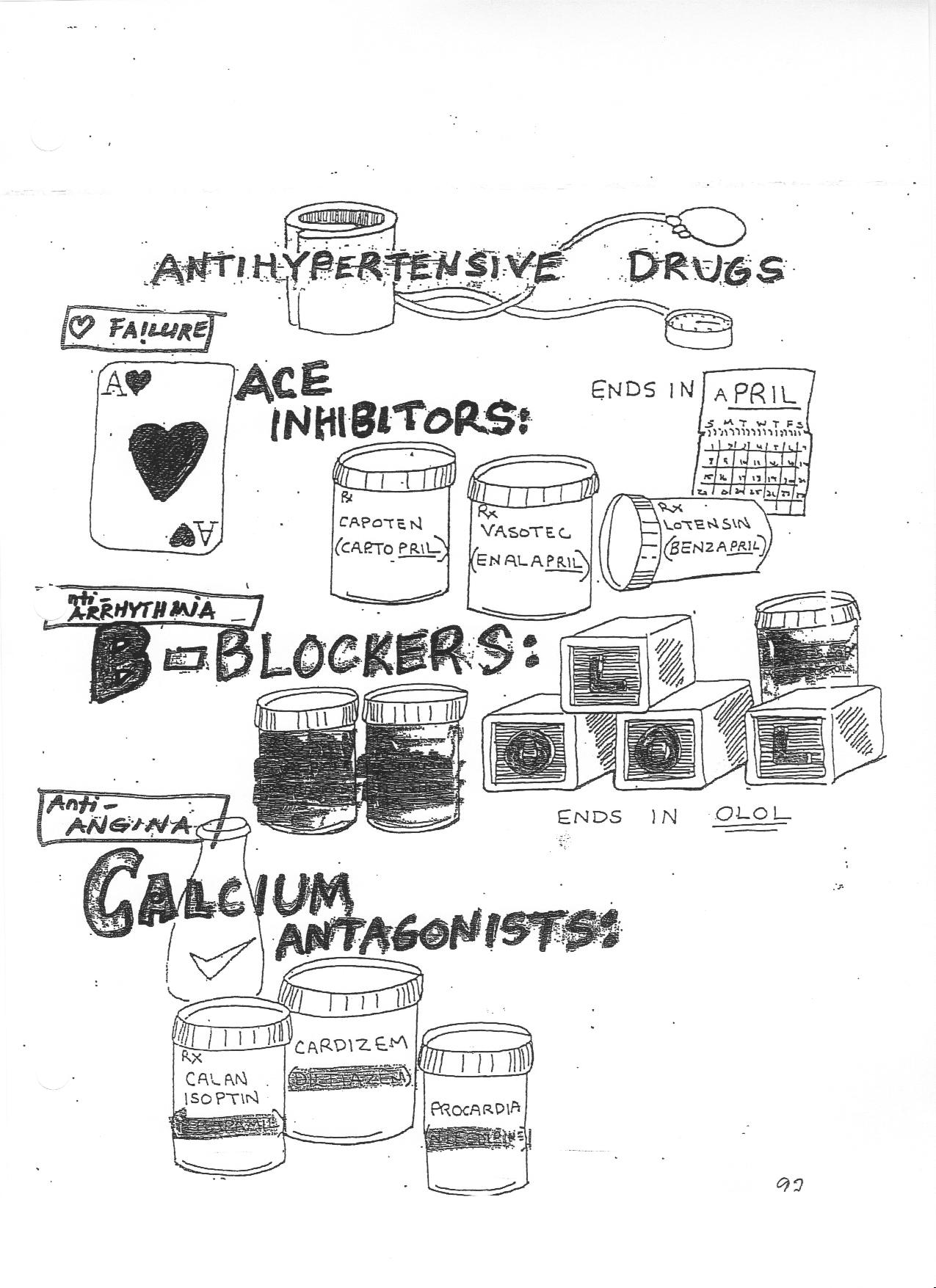
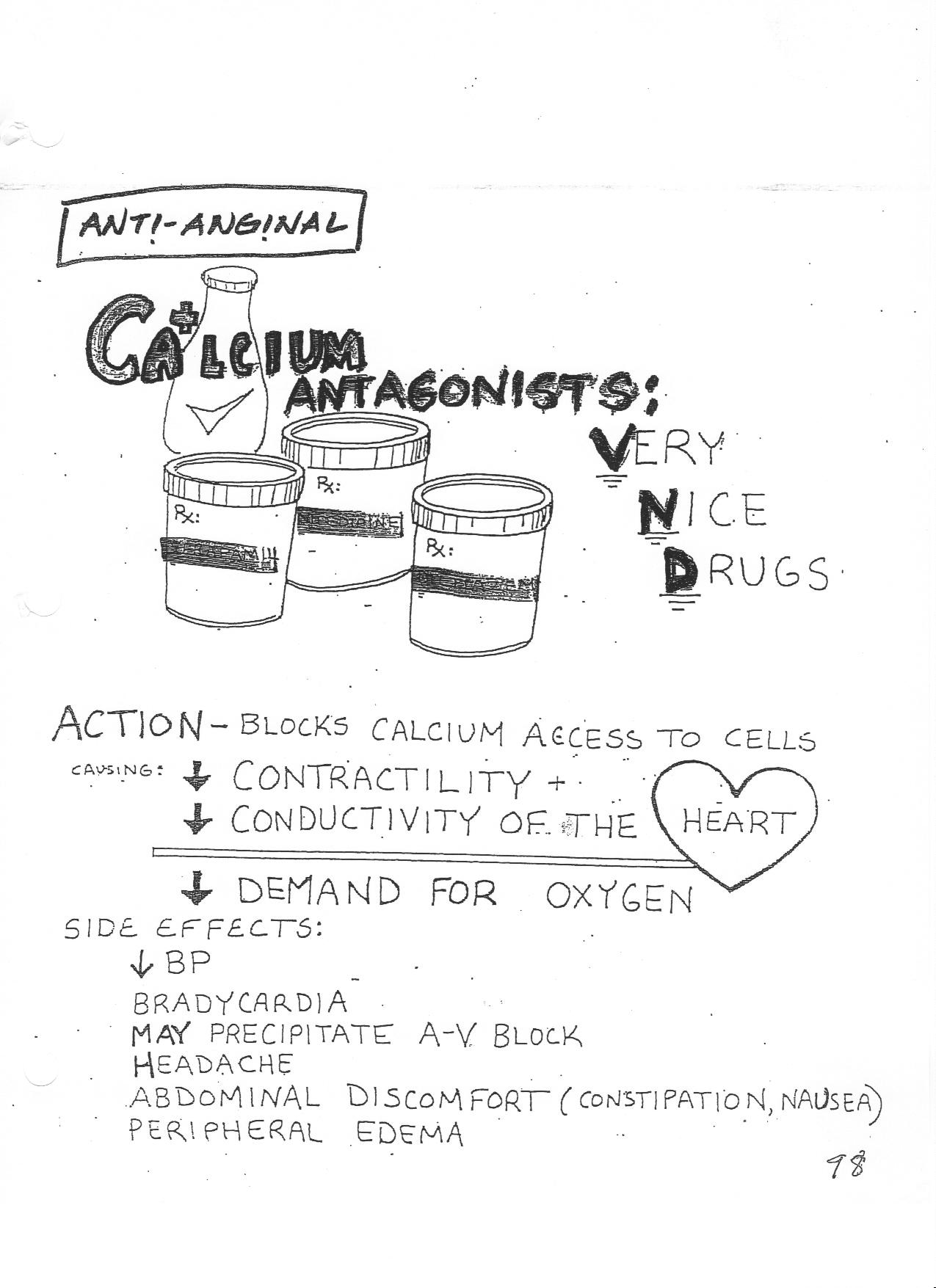
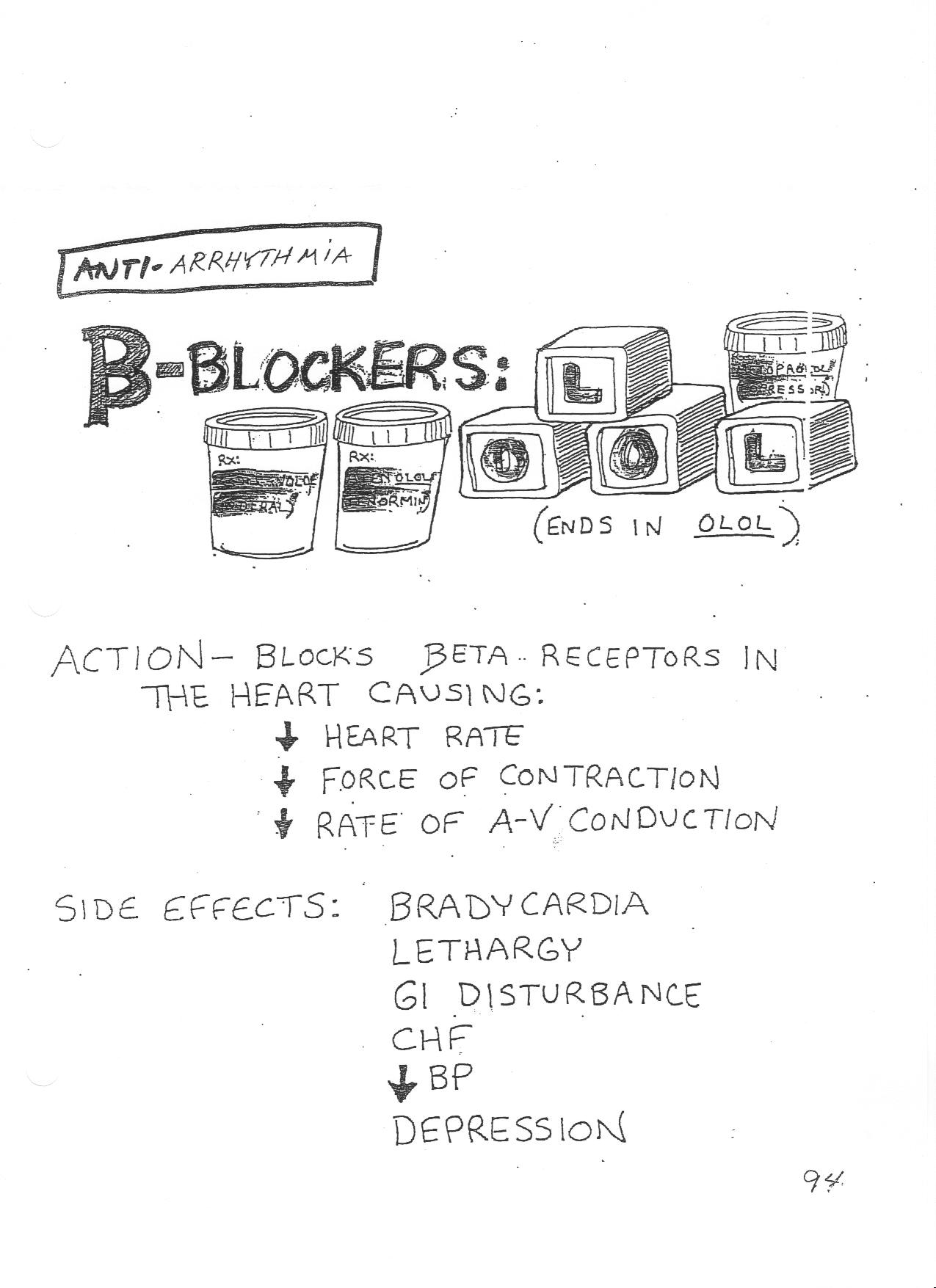
Bretylium Tosylate **(BRETYLATE, BRETYLOL): IV,** IM

SE: hypotension, general GI discomfort

NURSING IMPLICATIONS:

**1. Uses:** short-term treatment of ventricular fibrillation and tachycardia.

2. Hypotension occurs in majority of clients; keep clients on bed rest during treatment.



Procainamide ( PRONESTYL): PO, IV

Propranolol hydrochloride **(INDERAL)**

SE: systemic lupus erythematosus-like syndrome, blood dyscrasias, hypotension,

prolonged QT interval.

NURSING IMPLICATIONS:

*1.* Uses: short-and long-term control of ventricular and suprventricular

dysrhythmias.

2. if joint pain and inflammation occur, client should contact physician.

Atropine sulfete : PO, IM, SQ, IV.

SE; dry mouth, blurred vision, dilated pupils

NURSING IMPLICATIONS:

1. used to block cardiac stimulation, primarily for bradycardias that are

hemodynamically significant, or PVCs related to slow heart rate.

2. carefully assist client's cardiac output in response to the bradycardia episode.

**6. THROMBOLYTIC MEDICATIONS :** binds to fibrin in a thrombus and initiate

fibrinolysis to break up a clot. Converts the circulating plasminogen to plasmin to

begin fibrinolysis; is not clot specific.

GENERAL NURSING IMPLICATIONS:

Therapy should begin as soon the myocardial infarction is diagnosed, or whenthere

is history of prolonged angina.

Bleeding precautions

Streptokinase should be administered with an IV filter.

Streptokinase **(STREPTASE, KABIKINASE** ) TV

SE: bleeding and hypotension

NURSING IMPLICATIONS:

1. client with recent (1 year) history of streptococcal infection or previous treatment

with Streptokinase will have antibodies against medication and it will not be as effective.

Anteplase **(ACTIVASE }:** IV

NURSING IMPLICATIONS:

1. Uses: client's with history of streptococcal infection or previous treatment with

Streptokinase.

**VASCULAR SYSTEM MEDICATIONS**

1. ANTIHYPERTENSIVE MEDICATIONS:

GENERAL NURSING IMPLICATIONS:

Advise client that postural hypotension may occur and how to decrease effects.

Clients should be instructed regarding sedation; hazardous activities should be avoided. Hypotension may be increased by hot weather, hot showers, hot tubs, and alcohol ingestion. Encourage to stop smoking. Have client report unpleasant side effects related to sexual dysfunction.

A. *VASODILATORS:* acts directly on vascular smooth muscle to produce

vasodilation.

Hydralazine HCL **(APRESOLINE ): PO,** IM, IV

SE: tachycardia, angina, palpitations, anorexia, headache

NURSING IMPLICATIONS:

1. advise client that postural hypotension may occur.

2. medication may precipitate myocardial ischemia,

3. may be used in combination with other antihypertensive medications.

Nitroprusside **(NTPRIDE } : *TV***

*SE:* nausea, vomiting, headache, diaphoresis, abdominal pain.

NURING IMPLICATIONS:

1. generally used to .treat hypertensive crisis.

2. solution must be prepared immediately prior to use and protected from light

during administration.

3. should be given via infusion pump to ensure accurate flow rate.

4. should be used with caution in clients with liver and renal impairment

5. client should be closely monitored; preferably in a critical care setting.

**B. *CENTRALLY ACTING SYMPATHOLYTICS(* ALPHA** AGONIST ): decreases sympathetic effect (norepinephrine) on BP and decreases sympathetic tone which leads to dilation of both arterioles and veins.

Clonidine **(CATAPRES ): PO, patch**

Metheyldopa **(ALDOMET**): PO, parenteral

SE: dry mouth and nasal mucosa, drowsiness, impotence, postural hypotension.

NURSING IMPLICATIONS:

1. if withdrawn abruptly, may precipitate a hypertensive crisis.

2. more prolonged problems with postural hypotension and impotence

**C. ANGIOTENSIN- CONVERTINIG- ENZYME INHIBITORS** ( ACE): reduce

peripheral vasculature resistance without increasing cardiac output, rate, or contractility; angiotensin antagonist.

Captopril **(CAPOTEN): PO**

Enalapril (VASOTEC): PO

SE; postural hypotension, GI distress, hyperkalemia, insomnia, potential aggravating

non-productive cough.

NURSING IMPLICATIONS:

1. instruct client to stay in bed for 3-4 hours after initial dose.

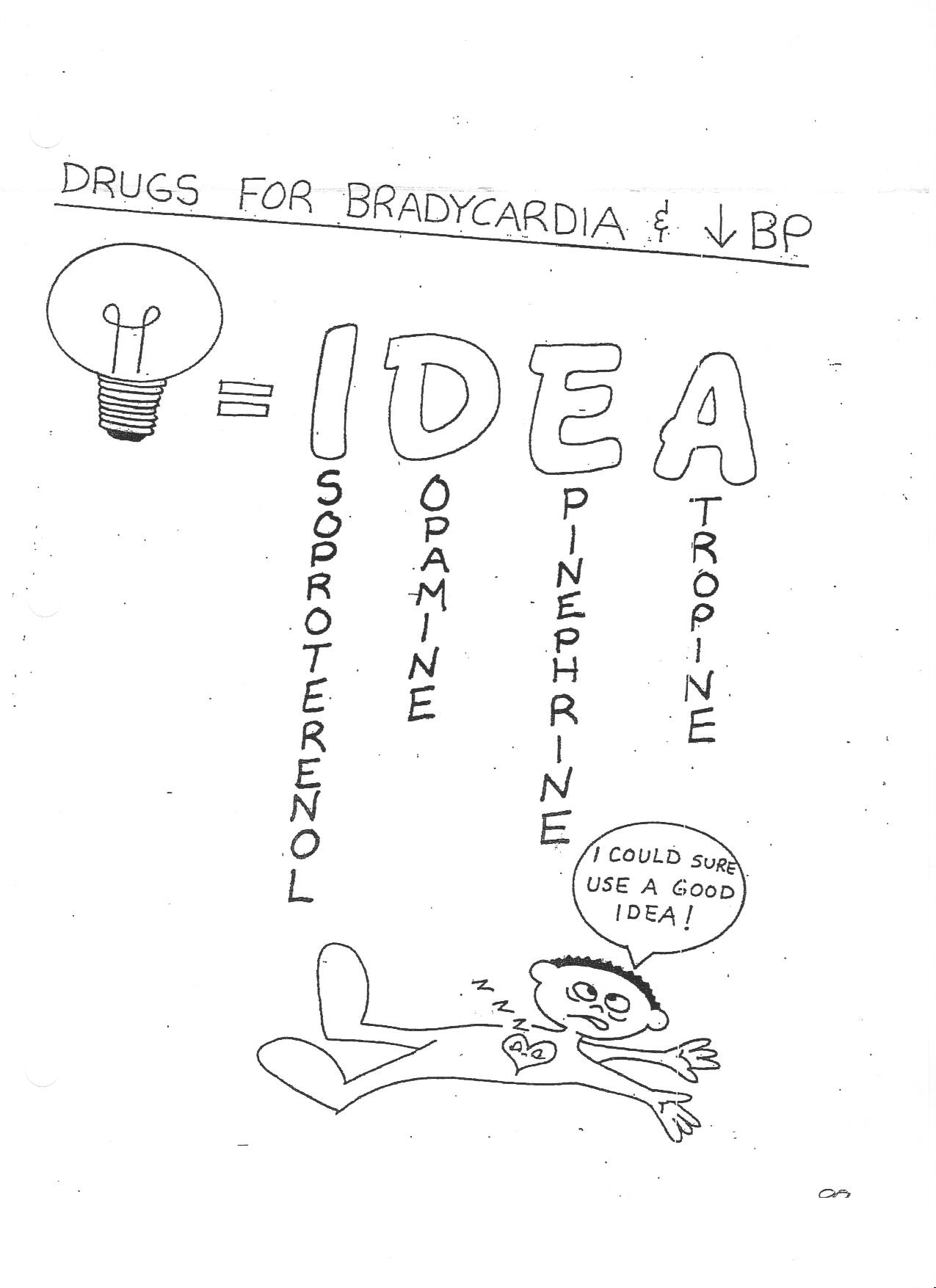
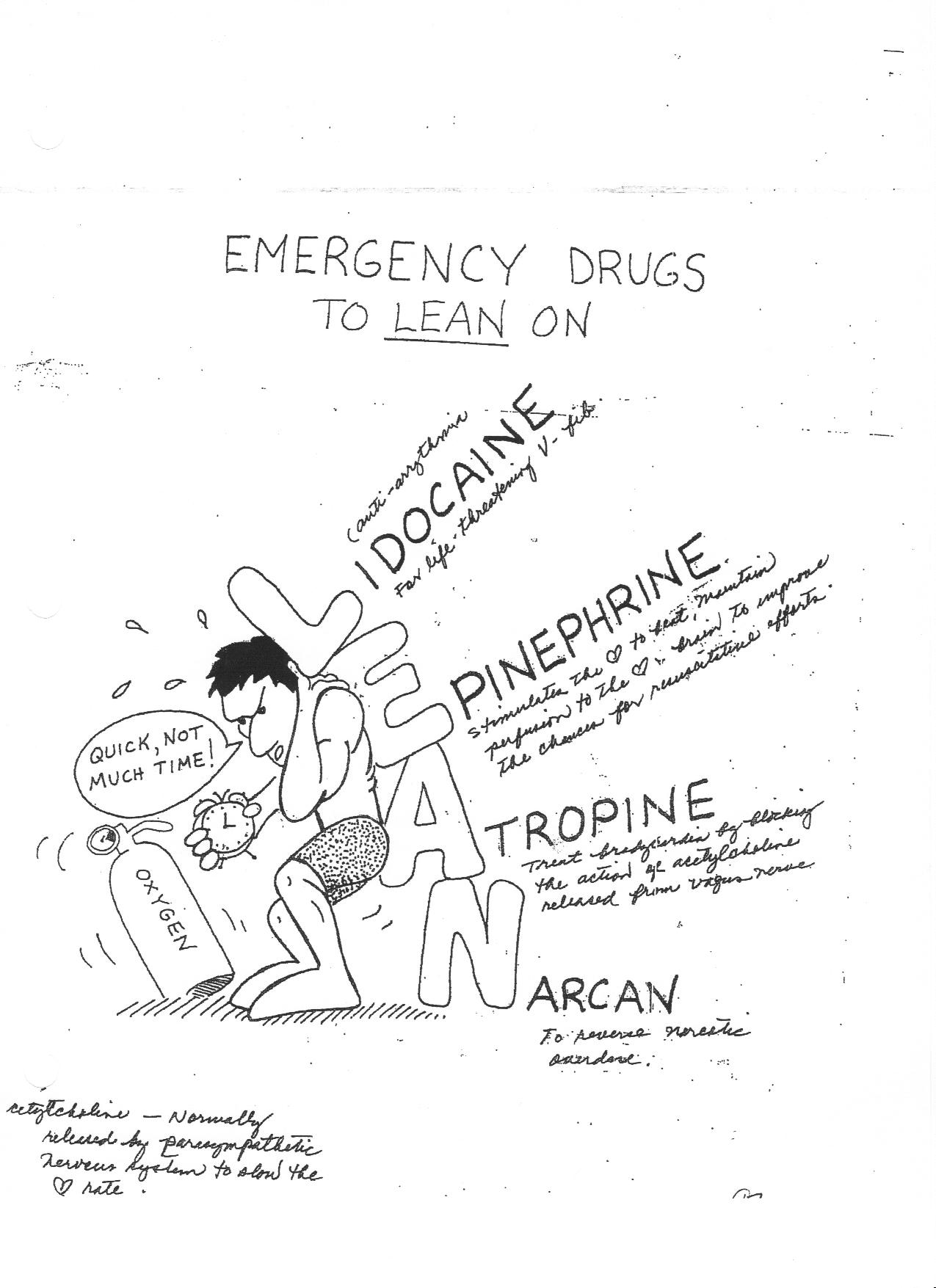
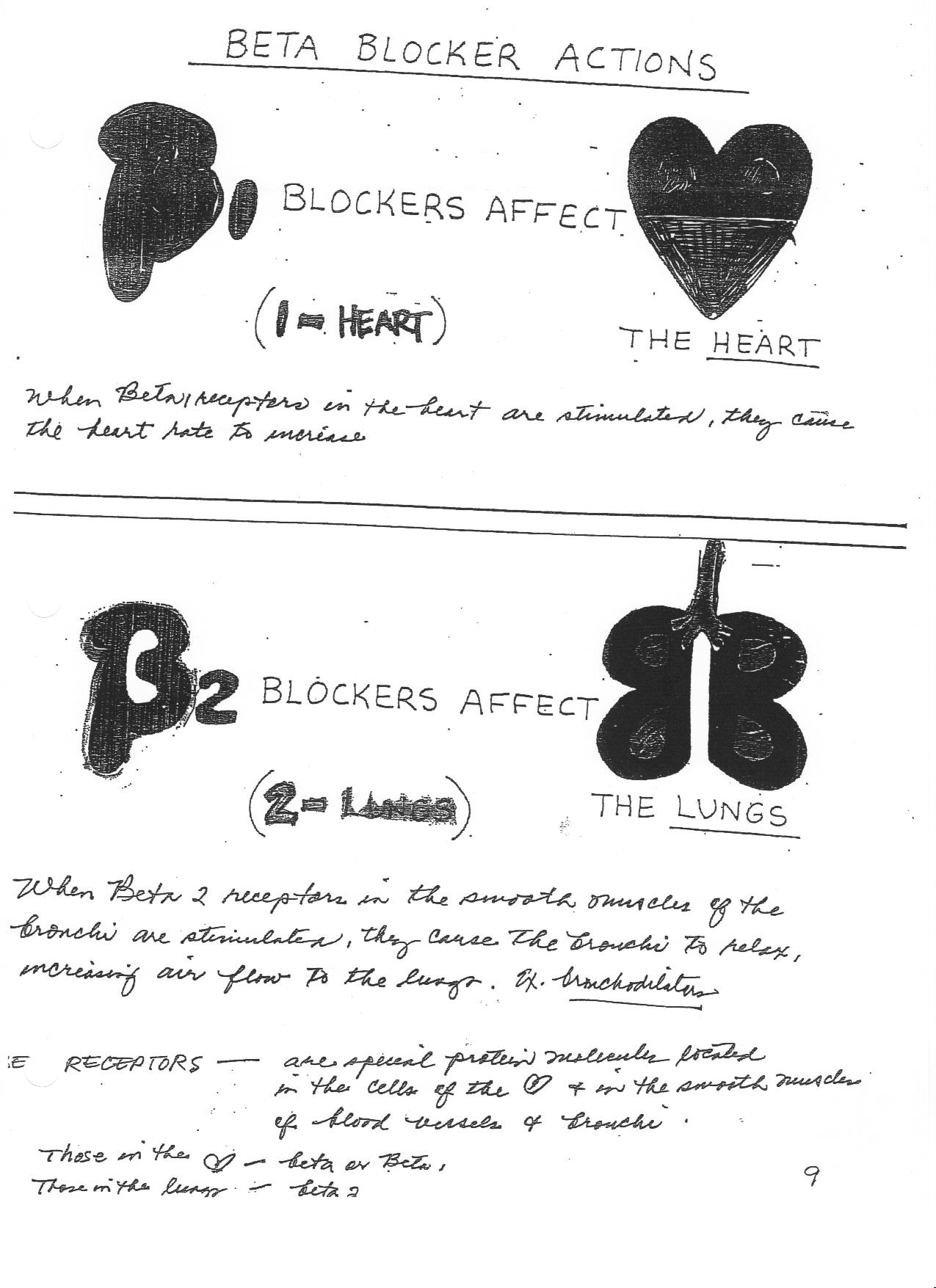
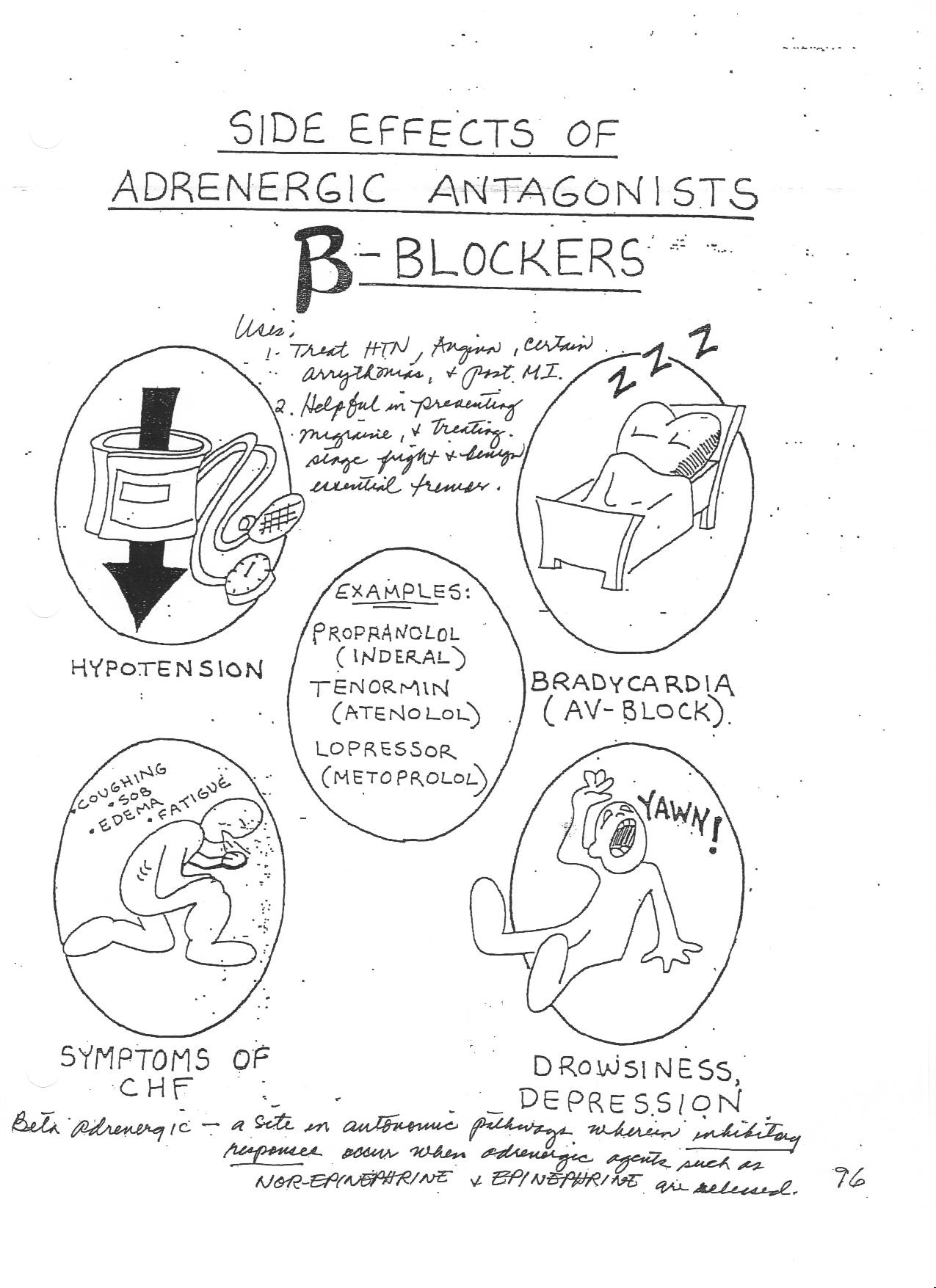
2. monitor BP closely after the first dose for pronounced hypotension.

3. monitor electrolytes; this medication causes retention of potassium.

4. elderly client is at highest risk for postural hypotension.

**D. BETA ADRENERGIC BLOCKERS:** see 4TH CARDIOVASCULAR MED

**E. CALCIUM CHANNEL BLOCKERS: see 3RD CARDIOVASCULAR MED**

****

**F. DIURETICS:**

GENERAL NURSING IMPLICATIONS:

1. evaluate daily weights for fluid loss or gain.

2. maintain intake and output records.

3. monitor for hypokalemia.

4. advise client of foods that are potassium-rich.

5. administer medications in the morning.

6. teach clients how to decrease effects of postural hypotension.

7. monitor blood pressure response to diuretics.

8. interctions: Digitalis action, is increased in presence of hypokalemia.

Lithium levels may be increased in presence of hyponatremia.

*Loop diuretics:* blocks sodium and chloride reabsorption, which causes water and solutes to be retained in the nephron. Prevention of water back into the circulation causes an increase in excretion of the water, therefore diuresis.

Furosemide (LASK ): PO, IM, IV.

Ethacrynic acid (EDECRIN): PO, IV.

Bumetamide (BUMEX )

SE: dehydration, hypotension; excessive loss of potassium, sodium, chloride,

hyperglycemia, hyperuricemia.

NURSING IMPLICATIONS:

1. strong diuretic that provides rapid diuresis.

*Thiazide* ***diuretics:***

Chlorothiazide **(DIURIL):** PO,IV.

Chlorthalidone **(HYGROTON** ): PO

Hydrochlorothiazide **(HYDRODIURTL, ESIDREX ):** PO

SE: dehydration, hypotension; excessive loss of potassium, sodium, chloride,

hyperglycemia, hyperuricemia.

NURSING IMPLICATIONS:

1. frequently used as a first hue drug to control essential hypertension.

*Potassium sparing diuretics:* blocks the effect of aldosterone on the renal tubule.

Spironolactone (ALDACTONE): PO

Triamterene **(DYRENIUM** ):PO

SE: menstrual irregularities, impotence, hypotension.

NURSING IMPLICATIONS:

1. may be used in combination with other diuretics to reduce potassium loss.

2. Potassium-sparing effects may result in hyperkalemia.

*Osmotic diuretic:* increases osmotic pressure of tie fluid in the renal tubule, thus

preventing reabsorption of sodium and water.

Mannitol (OSMITROL ): IV

SE: pulmonary edema, CHFS tissue dehydration, nausea, vomiting.

NURSING IMPLICATIONS:

1. stop infusion if client begins to show symptoms of CHF5 pulmonary edema.

2. use an IV filter to prevent infusion of crystals.

**G. MEDICATIONS USED FOR TREATMENT OF SHOCK**

GENERAL NURSING IMPLICATIONS:

Most often limited to critical care settings; constant monitoring is required.

Most often administered in diluted solution by IV drip.

Careful frequent observation and evaluation of blood pressure.

Continuous EKG monitoring; observe client closely for cardiac dysrhythmias.

Monitor urinary output every hour.

Frequent and close monitoring of IV infusion site; leakage into tissue may cause

tissue sloughing.

Medications should not be administered to clients receiving MAO inhibitors. •

ADRENERGIC AGONIST/ CATECHOLAMINE: increases myocardial contractility,

thereby improving cardiac output.

Dopamine (INTROPIN)

Dobutamine (DOBUTREX)

Amrinone (INOCOR )

SE: dysrhythmias (tachycardia), angina, hypertension, headaches.

Isoproterenol (ISUPREL)

SE: tachycardia

NURSING IMPLICATIONS:

1. may also be used as a bronchodilator when administered by inhalation.

2. generally not utilized in hypotension where tachycardia is a problem.

3. utilized to maintain cardiac output in clients with AV heart block prior to

pacemaker insertion.

Epinephrine hydrochloride (ADRENALIN): TV

Norepinephrine (LEVOPHED)

NURSING IMPLICATIONS:

1. be sure to read label correctly and utilize correct strengths.

2. observe for cardiac dysrhythmias.

3. use in treatment of anaphylactic shock and cardiac arrest.

ANTIHYPERLIPIDEMIC MEDICATIONS: decrease LDL cholesterol, but preferably does not decrease the HDL cholesterol. First line of treatment for increased cholesterol is dietary therapy to reduce cholesterol intake.

Cholestyramine **(QUESTRAN):** PO

Colestipol **(COLESTID ): PO**

SE: GI disturbances, constipation

NURSING IMPLICATIONS:

1. supplemental fat soluble vitamins in long-term therapy.

2. mix powder with several ounces of fluid for administration.

Nicotinic acid (NIACIN, NICOLAR): PO

SE: flushing, hyperglycemia, hyperuricemia, GI disturbances

NURSING IMPLICATIONS:

1. used with caution in clients with gall bladder disease, diabetes and gout.

2. flushing occurs in almost all clients, will diminish over several weeks.

Gemfibrozil (LOPID): PO

Lovastatin (MEVACOR): PO

SE: rashes, GI disturbances, hepatoxic

NURSING IMPLICATIONS:

1. should not be given to clients with pre-existing gall bladder disease.

2. will potentiate warfarin derivative anticoagulants (COUMADIN).

ANTICOAGULANTS: prolong coagulation by inactivation of clotting factors (heparin)

and by decreasing synthesis of clotting factors (Coumadin).

Heparin: IV, SQ

SE: hemorrhagic tendencies: bleeding gums, hematuria, frank hemorrhage.

NURSING IMPLICATIONS:

1. check the aPTT for normal levels vs therapeutic levels.

2. Protamine sulfate is the antidote.

3. will not dissolve established clots.

4. may not be given PO.

5. effective immediately after administration.

6. anticoagulation effect is short.

7. identify if heparin is being used to treat thromboembolic problem or as prophylaxis for thromboembolic problems.

Enoxaparin (LOVENOX) SQ

*Coumadin Derivatives:*

Warfarin (COUMADIN ): PO, IV (DICUMAROL): PO

NURSING IMPLICATIONS:

1. check the PT and INR to evaluate level of anticoagulation.

2. Vitamin K is the antidote.

3. Client teaching for home care:

Bleeding precautions

Advise all health care providers of medication

Not recommended if pregnant or lactating

Maintain routine checks on coagulation studies.

4. utilized for long- term anticoagulation.

5. check drug literature when administering with other medications; drug interactions are common.

6. should not be administered to clients at high risk for hemorrhagic problems.

7. oral contraceptives may decrease effectiveness.

**GASTROINTESTINAL MEDICATIONS**

**1. ANTIEMETICS**

PHENOTHIAZINE DERIVATIVES: depresses the chemoreceptor trigger zone

and vomiting center.

Chlorpromazine hydrochloride (THORAZENE ): PO, suppository, IM

Promethazine (PHENERGAN): PO, IM, suppository

Prochlorperazine(COMPAZINE): PO, IM, suppository

Thiethylperazine maleate (TORECAN): PO, IM, suppository

SE: central nervous system depression, drowsiness, photosensitivity.

NURSING IMPLICATIONS:

a. sub-q injection may cause tissue irritation and necrosis.

b. use with caution in pediatrics; do not administer THORAZINE to infants

under six months, COMPAZINE to children under 20 pounds or under two

years old, TORECAN to children under 12.

c. THORAZINE should be used only in situations of severe nausea or

vomiting.

ANTTHTSTAMINES: depresses the chemoreceptor trigger zone.

Hydroxyzine (ATARAX, VISTARTL ) PO, suppository, IM

Dimenhydrinate (DRAMAMINE, MARMINE ): PO, suppository, IM

SE: sedation; anticholinergic effects(blurred vision, dry mouth, difficulty in

urination and constipation; paradoxical excitation may occur in children

NURSING IMPLICATIONS:

a. caution client regarding sedation- should not operate machinery while

under the influence of medication,

b. administer early in order to prevent vomiting.

c. use with caution in clients with glaucoma and asthma.

d. sub-q injection may cause tissue irritation and necrosis.

**2. LAXATIVES**

GENERAL NURSING IMPLICATIONS:

1) May produce dependence if used for prolonged periods

2) May cause electrolyte disturbances if used excessively

3) Should be avoided in clients who have nausea, vomiting and/or

abdominal pain and cramping, or any indications of appendicitis.

4) administer with caution to the cardiac client as GI symptoms may be

indicative of cardiac problems.

1. **SODIUM PREPAPRATION:**

Sodium bicarbonate, (KOLAIDS,TUMS ): PO

SE: rebound acid production, Alkalosis

NURSING IMPLICATIONS:

1. discourage use of sodium bicarbonate due to occurrence of metabolic

alkalosis.

**B. HISTAMENE H2 RECEPTOR ANTAGONISTS:** reduces volume and

concentration of gastric acid secretion.

Cimetidine (TAGAMET): PO, IV, IM

SE: rash, confusion, lethargy, diarrhea, arrhythmias.

NURSING IMPLICATIONS :

1. take with foods or after meals,

2. may be used prophylactically or for treatment of PUD.

3. do not take with PO antacids.

Ranitidine (ZANTAC ): PO, IM, IV

SE: headache, GI discomfort, jaundice, hepatitis

NURSING IMPLICATIONS:

1. use with caution in clients with liver and renal disorders.

2. do not take with aspirin products.

3. wait I hour after administration of antacids.

Niaztidine ( AXXID ): PO

SE: anemia, dizziness

Famotidine (PEPCID): PO, IV £

SE: headache, dizziness, constipation, diarrhea

NURSING IMPLICATIONS:

1. used with caution in clients with renal or hepatic problems.

2. dosing may be done with meals or without regard to meal time.

3. caution client to avoid aspirin and other NSAJDs.

**C. ACID PUMP INHIBITORS:**

inhibits the enzymes that produces gastric acid.

Omeprazole **(PRILOSEC** ) PO

Lansoprazole( **PREVACID** )

SE: headache, diarrhea, dizziness

NURSING IMPLICATIONS:

1. administer before meals.

2. do not crush, chew or open capsules.

3. sprinkle granules of PREVACID over food, do not chew granules.

**D. CYTOPROTECTANT:** binds to diseased tissue provides a protective barrier to

acid.

Sucralfate (CARAFATE ): PO

SE: constipation, GI discomfort

NURSING IMPLICATIONS:

1. avoid antacids.

2. Use: prevention and treatment of duodenal ulcers.

3. may impede the absorption of medications that require an acid

medium.

**e. PROSTAGLANDIN ANALOGUE:** suppresses gastric acid secretion,

increases protective mucus and mucosal blood flow.

***Prostaglandin- any group of hormone-like fatty acids found throughout the***

***body, especially in semen, that affect BP, metabolism, body temperature, and***

***other important body processes.***

Misoprostol **(CYTOTEC ):**

SE: GI problems, headache.

NURSING IMPLICATIONS:

1. contraindicated in pregnancy.

2. indicated for prevention of NSAID induced ulcers.

**f. ANTICHOLINERGICS:** inhibits secretion of gastric acids.

DicycIominehydrochloride (BENTYL): PO

Hyscyamine (LEVSEV): PO

Prophantheline **(PRO-BANTHEVE ): PO,** IM

SE: drowsiness, dry mouth, urinary retention.

NURSING IMPLICATIONS :

1. use with, caution in clients with glaucoma. :

2. evaluate for anticholinergic side effects.

3. do not administer at same time as antacids.

**ENDOCRINE SYSTEM MEDICATIONS**

***ANTITHYROID****;* inhibits production of thyroid hormone; does not inactivate

thyroid in circulating blood.

Prophylthioracil **(PTU ): PO**

SE: agranulocytosis; abdominal discomfort; nausea, vomiting, diarrhea,

crosses placenta,

Methimazole **(TAPAZOLE ):** PO

SE: same; crosses placenta more rapidly.

NURSING IMPLICATIONS:

1. may increase anticoagulation effect of heparin and oral anticoagulants.

2. may be combined with iodine preparations.

3. monitor CBC.

4. store TAPAZOLE in light-sensitive container.

5. may be used prior to surgery or treatment with radioactive iodine.

Lugol’s solution: PO

SE: inhibits synthesis and release of thyroid hormone.

Saturated solution of potassium iodide (SSKI):

NURSING IMPLICATIONS:

1. administer in fluid to decrease unpleasant taste.

2. may be used to decrease vascularity of thyroid gland prior to surgery.

***RADIOACTIVE IODINE:*** accumulates in the thyroid gland; causes partial or total

destruction of thyroid through radiation. Iodide, I 131

SE: discomfort in thyroid area; bone marrow depression; permanent

hypothyroidism.

NURSING IMPLICATIONS:

1. check that antithyroid drugs are discontinued 2 to 4 days prior to

administering I131.

2. radiation precautions on body secretions- 3 days.

3. increase fluids immediately after treatment, as radioactive isotope is

excreted in the urine.

*THYROID REPLACEMENTS:* replacement of thyroid hormone.

Levothyroxine sodium **(LEVOTHYROID, LEVOXYL, SYNTHROID):** PO, JM,

**IV.**

Liothyronone (CYTOMEL):

SE: overdose may result in symptoms of hyperthyroidism: tachycardia, heat

intolerance, nervousness.

NURSING IMPLICATIONS:

1. be careful in reading exact name on label of medications; micrograms and

milligrams are used as units of measure.

2. generally taken once a day before breakfast

3. within 3-4 days begin to see improvement, maximum effect in 4-6 weeks.

***PANCREATIC ENZYMES:*** replacement enzyme to aid in digestion of starch, protein

and fat

Pancreatin: PO

Pancrelipase (PANCREASE, COTAZYM, VIOPLASE ), PO

SE: GI upset and irritation of the mucous membranes.

NURSING IMPLICATONS:

1. client is usually on a high- protein diet, high- carbohydrate, low- fat diet.

2. enteric-coated tablets should not be crushed or chewed.

3. Pancreatin may be given before, duringf, or within one hour after meals.

4. Panrelipase is given just before or with meal or snack.

***ANTIHYPOGLYCEMIC:*** increases plasma glucose levels and relaxes smooth muscles.

Glucagon: 3M, IV, SQ

SE: none significant

NURSING IMPLICATONS :

1. watch for symptoms of hypoglycemia and treat with food^rtf., if conscious.

2. client usually awakens in 5-20 minutes after receiving glucagon,

3. if client does not respond, anticipate TV glucose to be given.

***ORAL HYPOGLYCEMIC AGENTS****:* stimulate beta cells to secrete more insulin;

biguanides enhance body utilization of insulin.

***Sulfonylureas:***

Glipizide (GLUCOTROL): PO

Glyburide (MICRONASE, DIABETA): PO

Tolbutamide (ORINASE): PO

Tolazamide (TOLINASE): PO

***Biguanides:***

Metfonnin (GLUCOPHAGE): PO

SE: nausea, heartburn, stomach pain.

NURSING IMPLICATIONS:

1. Tolbutamide has shortest duration of action, requires multiple daily doses.

2. Metformin is administered with meals.

*3.* Glyburide has a long duration of action,

***STEROIDS:***

1. Steroids - prednisone, cortisone

a) Given to block the inflammatory response in the body

b) May mask signs of infection

c) May alter glucose metabolism; need to monitor blood glucose

d) May produce muscle weakness; need to monitor for safety and do client

teaching

e) May cause sodium retention, may cause loss of potassium; need to

monitor electrolytes, I & O, weight

***INSULIN:***

a) Need to know types and differences (regular, lente, combination,

NPH)

b) Need to know signs and symptoms of hypoglycemia, hyperglycemia,

and interventions

|  |  |  |  |
| --- | --- | --- | --- |
| **TYPE** | **ONSET** | **PEAK** | **DURATION** |
| REGULAR | ½-1 hour | 2 ½- 5 hours | 6-8 hours |
| NPH | 1-1 ½ hour | 4-12 hours | 2-4 hours |
| ULTRALENTE | 4-8 hours | 10-30 hours | 36 hours |

*\** Regular insulin- safest by IV and fast among insulin.

• Mid-afternoon and bed time snacks — minimize fluctuations of

blood glucose levels ( snacks cover peak time of insulin).

**ANTI- INFECTIVE MEDICATIONS** - all have potential for GI distress

**. Penicillin** — be aware of possibility for hypersensitivity and GI disturbances

Tetracycline - be aware of potential for dental discoloration in children under

eight

Streptomycin- client teaching for renal impairment, ototoxicity, & overgrowth

Sulfonamides- client teaching on nephrotoxicity, force fluids, I&O

*\*Slow release- to provide a continuous, sustained release of certain drugs*

*\*Enteric tabs- are covered -with a special coating which resists stomach acid but*

*dissolves in the alkaline environment of the small intestine.*

**HEMATOLOGIC** SYSTEM **MEDICATIONS:**

***IRON PREPARATIONS/ REPLACEMENTS:***

Ferrous fumarate **(FEOSTAT, SPAN** 77, **FEMTRON):** PO, **IM )**

SE: GI irritation, nausea, constipation

Ferrous gluconate **( FERGON, FERRALET** )

SE: toxic reactions: fever, urticaria

Ferrous sulfats (**FEOSOL, FER-EV-SOL)**

Iron dextran injection **(EMFERON):** IM, IV

NURSING IMPLICATIONS:

1. absorbed better on empty stomach; however, may cause GI upset

2. liquid preparations should be diluted and given through a straw to prevent

staining of the teeth.

3. tell client stool may be black.

4. if given IM, use Z-tract method to prevent tissue staining and trauma.

5. eggs, milk, cheese and antacids inhibit oral iron absorption.

6. IV test dose may be given to determine response.

7. IM iron preparations are not recommended.

***VITAMIN K:*** necessary for normal prothrombin activity.

Vitamin K **(AQUAMEPHYTON ): PO,** SQ, IM, IV

SE: GI upset, rash, hypersensitivity reaction if given IV; rash, urticaria,

NURSING IMPLICATIONS:

1. pain, hematoma formation at injection site.

2. protect medication from light

3. antidote for COUMADEY.

***GLYCOPROTEIN HORMONE;*** stimulates production of red blood cells. Epoetin alfa

(erytoropoietin)

**(EPOGEN, ERYPO, PROCRIT ): IV,** SQ

SE: allergy to albumin, hypertension.

NURSING IMPLICATIONS:

1. Use: treat to renal failure and anemia associated with chemotherapy.

2. monitor hemoglobin and hematocrit levels every two weeks when desired levels

is reached, maintenance dose begun.

3. monitor BP, since renal clients have problems with hypertension.

**URINARY-RENAL SYSTEM MEDICATIONS**

***URINARY ANTISEPTICS:*** concentrate in the urine and are active against common

urinary tract pathogens. Do not affect infections in the blood or tissue.

GENERAL NURSING IMPLICATIONS:

1. encourage intake of 2000-3000 cc per day during treatment.

2. continue medication therapy until all medication has been taken.

3. most medications are better absorbed on an empty stomach; however, if GI

distress occurs they may be taken with food.

4. monitor intake and output, as well as symptoms of increasing renal problems.

5. check drug insert package for interactions with anticoagulants.

Cinoxacin: PO

Nalidixic Acid (NegGram), PO

SE: GI upset is common, headache, rash, visual disturbances, photosensitivity.

NURSING IMPLICATIONS:

1. Cinoxacin and Nalidixic acid, both cause photosensitivity.

Methenamine Mandelate **(MANDELAMINE, MANDAMETH), PO**

SE: GI upset, bladder irritation, hepatotoxic.

NURSING IMPLICATIONS:

1. requires acidic urine to be effective.

2. should not be used with sulfonamides.

3. used for chronic UTI rather than acute.

Nitrofurantoin (FURADANTIN, **MACROBANTIN, APO-NITROFURANTOIN,**

**NITROFAN ): PO,** IM

SE: GI upset, blood dyscrasia, pulmonary reactions.

NURSING IMPLICATIONS:

1. requires adequate renal function to concentrate medication in urine.

2. should not be administered to renal transplant clients.

3. will turn the urine a brownish orange color.

***UBINARYANALGESIC;*** Phenazopyridine hydrochioride **(AZO-STANDARD, PYRTDIUM, URODINE,UROGESIC): PO**

SE: headache, GI disturbances.

NURSING IMPLICATIONS:

1. contraindicated in renal and liver dysfunction.

2. advise client to report any yellow discoloration to skin or eyes.

3. urine will turn orange.

4. administer with caution in clients with impaired renal function.

**REPRODUCTIVE SYSTEM MEDICATIONS**

***ALPHA-ADRENERGIC BLOCKER*** *:* medications decrease the size of the prostate,

therefore decreasing pressure on the urinary tract in clients with BPH.

Doxazosin **(CARDURA):** PO

Terazosin (HYTREV):PO

SE: dizziness, fatigue, hypotension, dyspnea.

NURSING IMPLICATIONS:

1. advise client of possible problems of decreased blood pressure and orthostatic

hypotension.

2. prostatic cancer should be ruled-out before medications are started.

3. medications should decrease problems of urination associated with BPH.

Finasteride **(PROSCAR ): PO**

SE: impotence, decreased libido,

NURSING IMPLICATIONS:

1. client should take contraceptive precautions or not have sexual intercourse with

women who could potentially get pregnant

***ANTIFUNGAL/PSOTOZOAL MEDICA TIONS:*** used to treat vaginal infections.

*Over the counter:*

Clotrimazole **(GYNE-LOTRJMIN ):** intravaginally.

Miconazole **(MONISTAT** 3 ): intavaginally

*Prescription only:*

Fluconazole **(DIFLUCAN**): PO, IV, intravaginally

Terconazole (TERAZOL): intravaginally

Metronidazole (FLAGYL): PO, IV

NURSING IMPLICATIONS: IV

1. creams are not recommended to be used with tampons or diaphragms.

2. not recommended for use in pregnancy or lactation.

**3. FLAGYL** is used to treat trichomoniasis; teach client urine may turn red-brown

and *to avoid alcohol* as it can lead to serious side effects of throbbing

headaches, nausea, excessive vomiting, hyperventilation, and tachycardia.

4. suppositories or applicators are used to place medication in vagina.

5. if client does not see improvement within 3 days, she should return to her

healthcare provider.

**6. DIFLUCAN** can be given as a single dose for vaginal candidiasis.

**INTEGUMENTARY SYSTEM MEDICATIONS**

GENERAL NURSING IMPLICATIONS:

Topical medications are used primarily for local effects when systemic absorption is

undesirable.

*For topical application:*

Apply after shower or bath for best absorption, as skin is hydrated.

Apply small amount of medication and rub it in.

*ANTI-FUNGAL:* inhibits or damages fungal cell membrane either altering permeability or disrupting cell mitosis.

Clotrimazole **(LOTRIMIN**): topical

SE: nausea, vomiting, abdominal pain.

Nystatin (MYCOLOG ): topical

SE: hypersensitivity reaction- rash, urticaria, pruritus.

Ketoconazole **(NIZORAL**): PO, topical

SE: hepatotoxicity, gynocomastia

Griseofulvin **(FULVICIN): PO**

SE: gynecomastia

NURSING IMPLICATIONS:

1. monitor hepatic function ( when on oral medication).

2. avoid alcohol due to potential liver problems.

3. check for local burning, irritation, or itching with topical application.

4. take griseofulvin **(FULVICIN )** with foods high in fat, (e.g., milk, ice cream), to

decrease GI upset and assist in absorption.

5. prolonged therapy ( weeks or months) is usually necessary, especially with

griseofulvin **(FULVICIN)** with foods high.

6. Uses: tinea infections, fungal infections, candidiasis diaper dermatitis,

***ANTIVIRAL:*** reduces viral shedding, pain, and time to heal.

Acyclovir **(ZOVIRAX)**: topical, PO, IV.

SE: IV: phlebitis, rash, hives

PO: nausea, vomiting

Topical: burning, stinging, pruritus

Vidarabine (Ara-A, **Vir\_A ):** IV, ophthalmic

SE: anorexia, nausea, vomiting

Ophthalmic: burning, itching

NURSING IMPLICATIONS:

1. apply topically to affected area six times per day.

2. avoid auto-innoculation; wash hands frequently; apply with gloved hand.

3. avoid sexual intercourse during duration of genital lesions.

4. drink adequate fluids.

5. infuse TV preparations over 1 hour, use an infusion pump for accurate delivery.

**6. Uses:** herpes infections.

***ANTI-INFLAMMATORY:*** decreases the inflammatory response.

Triamcinolone adetonide (ARISTOCORT ): topical

SE: skin thinning, superficial dilated blood vessels (teleangiectasis), acne-like

eruptions, adrenal suppression.

NURSING IMPLICATIONS:

1. Triamcinolone and hydrocortisone cremes come in various strengths and potency.

Watch the percent strength.

2. applied 2-3 times a day.

3. use an occlusive dressing only if ordered.

4. encourage client to use the least amount possible and for the shortest period of time.

**TOPICAL ANTIBIOTICS FOR TREATMENT OF BURNS:**

***TOPICAL ANTIBIOTICS:*** prevent and treat infection at the burn site.

Silver sulfadiazine (SIVADENE)

SE: pain, burning on application. Hypersensitivity: rash, itching, or burning

sensation in unburned skin.

NURSING IMPLICATIONS:

1. liberal amounts are spread topically with a sterile, gloved hand or on impregnated

gauze rolls over the burned surface.

2. if discoloration occurs in the **SILVADENE** cream, do not use.

3. dressings are not required, but are frequently utilized. A thin layer of cream is

spread evenly over the entire bum surface,

4. client should be bathe or tubbed daily to aid in the debridement

5. medication does not penetrate eschar and is bacteriocidal.

6. on extensive burns, monitor urine output and renal function; a significant amount

of sulfa may be absorbed.

Mafenide acetate **(SULFAMYLON 10% )**

SE: pain, burning or stinging at application sites; excessive loss of body water;

excoriation of new tissue; may be systemically absorbed and cause metabolic acidosis.

NURSING IMPLICATIONS:

1. bacteriostatic medications diffuses rapidly through burned skin and eschar is

effective against bacteria under the eschar.

2. dressings are not required, but are frequently utilized. A thin layer of cream is spread

evenly over the entire bum surface.

3. monitor renal function, as medication is rapidly absorbed from the burn surface and

eliminated via the kidney.

4. pain on application occurs.

**VASCULAR** SYSTEM **MEDICATIONS**

***ANTHYPERLIPIDEMIC MEDICATIONS:*** decreases LDL cholesterol, but

preferably does not decrease the HDL cholesterol. First line for increased cholesterol is dietary therapy to reduce cholesterol intake.

Cholestyramine **(QUESTRAN): PO**

Colestipol **(COLESTID ): PO**

SE: GI disturbances, constipation

NURSING IMPLICATIONS:

1. supplemental fat soluble vitamins in long-term therapy.

2. mix powder with several ounces of fluid for administration,

Nicotinic acid (NlACIN, NICOLAR): PO

SE: flushing, hyperglycemia, hyperuricemia, GI disturbances.

NURSING IMPLICATIONS:

*1.* used with caution in clients with gall bladder disease, diabetes and gout.

2. flushing occurs in almost all clients, will diminish, over several weeks.

Gemfibrozil **(LOPID** ): PO

Lovastatin **( MEVACOR ): PO**

SE: rashes, GI disturbances, hepatoxic

NURSING IMPLICATIONS:

1. should not be given to clients gall bladder disease.

2. will potentiate warfarin derivative anticoagulants (COUMADIN).

***ANTICOAGULANTS:***prolong coagulation by inactivation of clotting factors

(heparin) and by decreasing synthesis of clotting factors (coumadin).

Heparin; IV, SQ

SE: hemorrhagic tendencies: - hematuria, bleeding gums, frank hemorrhage

NURSING IMPLICATIONS:

1. check the aPTT for normal levels vs therapeutic levels.

2. Protamine sulfate is the antidote.

3. will not dissolve established clots.

4. may not be given PO.

5. effective immediately after administration.

6. anticoagulation effect is short.

7. identify if heparin is being used to treat thromboembolic problem or as prophylaxis

for thromboembolic problems.

Enoxaparin (LOVENOX): SQ

NURSING IMPLICATIONS:

1. Use: prophylaxis for coagulation in high-risk clients (hip or knee replacement).

2. dosage is not interchangeable with heparin.

***Coumadin Derivatives:***

Warfarin ( COUMADIN): PO, IV

**(DICUMASOL ): PO**

NURSING IMPLICATIONS:

1. check the PT and INR to evaluate level .of anticoagulation.

2. Vitamin K is the antidote.

3. client teaching for home care:

* bleeding precautions
* advise all health care providers of medication
* not recommended if pregnant or lactating
* maintain routine checks on coagulation studies.

4. utilized for long- term anticoagulation.

5. check drug literature whea administering with other medications; drug interactions are common.

6. should not be administered to clients at high risk for hemorrhagic problems.

7. oral contraceptives may decrease effectiveness.

**MUSCULOSKELETAL SYSTEM MEDICATIONS**

***ANTIGOUT:*** decreases the plasma uric acid levels by either inhibiting the synthesis

of uric acid or by increasing the excretion of uric acid.

Colchicine: PO, IV

SE: nausea vomiting

NURSING IMPLICATIONS:

1. take medication at earliest indication of impending gout attack.

2. take medication with food.

3. promote high fluid intake to promote uric acid excretion.

4. in acute attack, administer one tablet every hour until symptoms subside, or until

GI problems occur or a total of 8 mg has been taken.

Allopurinol **(ZYLOPRJM): PO**

SE: rash, GI distress, fever, headache.

NURSING IMPLICATIONS:

1. administer with food to decrease gastric upset.

2. discontinue medication if rash occurs.

3. use with caution in clients with renal insufficiency.

4. may be used to decrease serum uric acid levels in clients on chemotherapy.

Probenecid **(BENEMID): PO**

Probenecid + Colchicine **(COLBENEMID):** PO

SE: GI disturbances, headache, skin rash, fever.

NURSING IMPLICATIONS:

1. urate tophi deposits should decrease serum uric acid levels hi clients on

Chemotherapy.

2. lifelong therapy is usually required.

***SKELETAL MUSCLE KELAXANTS:*** relaxes skeletal muscle by depressing synaptic

pathways in the spinal cord.

Methocarbamol ( **ROBAXIN ): PO,** IM. IV

SE: drowsiness, dizziness, GI upset, rash, blurred vision

Cyclobenzaprine **(FLEXERIL): PO**

SE: drowsiness, dizziness, headache, GI upset, orthostatic hypotension.

Baclofen **(LIORESAL): PO**

SE: drowsiness, weakness, fatigue, confusion

NURSING IMPLICATIONS:

1. Use: muscle spasm associated with. MS, and spinal cord injury.

2. caution clients to avoid activities that require mental alertness for safety ( driving,

power tools, etc.)

3. evaluate client for postural hypotension.

4. advise client to avoid CNS depressants ( alcohol, opioids, antirustarnines).

***CALCIUM MEDICATIONS*** : hormones that preven the resorption of bone and

decrease serum calcium.

Calcitonin-Salmon(CALCIMAR): SQ, IM

SE: GI upset, local imflanunation at injection site, flushing

NURSING IMPLICATIONS:

1. monitor levels of serum calcium.

2. only given pameterally. .

Aminobisphosphonate (FOSAMAX): PO

SE: GI upset, nasal ulceration with spray, flushing, rash,

**(MIACALCIN**) nasal spray

NURSING IMPLICATIONS:

1. have client swallow tablet whole, do not chew.

2. Take in AM with large glass of water and wait at least 30 minutes before eating or

lying down.

3. make sure client has adequate intake of Vitamin D.

4. prevention of post menopausal osteoporosis

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PSYCHOSOCIAL INTEGRITY

**Client Need: Psychosocial Integrity**

I. Therapeutic Communication

A. Effective communication techniques

***Sample Question 1***

**A client walks by and says to the nurse, "I'm leaving now. I have to be home by 6 o'clock for supper." Which would be the most appropriate response by the nurse?**

A. "Tt is already 5:30 p.m. You can eat supper with us."

B. "Don't worry about supper. We have taken care of that for you."

C. "At home you had supper at 6:00 p.m. didn't you? Tell me about other things you did in the evening."

D. "Don't be silly. You know you always eat supper here at 6:00 p.m."

***Sample Question 2***

**A woman is** 30 years-old **and unexpectedly pregnant. She has decided to keep the pregnancy but is worried about being pregnant at her age. She asks the nurse for an opinion. What would be the nurse's best answer?**

A. "Oh, honey, don't worry, you'll have a healthy, happy baby." .

B. "Is there something in particular that worries you?

*C.* "Are you sure you want a baby at your age?"

D. "My morn had me when she was 41 -years- old."

***Sample Question 3***

**The client diagnosed as experiencing severe depression tells the nurse, “I wish I was dead; I have no reason to go on." What would be the most appropriate** response by **the nurse?**

A. "Don't be silly. You have lots of reasons to live."

B. "What makes you think you have no reason to go on?"

C. "There's a good movie on TV — maybe that will cheer you up."

D. "Have you been thinking about hurting yourself?"

***Sample Question 4***

**A client reports having "sinned" and feels unworthy of the nurse's attention. Which is the best response by the nurse?**

A. "I'm sure you haven't done anything wrong."

B. "There are many people who really care about you."

C. "You know that's not true."

D. "What do you think you've done?"

***Sample Question 5***

**A client is admitted with a diagnosis of schizophrenia, oriented to the unit routine, and taken to a room. A short time later the client appears in the day room unclothed. What is the best response by the nurse?**

A. "I'll take you to your room so you can get dressed."

B. "You know you're supposed to be dressed when you come in here."

C. "What happened to your clothes?"

D. "You'll embarrass the other clients coming out here without clothes."

1. **Listen**
2. Acknowledge
3. Give feedback
4. Be congruent (mutual fit)
5. Clarify
6. Focus or defocus the client
7. Validate
8. Reflect
9. Ask open-ended questions

10. Encourage in a nonverbal way

11. Restate

12. Paraphrase

13. Respond in a neutral way

14. Use incomplete sentences

15. Minimize verbalization

16. Initiate broad statements

17. Use translator as needed

**B. Blocks** to Effective communication

1. Make assumptions

2. Give advice

3. Change the subject

4. Use of social response

5. Invalidate client

6. Use of false reassurance

7. Overload conversation

8. Underload conversation

9. Use of incongruent messages

10. Make value judgments

II. Basic Mental Health Concepts

**A.** Assessment

1. Mental Status
2. General appearance
3. Orientation
4. Affect, mood
5. Body movements
6. Speech

*Sample Question 6:*

When the nurse asked what brought the client to the hospital, the client then replied, “ A cab.” This reply is an example of what specific condition?

A. Denial

B. Concrete thinking

C. Hallucination

D. Rational answer

1. Thought processes – delusions
2. Perceptions - illusions, hallucinations
3. Memory
4. General information and education/religious and spiritual influences
5. Judgment – insight
6. Potential for danger

2. DSM IV - Multi-axial system

1. Axis I: Clinical disorders; other conditions that may be a focus of clinical attention.
2. Axis II: Personality disorders; mental retardation
3. Axis III: General medical condition
4. Axis IV: Psychosocial and environmental problems
5. Axis V: Global assessment of functioning

B. Personality

1. Attitudes and behaviors particular to an individual.
2. Influenced by genetics and interactions with the environment
3. Total of an individual's internal and external patterns of adjustment to life.
4. Freud - id, ego, superego

C. Stress

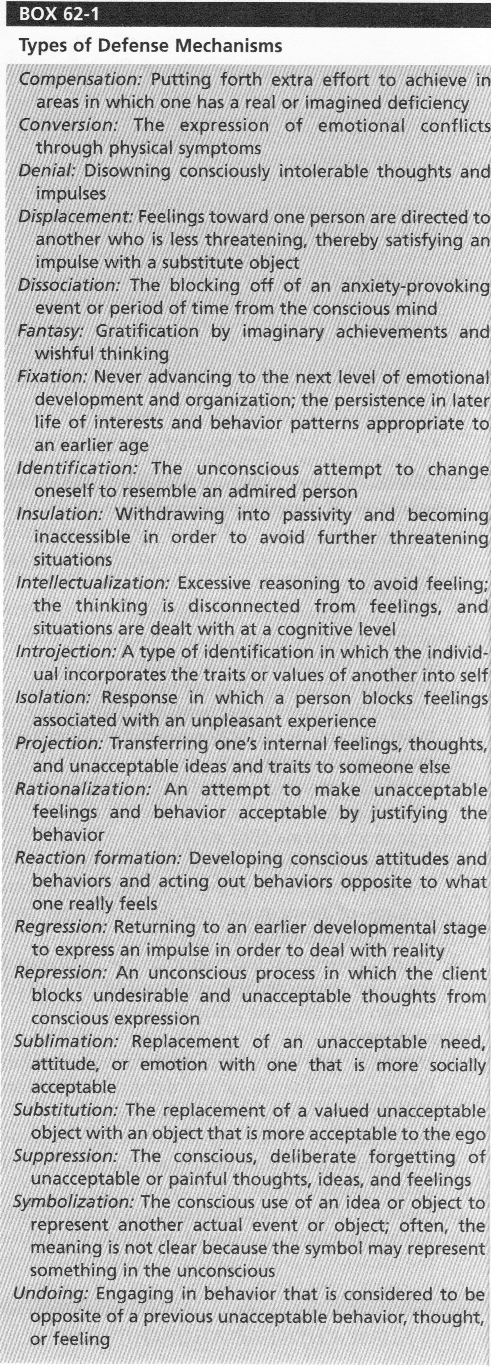
1. Nonspecific reaction of the body to a demand made upon it.

2. Response is learned or conditioned behavior

D. Anxiety

1. Vague feeling of apprehension resulting from perceived threat to the self.
2. Response to a stressful state; internal process of experience

E. Defense Mechanisms used in Adaptation and Coping[[4]](#footnote-5)



F. Crisis Intervention

1. **Definition - Use of the nursing process toward the goal of alleviating the** impact **of the crisis while enhancing the capacity for growth, development and change.**
2. **Behaviors seen with illness crisis**

**a. Denial**

**b. Anxiety**

**c. Shock**

**d. Anger**

**e. Withdrawal**

**3. Nursing Care**

**a. Phases of Crisis**

1) Increased anxiety and tension

2) Normal coping ineffective, seeks assistance

3) Panic state

4) Personality changes

5) Resolution

**b. Data Collection - collect data about the balancing factors and client's current support system and safety**

**c. Care**

1) Try to understand client's feelings

2) Maintain safety of client

3) Enlist the aid of others

4) Collaborate with health team members

5) Use non-verbal communication

6) Offer concrete assistance and be directive

7) Monitor progress and provide for follow-up

**4. Treatment**

**a. Group Therapy**

**b. Family Therapy**

**c. Environmental Therapies**

**d. Psychotherapy**

**e. Somatic Therapy**

1) Electroconvulsivc therapy (ECT)

2) Phototherapy - for Seasonal Affective Disorder (SAD)

***Sample Question 7***

**Because there is loss of a body part, the mastectomy client** goes **through the grieving** process. **How can the nurse support the client?**

A. Convey the attitude that this is a necessary part of growth and will soon pass

B. Recognize that the client is immature and overreacting to the situation

C. Recognize that the client may sometimes feel irritable, anxious and depressed

D. Make the client participate in self-care to promote acceptance of the sur

**5. Grief and Loss**

**a. Stages of Grieving/Dying**

1) Denial and isolation

2) Anger

3) Bargaining

4) Depression

5} Acceptance

**b. Assessment**

1) Previous coping mechanisms

2) Potential for violence

3) Changes in self

4} Changes in health maintenance

**c. Interventions**

1) Provide support

2) Be aware of own feeling

3) Assess religious/spiritual beliefs

4) Assist client in saying good-bye

5) Provide medications as ordered

**Post-traumatic stress disorder - related to unexpected, extraordinary life ev**

**a. Symptoms**

1) Very introverted

2) Social withdrawal

3) Much guilt and unfocused anger

4) irritable and hostile

5) Low self-esteem

6) Sleep disturbances (nightmares)

7) Symptoms of depression, substance abuse

8) Impaired relationships

**b. Interventions**

1) Educate about the disorder

2) Non-stimulating and non-threatening environment

3) Provide supportive and protective relationship

4) Encourage discussion of feelings

5) Set limits on behavior

6) Redirect aggressive or hostile behavior immediately

7) Antianxiety medications

III. Psychiatric Disorders

A. Cognitive Mental Disorders

***Sample Question 8***

**Which is true regarding client loss of orientation to time, place, and person?**

A. Place is the first to go

B. Time is the second to go

C. Person is the last to go

D. Person is the first to go

***Sample Question*** *# 9*

**What is the goal of nursing care for the client with a cognitive disorder?**

A. Provide new and varied experiences to prevent boredom

B. Structure the day with consistent routines

C. Always offer the client a choice

D. Help client with decision making process

**1. Dementia - altered mental state related to cerebral disease; usually slow and progressive loss of intellectual function; often irreversible and interferes with ADL**

**2. Delirium - rapid change in consciousness occurring over short time; associated with reduced awareness and attention to surroundings, disorganized thinking, sensory misinterpretation, and irrelevant speech**

***Sample Question 10***

**Which treatment would be included for a client with Alzheimer's?**

A. A high cholesterol diet

B. Variable, complex routines

C. Reminiscence

D. Frequent reorientation

**3. Alzheimer's Disease**

**4. Nursing Care with Cognitive Disorder**

B. Thought Process Disorders

***Sample Question 10***

**What is a major defense mechanism common to paranoid schizophrenia, paranoia, and other paranoid type reactions?**

A. Undoing

B. Projection

C. Conversion

D. Reaction Formation

***Sample Question 11***

**A client was admitted to the psychiatric hospital after assaulting a psychiatrist and smashing two heavy doors. The client had been in a general hospital 2 days prior to this admission with behavior described as combative, suspicious, a*nd* impulsive. The diagnosis is schizophrenia, paranoid type. What is included in the nursing care for this client?**

A. Orient to time and place and assure of safety

B. Try to explain the client's false ideas

C. Allow situations where staff may be seen talking, but can not be heard

D. Provide a quiet, safe environment

***Sample Question 12***

**What would be most helpful to establish a bond and promote a sense of trust with the paranoid client?**

A. Complex language to explain routines

B. A passive but interested approach

C. Consistent, honest interventions

D. Insistence that the client respond to staffs verbal demands

**1. Schizophrenia- abnormal behavior pattern characterized by a breakdown of integrated personality functioning, withdrawal from reality, emotional blunting, distortion and regressive behavior, poor communication, impaired interpersonal relationships and disturbances in thoughts and behavior.**

**a. Symptoms, characteristics**

1) Cognitive impairment

2) Perceptual changes - illusions/hallucinations

3) Affective changes

4} Behavioral changes

5) Social ehanges

**b. Assessment**

1) Mental functioning

2) Ability to function in society

3) Ability to care for self

4) Safety

**c. Interventions**

1) Self-care activities

2) Counseling, education

3) Neuroleptics/Antipsychotics

4) Teaching

**2. Delusion - false, fixed belief about self that cannot be corrected by feedback and is not accepted by other persons**

**a. Gradeur**

**b. Ideas of reference**

**c. Persecution**

**d. Somatic delusions**

**e. Thought broadcasting**

**f. Thought insertion**

**g. Thought withdrawal**

***Sample Question***

**What is the best description of a hallucination?**

A. An emotional retreat from reality

B. A sensory experience occurring without environmental stimulus

C. A misinterpretation of a sensory experience

D. A false idea based upon an external event

**3. Hallucinations**

***Sample Question***

**A client diagnosed as being depressed is found to have symptoms of anorexia and sleep disturbance. Which is a correct conclusion by the nurse?**

A. They are signs of depression

B. Depression is a misdiagnosis

C. They are signs of an anxiety disorder

D. They are effects of hospitalization

***Sample Question***

**Nursing care of a client suffering with depression should include which action by the nurse?**

A. Make every effort to cheer up the client

B. Assist with basic daily needs

C. Provide rigid, detailed tasks

D. Realize that the client's suicidal thoughts are probably not s>

***Sample Question***

**A client diagnosed with depression seems to be improving, and appears both cheerful and talkative. Which should the nurse consider in interpreting this behavior?**

A. MAOl's often produce a sudden relief of depression

B. The client may be planning a suicide attempt

C. The client has been misdiagnosed and is probably manic depressiv

D. The treatment is working, and the client should be discharged soon

1. Depression - mood disturbance with loss of interest in all usually pleasurable outlets such as food, sex, work, friends, hobbies, or entertainment; loss of energy or fatigue

**1. Symptoms of Depression**

**a. Psychologically depressed mood**

**b. Appetite disturbance - usually anorexia**

**c. Sleep disturbances**

**d. Psychomotor retardation**

**e. Anxiety**

**f. Decreased** self-esteem

**g. Somatic complaints**

**h. Decreased or lack of interest in alt activities**

**i. Suicidal thoughts**

**j. Poor personal hygiene, posture, clothes**

**2. Interventions**

**a. Monitor physical behaviors**

**b. Thought process - slowed, ruminative, blocking, restating**

1) Allow time for client to respond to questions

2) Focus on the here and now

3) Short, successful activities

4) Limit choices

5) Be calm, matter of fact, non-judgmental

**c. Warm, supportive, repeated attention**

**d. Suicide precautions**

**e. Antidepressants**

**f. ECT**

**g. Psychotherapy**

**h. Requires long-term follow-up**

***Sample Question***

**A client was admitted 2 days ago with manic depressive psychosis and has not slept in 2 days. In addition to activity, the client might be expected to exhibit which symptom?**

A. Looseness of associations

B. Mutism

C. Rapid speech

D. Flight of ideas

***Sample Question***

**The manic depressive client should be watched closely for which sign?**

A. Electrolyte imbalance

B. Exhaustion

C. Elevated temperature

D. Hypotension

***Sample Question***

**Nursing care of the elated, overactive client would include which action by the nurse?**

A. Monitoring activities that eliminate excessive energy

B. Exerting strong, rigid controls on behavior and interactions

C. Placing the client in restraints upon becoming overactive

D. Having the client spend time with other active clients

D. Bi-polar Disorder - mood swings from depression to mania with some periods of normal mood

**1. Symptoms of manic state**

**a. Flight of ideas**

**b. Elated, grandiose mood**

**c. Psychomotor excitement**

**d. Physiologic symptoms**

**2. Interventions**

**a. Maintain physical status**

b. Assess **and assist with stabilization of thought processes**

**c. Decrease complications/hazards of abnormally inflated self-esteem**

**d. Prevention of painful consequences**

**e. Adjunct therapy**

**f. Lithium**

***Sample Question***

**What is the most appropriate approach by the nurse in caring for a client with an anxiety?**

A. Strict, authoritarian

B. Calm, quiet

C. Empathetic

D. Silent

***Sample Question***

**Which is an appropriate implementation for treating an anxious client?**

A. Provide detailed tasks for the client to perform to relieve anxiety

B. Allow the client to ventilate feelings until anxiety lessens

C. Schedule the client for regular physical exercise to work off anxiety

D. Encourage the client to identify behavior and symptoms related to anxiety

***Sample Question***

**A client medicated for anxiety, demonstrates which positive behavior related to the medication?**

A. Increased appetite

B. Normal pulse and respirations

C. Clear communications

D. Stable blood pressure

E. Anxiety - disorders that are the result of repression of deep emotions or feelings and are characterized by feelings of fear or insecurity. Symptoms are associated with autonomic nervous system.

**1. Generalized Anxiety Disorder - unrealistic or excessive anxiety about 2 or more life experiences causing feelings of distrust and impairment in ADL’s, lasting at least 6 months.**

**a. Symptoms**

1) Muscle aches

2) Shakes

3) Palpitations

4) Dry mouth

5) Nausea/vomiting

6) Hot flashes

7) Chills

8) Polyuria

9) Difficulty swallowing

**b. Interventions**

a) Counseling

b) Apply coping skills

c) Improve self-care

d) Milieu Therapy

e) Antianxiety medications - Xanax (alprazolam), Klonopin (clonazepam), Ativan (lorazepam)

**2. Panic attack - person lives in fear of another attack and avoids perceived triggers**

**3. Phobias *-* persistent, pathological fear of objects or situations that present little danger, resulting from long-term repressed anxiety**

**a. Types**

1 )\* Acrophobia - fear of heights

2) Agoraphobia - panic attacks in normal, everyday situations

3)\* Hematophobia - fear of blood

4) Mysophobia - fear of germs

5) Social phobias - fear of crowds, public speaking, etc.

6) Simple phobias - fear of spiders, snakes, dark, rats, etc.

7)\* Claustrophobia - fear of enclosed spaces \*Common phobias

**b. Intervention**

1) Maintain a calm milieu

2) Assurance that staff and other clients won't belittle the client for behaviors

3) Provide activities that are constructive and promote feelings of safety

4) Promote social interaction - the client is usually withdrawn

5) Do not attempt to interpret client's behavior

6) Monitor for panic attacks if forced to face the feared object suddenly

7} Observe for signs of suicidal thoughts

8} Document behavior changes

**4. Obsessive Compulsive Disorder (OCD)**

**a. Definition - persistent, intrusive thought or action performed systematically, but seemingly without purpose; due to repressed anxiety state**

**b. Interventions**

1) Provide time to engage in the ritual

2) Help problem-solve anxiety after the client has completed the ritual; role model appropriate behavior

3) Suicide precautions

4) Provide a warm, supportive environment with few changes

5) Monitor client's physical needs

6) Provide anti-anxiety medications combined with antidepress;

7) Document behavior changes

***Sample Question***

**An attractive 24-year-old client is admitted to the psychiatric unit with a diagnosis of antisocial personality disorder. Which behavior *is* most typical for this client?**

A. Withdrawal

B. Obedience

C. Ritualistic behavior

D. Manipulative behavior

F. Personality Disorders

**1. Abusive - uses violent or abusive behavior to cope with anxiety**

**2. Dependent - lack of self-confidence; pervasive pattern of dependent and submissive behavior. Wants others to make decisions for them and tends to feel inferior.**

**3. Paranoid - Suspicious of other people**

**4. Borderline - interpersonal relationships are intense and unstable; impulsiveness and unpredictable behavior that is self-damaging or self-mutilating**

**5. Antisocial- history of continuous and chronic violation of the rights of others; immediate self-gratification**

**6. Passive-Aggressive - presents with passive type behaviors; procrastinator; pouty and irritable when asked to perform tasks.**

***Sample Question:***

**Which reaction often causes depression and suicide'**

A. Sudden unexpected event

B. Loss of a parent

C. Overprotective parent

D. Series of crises

***Sample Question***

**When the school nurse talks with a 14-year-old teenager whose parents have concerns about her, she** says **that she is feeling, "OK," and** says **that she is going to work to get her grades up. Her girlfriend says,** "Yes, she **even** gave **me her dance shoes." What** significance **does the nurse give to this event?**

A. She is probably serious about studying

B. She is trying to avoid the temptation of dancing by giving away her shoes

C. Giving away her shoes may indicate thoughts of self-destruction

D. It is not significant; teenagers often loan treasured things to each other

***Sample Question***

**A client indicates having thoughts of suicide but has no plans. The nurse rates the client's lethality as low and begin problem-solving with the client. Which is** the best **statement by the nurse?**

A. "I'm sure you'll feel better in a few days."

B. "It's not unusual to feel this way."

C. "Tell me what's most important to you."

D. "You can't go back to work until you get some professional help."

G. Suicide

**1. Characteristics, symptoms**

**a. Noticeable improvement in mood and affect**

**b. Feelings of hopelessness, helplessness, guilt and aggression**

**c. Gives** away **personal items**

**d. Progressive inability to adapt and cope with either internal**

**e. Usually follows a series of "small"** stressors **rather than** j u s

**f. Talks about death or suicide and becomes preoccupied aboi**

**g. Difficulty sleeping or awakes very early in morning**

2. Danger signs

**a. History of previous suicide attempts**

**b. Change in personality**

c. Change in mood

**d. Giving away valued possessions**

**e. Getting things in order**

f. Direct verbalizations

g. Long-term chronic illness

h. Alcoholism or drug abuse

**i. Teenagers or** elderly **- high risk groups**

**j. Recurrent surgeries**

**k. Suicide note**

**3. Interventions**

a. Assess the extent of the client's suicide intent

**b. Suicide precautions**

**c. Offer support, safety, esteem**

**d. Treat underlying depression**

H. Eating Disorders

***Sample Question:***

**A Client, age 16, is brought to the emergency room because of fainting spells. Examination reveals a weight of 65 pounds and severe electrolyte imbalance. What other symptoms might be expected?**

A Outgoing, active, friendly

B. Aversion to food; disturbed body image

C. Diarrhea, increased WBC, fever

D. Suicidal thoughts, over activity

***Sample Question***

**Once the acute physical problems of the anorexic client are under control, a behavior modification program is established. In development of the program, which consideration would interfere with further progress?**

A. Giving rewards based on privileges is unimportant to the client

B. Denying privileges for weight loss will reinforce compliance

C. Keeping the plan a secret from the client will prevent sabotage of plan

D. Weighing the client daily will monitor frequent changes

***Sample Question***

**Which behavior indicates an improvement in the anorexic client's condition?**

A. Expressing a need to gain weight

B. Eating 2 oz. of lean meat daily

C. Ability to do 1 hour of calisthenics

D. Refusal to go to the parents' home

1. **Anorexia Nervosa - intense drive for thinness with extreme weight loss, issues of self control; producing high anxietyused by unresolved**

**a. Symptoms**

1. Refusal to maintain normal body weight—excessive weight loss of 25% or more of average body weight.

2) Intense fear of becoming fat even though currently underweight

3) Consumption of only 200 to 400 calories daily

4) Denial of seriousness of current low body **weight**

5) Absence of menarche for women

6) Obsessive thoughts: excessive exercising

7) Sleeps very little (2-3 hours per night)

**b. Education**

1) Education about nutrition, exercise, and sexuality

2) Assess medication

3) Psychotherapy for underlying issues

4) Promote positive self-concept

5) Promote healthy coping skills

6) Promote adequate nutrition

**c. Evaluation**

**2. Bulimia - recurrent episodes of binge eating followed by purging**

**a. Symptoms**

1) Recurrent episodes of binge eating - large amounts of food in short period of time

2) Loss of control during the eating episode

3) Recurrent inappropriate actions to avoid weight gain and purging of calories

4) Fasting after food binges for extended periods of time

5) Weight control through excessive exercise

6) Self-esteem controlled by body shape and weight

7) Purging type - self induced vomiting, laxatives, diuretics or enemas

8) Non-purging type - fasting or excessive exercise to compensate for extensive food

9) Impulsiveness: Thoughts of harming self; suicidal risk

**b. Interventions**

1) Promote healthy coping skills

2) Proper nutrition

3) Education about nutrition, exercise, and sexuality

4) Assess medication

5) Psychotherapy for underlying issues

***Sample Question***

**A client diagnosed as an alcoholic denies alcoholism because the same type of drinks are not consumed—that is, there is no craving for any specific type of alcohol. How is the client affected by switching drinks?**

A. Drunker than staying with one kind of alcohol

B. Oxidizes alcohol at a slower rate

C. Increases the likelihood of GI disturbances

D. Decreases the depressant effect of alcohol

***Sample Question***

**Ingesting alcohol has what effect on the alcoholic?**

A. Increasing dependency needs

B. Satisfying ego needs

C. Decreasing impulsive tendencies

D. Strengthening superego controls

***Sample Question***

**Which medication is often prescribed to help an** alcoholic stop **drinking?**

A. Diazepam (Valium)

B. Chlordiazepoxide (Librium)

C. Disulfiram (Antabuse)

D. Amitriptyline (Elavil)

***Sample Question***

**Three days after admission for alcoholism, the client appears agitated and anxious. The nurse is aware** of the **possibility for acute alcohol withdrawal and expects to find which other characteristics?**

A. Bradycardia, decreased respirations

B. Tachycardia and hypertension

C. Hypotension, normal pulse rate, increased respirations

D. Tachycardia, increased respirations and normal blood pressure

IV. Substance use Disorders

**A. Definition - maladaptive behavioral changes that may occur in individuals who misuse drugs that affect the central nervous system (typically psychoactive drugs and/or alcohol)**

**B. Risk Factors**

**1. Cultural factors**

**2. Family dysfunction**

**3. Personality disorders**

**4. Poverty and deprivation**

***5.* Genetic predisposition**

**6. Excessive drug use**

**7. Presence of psychological conflict**

**C. Diagnostic** criteria

1. Abuse of at least one month's duration

2. Social complications of use

3. Dependence, tolerance or withdrawal symptoms

4. Pathological pattern of behavior

D. Interventions

1. Individual and group counseling

2. Support groups, milieu treatment

3. Relationship skills

4. Self-care activities

5. Special care for follow-up with dual diagnoses

6. Health promotion/maintenance teaching

7. Pharmacologic intervention

8. Delirium Tremens

E. Other Substances

1. Similar to alcohol abuse

2. Heroin, Narcotics, Cocaine, Metamphetamines

3. Treatment similar to alcohol

**V. Abuse - Physical, Emotional, Sexual, Elder**

A. Causes

1. Not fully known

2. Abusers tend to have low self-esteem and a history of abuse; may come from dysfunctional family

3. Abusers often have personality disorders and poor relationship skills

4. Often family stressors

B. Signs, symptoms and behavioral indicators

1. History

a. Delay in seeking medical care

b. Discrepancies in the history

c. History of multiple emergency room visits for various injui

d. A story that is vague and contradictory

e. Sudden change in behavior

f. Care giver refuses to allow visitors to see elder alone

g. Significant other or parent answers all questions

h. Dependent or co-dependent personality

i. Reliance on the abuser

2. Physical Exam

a. Multiple bruises and abrasions especially around the trunk and buttocks

b. Old bruises as well as new ones

c. Suspicious burns in children

d. Apathetic child and adult

e. Poorly nourished child

f. Child who does not turn to parents for comfort :

g. Unexplained vaginal/genital bruising or bleeding

C. Treatment/Nursing Care

1. Notify abuse hotlines when abuse suspected - may remain anonymous

2. Children may need to be removed from the home

3. Make adult feel safe enough to discuss events/concerns with health care professional

4. Provide information about abuse and where to go for help

5. Ensure safety

6. Know your own thoughts/feelings about abuse

7. Remain nonjudgmental/show empathy

8. Know your agency policy

D. Prevention

1. Education begins in preschool about healthy family behaviors

2. Build self-esteem and assertiveness skills

3. Eliminate co-dependent behavior

4. Re-enforce that violence is NEVER an acceptable way to deal with problem

PSYCHOTROPIC DRUGS

**Antipsychotics**

**Phenothiazines**

**Drug:** chlorpromazine (Thorazine)

Usual Dose: 30-1200 mg

**Drug:** thioridazine(Mellaril)

Usual Dose: 30-800 mg

**Drug:** mesoridazinc (Serentil)

Usual Dose: 100-400 mg

**Drug:** fluphcnazinc (Prolixin)

Usual Dose: 1-20mg

**Drug:** perphenazinc (Trilafon)

Usual Dose: 6-64 mg

**Drug:** thiothixene (Navane)

Usual Dose: 6-60 mg

**Butyrophenones**

**Drug:** halopcridol (Haldol)

Usual Dose: 2-15 mg

Uses: psychotic behavior also used as:

antiemetic. analgesic, anesthesia

Side Effects: Quinidinc-like effect, autonomic

effect parasympathetic, beta-adrenergic,

convulsant liver dysfunction,

hematologic complications, postural

hypotension, skin reactions;

extrapyrarnidal symptoms

**Antianxiety**

**benzodiazepines**

chlordiazepoxide (Librium)

Usual Dose: 15-300 mg

**Drug:** diazepam (Valium)

Usual Dose: 4-10 mg

**Drug:** oxazepam (Serax)

Usual Dose: 30-200 mg

**Drug:** clonazepam (Klonopcn)

Usual Dose: 0.5 mg-1 mg

**Drug:** lorazepam (Ativan)

Usual Dose: 2-6 mg

**Antidepressant**

**MAOI**

**Drug:** isocarboxazide (Marplan)

Usual Dose: 10-30 mg

**Drug:** tranylcypromine (Parnate)

Usual Dose: 10-30 mg

**Drug:** phenelzine (Nardil)

Usual Dose: 15-75 mg

Uses: depression- use limited due to dietary

restrictions and side effects

Side Effects: postural hypotension, dizziness.

restlessness, nausea, vomiting, constipation, am

dry mouth, chills, tachycardia, edema,

toxic: hypertensive crisis

**Tricyclic**

**Drug:** imipramine (Tofranil)

Usual Dose: 50-200 mg

**Drug:** arnitriptyline (Elavil)

Usual Dose: 75-150 mg

**Drug:** doxepin (Sinequan)

Usual Dose: 75-300 mg

Uses: depression, mild anxiety

Side Effects: hypotension, tachycardia dysrhytlimias,

confusion, anxiety, allergic reactions,

anticholinergic effects, blood dyscrasias,

nausea, vomiting, fatigue, drowsiness

**SSRl's**

**Drug:** fluoxetine (Prozac)

Usual Dose: 20 mg daily

**Drug:** sertralme (Zoloft)

Usual Dose: 50 mg daily

**Drug:** paroxetine (Paxil)

Usual Dose: 20-50 mg/day

Uses: depression, anxiety

Side Effects: weight loss, diz

dysfunction

ess, hypotension, sexual

**Antimania**

**Drug:** lithium carbonate (Lithane)

Usual Dose: 900-1800 mg

Uses: calm mania, prevent recurrence of mania

and depression

Side Effects: thirst, polyuria, nausea.

Toxicity: diarrhea,

vomiting, drowsiness, muscle weakness;

slurred speech, abdominal pain, dizziness;

convulsions, circulatory failure, coma.

Serum level: 1-15 mEq/L acute

0.6-1.2 mEq/L maintenance

**Analgesics**

**Narcotic**

**Drug:** meperidinc (Demeroi)

Usual Dose: 50-150 mg

**Drug:** codeine

Usual Dose: 15-60 mg

**Drug:** morphine

Usual Dose: 5-15 mg

**Drug:** hydrornorphone (Dilaudid)

Usual Dose: 1-4 mg

**Drug:** niethadone (Dolophinc)

Usual Dose: 2.5-10 mg

**Drug:** oxycodone/aspirin (Percodan)

Usual Dose: 5-10 mg q 6 hours

**Drug: pentazocine** (Talwin)

Usual Dose: 50-100 mg

**Drug:** propoxyphene (Darvon)

Usual Dose: 32-65 rng

Uses: moderate-severe pain

Side Effects: nausea, vomiting, constipation, po

hypotension, respiratory depression,

behavioral changes (restlessness,

delirium, insomnia), allergic reactions,

constrictions of pupils

**Hypnotic/Sedative:**

**Barbiturate**

**Drug:** phcnobarbital (Luniinal)

Usual Dose: 30-100 mg

**Drug:** secobarbital (Seconal)

Usual Dose: 100-200 nig

**Drug:** amobarbital (Amytal)

Usual Dose: 100 mg

**Drug:** diphenhydramine hydrochloride (Bcnadryl)

Adults: 25-50 mg (sedation)

**Non-Barbiturate**

**Others**

**Drug:** chloral hydrate (Noctcc)

Usual Dose: 250 mg-2 g.

**Alcohol** Treatment

**Drug:** disulfirarn(Antabuse)

Usual Dose: 500 nig daily

Uses: sensitize individual to alcohol

Side Effects: drowsiness, impotence, headache,

metallic taste. With alcohol ingestion:

InpcncntilaiiiHi, nausea, vomiting,

headache, dyspnea, drowsiness

**Anticonvulsants**

**Drug:** phenytoin (Dilantin)

Usual Dose: 300-400 mg daily

**Drug:** trimethadione (Tridione)

Usual Dose: 900-1200 mg daily

**Drug:** ethosuximide (Zarontin)

Usual Dose: 500 mg daily (initially)

**Drug:** primidone (Mysoline)

Usual Dose: 750-1.5 mg daily

**Drug:** carbamazepine (Tegretol)

Usual Dose: 600-1200 mg daily

**Drug:** valproic acid (Depakene)

Usual Dose: 30 mg/kg/day

Uses: Epilepsy

Side Effects: apathy, nervousness, dizziness, ataxia,

blurred vision, hyperplasia of gums,

sensitivity reactions

**Stimulants**

**Amphetamines**

**Drug:** dextroamphetamine (Dcxedrine)

Usual Dose: 25-15 mg

**Drug:** methylphemdaic (Ritalin)

Usual Dose: 10-50 mg

Uses: narcolepsy, hyperkinetic behavior, obesity

Side Effects: elevated BP, tachycardia, GI disorders.

High potential for abuse

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| **MENTAL HEALTH NURSING REVIEW**  **GLOSSARY**  **ACTIVE** LISTENING— Attentive involvement with as  client; a therapist's ability to hear the client without interpreting along the lines of the therapist's own experiencee or problems.  AFFECT— Emotion or feeling; the tone of one's reaction s to persons and events.  AMBIVALENCE— Simultaneous conflicting feelings ***or*** attitudes toward a person or object; the subjective state ofsimultaneously loving and hating an object.  **ANTI DEPRESSANT DRUG— A** medication **used to treat** severe depression. Antidepressants are divided into twoprincipal categories, the tricyclic compounds and thernonoamine oxidase inhibitors.  **ANTIPSYCHOTIC DRUG— A** medication used to control certain psychotic symptoms, notably disordered thinking, agitation, and excitement. The principal classes of antipsychotics are phenothiazincs, thioxanthenes, and  butyrophenones.  **ANXIETY— A** diffuse feeling of dread, apprehension, or unexplained discomfort; a subjectively painful warning of impending danger that motivates the individual to take corrective action in order to relieve this unpleasant feeling.  **APATHY** — Lack of feeling, interest, concern, or emotion.  AUTISTIC— Relating to private, individual affects and  ideas that are derived from internal drives, hopes, and wishes. Most commonly refers to the private reality of persons labeled schizophrenic as opposed to the shared reality of the external world.  **BEHAVIOR— Any** human activity, cither mental or physical. Some behavior can be observed, but other behavior can only be inferred. For example, an observer can infer from physical activity that mental behavior has taken place.  DELUSION— An important personal belief that is almost certainly not true and is resistant to modification.  DEVELOPMENTAL STAGES— A series of normative conflicts or specific psychosocial tasks with which every person must deal. Developmental stages are a kind of  timetable for personality development specifying the  desirable rate of growth or accomplishment and favoring certain aspects of development at the expense of others.  DI SO RIENTATION— Impairment in the understanding of temporal, spatial, or personal relationships. Lack of awareness of the correct time, place, or person.  DRUG ADDICTION— A state of chronic intoxication that is detrimental to an individual and that is produced by repeated consumption of a drug. The condition is characterized by (1) an overpowering need to take the drug, (2) a willingness to obtain the drug by any means, including illegal ones, (3) a tendency to increase the dose, and (4) dependence on the effects of the drug.  DRUG DEPENDENCE—A condition in which a person (1) requires a certain drug to maintain his or her functioning, (2) develops a tolerance for it requiring increased doses, (3) develops physical withdrawal symptoms if the drug is stopped, and (4) psychologically feels that it is impossible to get along without the drug.  **ECT (ELECTRO-CONVULSIVE THERAPY)—A** treatment, generally for depression, that uses electric current to induce unconsciousness and convulsive seizures. It is acontroversial treatment that raises ethical issues.  EGO—A theoretical construct of the organized part of the personality structure that includes defensive, perceptual, intellectual- cognitive, and executive functions. Conscious awareness resides in the ego, although not all operations of the ego are conscious.  EGO FUNCTIONS—The functions of self-regulation,  balance maintenance, and integrity preservation. They  include perception, control of voluntary movement,  management of memory, production of adaptive delay  between perception and action, choice between "fight" or "flight", selection of needs to be gratified, judging and evaluating internal and external conditions, problem solving, learning, and reality testing.  EMPATHY—The ability to feel the feelings of other people so that one can respond to and understand their experiences on their terms. It is differentiated from sympathy in that empathy does not contain elements of condolence, agreement, or pity.  INVOLUNTARV COMMITMENT—The legal process by which a person is confined, without consent, to a mental hospital. There are three categories: (1) emergency, (2) temporary or observational, and (3) extended or indeterminate. The designated body, such as a court or administrative tribunal, or the required number of physicians must find that the person's mental state meets the statutory criteria for involuntary admission. Criteria vary from state to state.  JUDGMENT—The capacity to anticipate the consequences of one's behavior and to eliminate behaviors that are ineffective. It involves the ability to behave appropriately in terms of external reality and is closely linked with reality testing.  LIBIDO—In psychoanalytic theory, the sexual drive.  MANIPULATION—A behavior pattern characterized by attempts to exploit, or actual exploitation of interpersonal contact.  **MENTAL STATUS EXAMINATION**  EXAMINATION—Usually a standardized procedure with the primary purpose of gathering data to determine etiology, diagnosis, prognosis, and treatment. This traditional medical model technique is being replaced by more dynamic psychosocial assessment processes.  MILIEU THERAPY—Treatment that emphasizes appropriate socio-environmental manipulation for the benefit of the client.  **NONVERBAL COMMUNICATION—Communication** between two or more people without the use of words. Facialexpressions, gestures, and body postures are examples.  PERCEPTION—The experience of sensing, interpreting, and comprehending the world; a highly personal and internal  PERSONALITY—The accumulated, characteristic behaviors and thoughts unique to each individual.  PERSONALITY TESTS—Instruments designed to measure personality characteristics. Many are called  projective tests, because they evoke projection in the responses of the person being tested. Commonly used  personality tests include the Rorschach test, the Thematic Apperception test (TAT, the Minnesota Multiphasic Personality Inventory (MMPI), the Draw-a-Person test, the Sentence Completion test, and the Bender Gestalt test.  **REFLECTING—A** communication skill in which the nurse reiterates either the content of the feeling message of the client. In content reflection, the nurse repeats basically the same statement as the client. In feeling reflection, the nurse verbalized what seems to be implied about feelings in the client's comment. Reflecting may identify both latent and connotative meanings that either clarify or distort the content. If properly used, reflection encourages the client to make additional clarifying remarks.  **SCHIZOPHRENIA—Medical** model diagnostic term for a disintegrate life pattern characterized by thinking disorder, withdrawal from reality, regressive behavior, poor communication, and impaired interpersonal relationships. Four symptoms ("the four A's) are considered classics: (1) disturbance in association, (2) flattened affect, (3) ambivalence, and (4) autism. The term is criticized by some mental health professionals as a "label" that tends to elicit the disturbed functioning from an individual over time.  **SELF-CONCEPT—**A person’s image of self, usually conscious image.  **STRESS-ADAPTATION THEORY— A** framework for understanding how individuals react to stress. Hans **Sclye** defines stress as "the rate of wear and tear on the body" and maintains that any emotion or activity causes some degree of stress. Stress can be produced by any factor that requires a response or change in the individual. Stressors may be physical, chemical, physiological, developmental, or emotional. Life itself is stressful in that it involves a process of adaptation to continual change. Though adaptation is stressful it is not necessarily harmful and can be exciting and rewarding.  **SUPEREGO** — A theoretical construct comprised of that organized part of the personality structure, mainly  unconscious, that includes one's ego ideals and the  "conscience" that criticizes and prohibits one's drives, fantasies, feelings, and actions.  **TARDIVE DYSKINESIA—**A disorder characterized by movements of the face, jaw, and tongue. | **BEHAVIOR MODIFICATION— A** method of reeducation or treatment mode based on the principles of  Pavlovian conditioning; an effort to change "disturbed" or "disordered" behavior patterns through modification techniques.  **BONDING** — An interactive process in which two  individuals commit themselves together. The term  commonly refers to a parent's ties to an infant.  BURNOUT— A condition in which health professionals lose their concern and feeling for the clients they work with and begin to treat them in detached or dehumanized ways. It is an attempt to cope with the intense stress of interpersonal work by distancing. Burnout is an occupational hazard in professions such as social work, nursing, child care, and day treatment.  CONFRONTATION— A communication that deliberately invites another to self- examine some aspect of behavior in which there is a discrepancy between what the person says and does. A confrontation may be (1) informational (describing the visible behavior of another person), or (2) interpretive (expressing thoughts and feelings about the other's behavior and/or drawing inferences about the meaning of the behavior).  COPING MECHANISMS— Operations outside a person's awareness that protect the person against anxiety; defense mechanisms.  COVERT— Covered or sheltered; concealed or disguised; not openly acknowledged.  CRISIS INTERVENTION— An intervention process  aimed at re-establishing the client's functioning at a level  equal to or better than the pre-crisis level.  DECOMPENSATION— Disorganization of a previously stable emotional adjustment or defensive system.  DEFENSE MECHANISMS— Operations outside of a  person's awareness that the ego calls into play to protect  against anxiety; the psychoanalytic term for coping  mechanisms: also called mental mechanism.  FAMILY THERAPY—Psychotherapy in which all, or almost all, members of a family system participate at once.  FLATNESS OF AFFECT—a dull or blunt emotional tone attached to an object, idea, or thought. It is most frequently observed in schizophrenic disorders.  FLIGHT OF IDEAS—A state in which thoughts come so quickly and bring so many associations that no single thought can be clearly expressed. The person's ideas occur in a rapid and endless variety, with only a single, slim thread connecting them.  GENUINENESS—The ability to be real or honest with another; closely related to respect.  GESTALT THERAPY—A type of psychotherapy that emphasizes treatment of the person as a whole—biological component parts and their organic functioning, perceptual configuration, and interrelationships with the outside world.  Focuses on sensory awareness of here-and-now experiences rather than on past recollections or future expectations.  GRIEF WORK—The work of mourning that can be  identified as emancipation from bondage to the deceased, readjustment to the environment in which the deceased is missing, and formation of new relationships. Successful grieving consists of three phases; shock and disbelief, developing awareness, and restitution or resolution.  HOLISTIC VIEW—The view that the "whole" is  inextricably related and linked to each part. In psychiatric nursing, a holistic approach views a client as a complex organic whole with physical, mental, emotional, social, and cultural dimensions. Holistic life theory explains the life process as a total field of events in which the individual and the environment are engaged in a constantly changing interaction. Current approaches to health are based on a holistic life theory and focus not on a specific disease but rather on the total health of the individual.  ID—A psychoanalytic construct; a completely unorganized reservoir of energy derived from a person's drives and instincts.  IDEAS OF REFERENCE—A state in which a person  believes that certain events, situations, or interactions are directly related to him or her.  INSIGHT—The ability to understand one's own motives, psychodynamics, and behavior.  PLAY THERAPY—Therapy used with children, usually of preschool and early latency ages. The child reveals problems on a fantasy level with dolls, toys, and clay. The therapist may intervene with explanations about the child's responses and behavior in language geared to the child's comprehension.  PSYCHOANALYSIS—A theory of human development and of human behavior, and a form of psychotherapy developed by Sigmund Freud and his followers. It is a form of insight therapy that relies on the technique of free association to explore the dynamic, psychogenic, and transference aspects of a client's personality.  PSYCHONEUROSIS (NEUROSIS)—A psychological  disorder in which maladaptive behavior patterns produce  psychic distress for the individual. This category includes anxiety reactions, hysterical reactions, obsessive- compulsive neuroses, phobic reactions, and depressive reactions.  PSYCHOPHYSIOLOGICAL DISORDER—A physical illness that is strongly influenced by psychological problems; called a psychosomatic disorder in earlier medical model terminology.  PSYCHOSOCIAL ASSESSMENT—A dynamic process that begins in the initial contact with the client and continues throughout the nurse-client experience. Its focus is on assessing the social and psychodynamic data gathered from interaction with the client rather than formulating a psychiatric diagnosis. Instead of adopting a medical model orientation, the psychosocial assessment is directed toward assessing the client's difficulties in living.  PSYCHOTHERAPY—In a medical model framework, a form of treatment for psychiatric disorders characterized by a special relationship between the client and a professional whose goal is to modify particular symptoms or patterns of behavior that are considered maladaptive by the client. In a humanistic framework, a special relationship between client and therapist through which they mutually define problem areas and negotiate goals for the client in an effort to increase the client's satisfaction in living.  **REALITY TESTING**—The ability to differentiate one's thoughts and feelings from the outside world. Psychological introspection is considered a sophisticated form of reality testing. Impaired reality testing results in opinions that are based not on validated experience but on emotional needs that block accurate perception of reality.  resulting in bizarre grimacing, lip smacking, and protrusion of the tongue. The syndrome frequently occurs after years of antipsychotic drug treatment.  **THERAPEUTIC COMMUNICATION—A** theory  developed by Jurgen Reusch, defining communication as all the processes by which one individual influences another. The theory has six basic concepts: (1) communication occurs in four types of settings—intrapersonal, interpersonal, group, and societal. (2) the ability to receive, evaluate, and transmit messages is influenced by perception, evaluation, and transmission quality of messages, (3) communication occurs in systems of codification, (4) messages achieve meaning  when they are consensually validated or verified between the two parties, (5) mctacommunications contain instructions on the interpretation of messages by both the sender and receiver on the levels of denotation and connotation, and (6) correction through feedback is basic to adaptive, healthy behavior and successful communication.  **TRANSACTIONAL ANALYSIS** (TA)—A system  introduced by Eric Berne that studies interactions going on in the treatment sessions. The system has four components: (1) structural analysis of intrapsychic phenomena, (2) transactions! analysis proper, (3) game analysis, and (4) script analysis. TA is used in both individual and group psychotherapy.  **WITHDRAWAL—A** behavior pattern characterized by  avoidance of contact. It may be functional or dysfunctional in nature. Withdrawal may be avoidance of interpersonal relationships and/or of a sense of reality. |

# References

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SAFE, EFFECTIVE CARE ENVIRONMENT

Client Need: Safe, Effective Care Environment

I. The Nurse's Role

A. Standards of Nursing Practice

1. Provide guidelines for public safety

2. Should be used in all care decisions

B. Responsibilities

1. Practice must be within the scope of:

a. Standards of Practice

b. Nurse Practice Act

c. Policies of agency

2. Client care in a safe manner

3. Staff Education (New section for April 2008)

4. Information Technology (New Section for April 2008)

a. Definitions

1) All forms of information

a) Computers

b) Video/DVD

c) Books/journals

d) CD/audio

2) Way to disseminate information to anyone

b. Computer

1) Use for recording - client records

2) Internet - finding information

3) Security issues

c. Video/DVD/Books/Journals/CD/Audio

1) Useful for client teaching/nurse continuing education

2) Remember copyright issues

II. Quality Assurance

A. Quality of Care

B. Maintaining High Quality Care

1. Good Communication

2. Know Client **Care** Needs

**3. Collaboration with interdisciplinary team** (New Section for April 2008)

C. Consultation and Referrals

III. Preventing Injury and Infection

Accidents

***Sample Question:***

**An insurance claim indicates a client had a nosocomial infection. Which client statement indicates a correct understanding of this infection?**

A. "This is an infection I got from new carpeting in my office."

B. "My infection began when I had surgery three weeks ago."

C. "I think someone at the doctor's office was sick when I was there."

D. "I flew to New York and the plane was full. I got sick right after that."

B. Nosocomial **Infection**

**1. Hospital-acquired infection**

**2. Protect clients from other infections**

3. Good Handwashing

C. Incident Reports

***Sample******Question b***

**A nurse is caring for these four clients who are on different types of isolation. Identify the client for which the nurse would not be required to wear a mask when giving care.**

A. Meningitis

B. Diphtheria

D. Cholera

***Simple Question***

**Which nursing action is essential for a client in isolation?**

A. Restraints applied to keep client's hands away from the infected area

B. Frequent contact hy health care workers with the client

C. Allow the client out of the room every two hours

D. Remove all non-essential furniture from the room

D. Isolation Procedures

**1. Standard Precautions - Handwashing, gloves, mask, eye protection, face shield, gown, equipment, environmental control, linen**

**2. Droplet Precautions (large particle) - Mask, client placement**

**3. Airborne Precautions (small particle) - Client placement, respiratory protection, client transport**

**4. Contact Precautions - Client placement, equipment, gloves and handwashing, gown, client transportation**

|  |  |
| --- | --- |
| ILLNESS | TYPE OF ISOLATION |
| Direct, indirect contact with HIV, Hepatitis, and Immunocompromised patients | Standard Precautions |
| Haemophilus Influenzae, Streptococcus Pneumoniae | Droplet Precautions |
| TB, Respiratory Viruses, Meningitis, Measles, | Airborne Precautions |
| Drainage/Secretions, Wounds | Contact Precautions |

E. Internal and External Disasters

**1. Agency protocol for evacuation**

**2. Recommendations for discharge**

**3. Appropriate personnel to help**

F. Ergonomic Principles (New Section for April 2008)

**1. Ergonomics is the study of the worker in the work environment for the purpose fo preventing work-place injuries**

**2. Most efforts are focused on the musculoskeletal system, but may include exposure to disease, chemicals, or mental stress**

**3. May include lifting/transferring clients, repetitive movements, stretching, or twisting**

**4. Principles of body mechanics**

IV. Legal and Ethical Issues

***Sample Question***

**A nurse is caring for a client with a fractured arm who has just received a plaster cast. Identify the situation that would put the** nurse **the highest risk for a malpractice suit.**

A. Failure to keep the care plan updated

B. Notifying a physician that the client is having pain in the arm

C. Failure to note that the client's fingers are cold with a bluish color

D. Charting that the client did not respond to the pain medication

A. Civil Law (Law of Torts)

**1. Unintentional Torts - Malpractice**

**2. Intentional Torts**

**a. Assault and Battery**

**b. False Imprisonment (Behavior Control)**

***Sample Question***

**Two nurses are eating lunch in the cafeteria and one of them states, incorrectly, that one of the clients in the unit is a prostitute and has genital herpes. A close, personal friend of the client, in question, is also eating lunch at the next table and overhears the conversation. The nurses are guilty of which type of tort?**

A. Invasion of privacy

B. Defamation of character

C. Libel

D. Slander

**3. Quasi-intentional torts - Breach of Confidentiality**

**a. Defamation of character**

**b. Slander**

**c. Libel**

**d. Invasion of privacy**

B. Patient's Rights

***Sample Question***

A**client who is scheduled for a hernia repair in the morning decides not to have the procedure done, even though the****consent form has already been signed. What is the best action by the nurse?**

A. Remind the client that the consent is a legal document, and once signed remains in effect for 24 hours

B. Report the situation to the physician and record it in the nurse's notes

C. Attempt to convince the client that the procedure is necessary

D. Point out that without the procedure, the client may have a strangulation

**1. Informed Consent**

**2. Confidentiality**

**3. Information Security** (New Section for April 2008)

**a. Security of computers and electronic records**

**b. All records are confidential and must be protected**

**4. Invasion of Privacy**

**5. State Law Concerning the Commitment of Clients with Psychiatric Conditions**

**a. Involuntary Commitment**

**b. Voluntary Commitment (Consent to Treat)**

**6. Legal Rights of Clients with Mental Illness**

**a. Right to Treatment**

**b. Right to Refuse Treatment**

**7. Legal/Ethical Considerations in Nursing of Children**

**a. Consent**

***Sample Question***

**During the psychosocial section of history taking, what is necessary to assess during the routine clinic visit of a 2-year-old brought in by the parent?**

A. Relationship between the parent and child

B. Frequency of the child's naps

C. Planning conception of the next child

D. Whether the child was breast or bottle fed

**b. Documentation of Parent/Child Interactions**

**8. Nursing Responsibilities for Informed Consent for Immunizations**

C. Ethical Issues

1. Right to Refuse Treatment

2. Behavior Control - restraints

3. Do Not Resuscitate Orders

4. Living Will/Medical Power of Attorney

D. Cultural and Religious Issues

1. Nurses must consider cultural and religious practices when planning and giving care

2. Nurses must help meet spiritual needs of clients

E. Organ Donations

V. Safety During Diagnostic Procedures

Neurological

***Sample Question***

**A 16-year-old client, who is scheduled for a lumbar puncture, was told by friends that "the brain sinks" when cerebrospinal fluid is removed. Choose the best response by the nurse to lower anxiety levels.**

A. "Removing the CSF has absolutely no effect on the brain."

B. "The amount of CSF removed will rapidly be replaced by the body."

C. "The body has more fluid than is necessary and the amount removed is insignificant."

D. "The physician will monitor the CSF pressure closely during the procedure to minimize any danger."

**1. Lumbar Puncture**

**a. Is used most for diagnosing disease/measuring pressure of CSF.**

**b. Is often done in the client's room. May include injection of dye.**

**c. Not used with clients who have severely increased intracranial pressure.**

**d. Must remain flat in bed for 4-8 hours after the procedure.**

***Definition*** *-* This is a diagnostic test carried out on clients with neurological signs and symptoms and, also, those with leukemia. It is used chiefly to determine the presence of meningitis but, also, to detect abnormalities of circulating cerebral spinal fluid (CSF) in the brain, such as the presence of blood or leukemia cells. Diagnostic ally, a lumbar puncture removes a small amount of CSF for examination and measurement of CSF pressure. A lumbar puncture should not be performed with evidence of greatlyincreased intracranial pressure such as papilledema because herniation of the brain could occur. The normal CSF appearance is clear unless the spinal tap has been traumatic. Then, the CSF will appear bloody at first and gradually clear. Abnormal results of a spinal tap would include bloody or cloudy CSF. Cloudy CSF may indicate meningitis. The CSF will be further evaluated to detect WBC's, RBC's and bacteria. A gramstain is also often done. Frank, bloody CSF may be indicative of an intracerebral bleed.

***Client Preparation*** *-* Explain the procedure to the client. No dietary or fluid restrictions are required before the procedure. Emphasize the need for full cooperation during the test and the need for bed rest following the test. The test will take approximately 15-20 minutes. A signed consent is necessary. Notify the physician if the client is very anxious since a sedative may be ordered. The most important nursing function is to help the client in positioning for the procedure. The client needs to be in a chin to chest position to allow for optimal spinal flexion.

***Post-procedure care*** *-* Advise the client to lie flat for 4-6 hours. Turning side-to-side is permitted. Encourage fluid intake with a straw. Check the puncture site for swelling, redness, and drainage, and assess the ability to void and move the extremities. Observe for signs of complications i.e., neck stiffness, irritability, decreasing level of consciousness (LOC), and altered vital signs. A post lumbar headache may occur a few hours to several days after the procedure and is caused by leakage of CSF. This can be alleviated by bed rest in a quiet, darkened room, analgesics, or a blood patch.

2. Angiography/Arteriography

***Definition*** *-* This is an x-ray study of circulation following injection of contrast material into a selected artery.

**a. Is a type of dye injection test that indicates blood flow.**

**b. Used to diagnose brain tumors, atrial ventricular malformations, aneurysms, strokes, seizures, headaches, motor weakness, cardiac chambers, valves and coronary arteries.**

**c. Like all dye injection tests:**

1) Obtain a signed permit

2) Assess the client for allergies to shell fish, sea foods, and iodine, or past reactions to other dye tests (all are iodine based)

3) Increase the fluid intake after the test (300-500 rnL) to help wash the dye from the system

***Procedure*** *-* A catheter is introduced and advanced to appropriate vessels, contrast material is injected. X-rays are taken.

***Post-procedure*** *care—*Assess for alterations in LOC, weakness on one side of the body, motor or sensorydeficits, or speech disturbances; monitor for reactions to contrast dye. Observe the injection site forhematoma formation. An ice pack may be immediately applied to relieve swelling and discomfort. Applypressure dressing to injection site. Monitor peripheral pulse, color, and temperature of involved extremity.

3. Myelography

***Definition*** *-* A radiological examination of the spinal canal that uses contrast dyes.

**a. Largely replaced by less invasive MRI or CT**

**b. X-ray of spinal canal of cervical, thoracic and lumbar area**

**c. Used to identify lesions like herniated nucleus pulposus, nerve root involvement, spinal stenosis, tumor, or other suspected lesions of spinal canal**

**d. May be performed in conjunction with CT**

**e. Like all other dye injection tests:**

1) Obtain a signed permit

2) Assess for client allergies, especially iodine/shellfish

***Client preparation*** *-* This outpatient procedure requires the client to be NPO after a clear liquid breakfast. A careful medication history is necessary because certain drugs interact with the contrast used and lower the client's seizure threshold. A sedative may be given.

***Procedure*** *-* The client is transferred to x-ray table and positioned in lateral or sitting position for the lumbar puncture. The client is moved to prone position for the myelograrn and the x-ray table is moved and tilted to facilitate the dye filling the canal. The procedure may take up to 1 hour.

***Post-procedure -*** Positioning: head of bed at 30 degrees for 24 hours. Neuro checks are performed hourly. Diet and fluids arc resumed as tolerated. Common side effects are headaches, nausea and vomiting. The client should he monitored for reactions to contrast dye. The puncture site is dressed with a small adhesive strip and should be checked for bleeding. Clients are discharged with instructions that include gradual resumption of normal activities and caution client to avoid lifting or strenuous activity; check puncture site for signs of infection; and contact the physician if nausea and vomiting develops.

4. Electroencephalogram (EEC)

**a. Non-invasive.**

**b. Used for seizure disorders, and brain death determination.**

**c. No particular client preparation.**

**d. Remove the electrode gel from the hair as soon as possible.**

***Definition*** -This is a non-invasive test that records a portion of the brain's electrical activity, EEC helps in diagnosing seizure disorders, brain tumors, abscesses, and psychological disorders. It is also useful in establishing brain death.

***Client Preparation*** *-* Inform the client that this is a non-invasive test and the procedure to be used. There are no dietary restrictions but sometimes medications are withheld before testing. A written consent is not necessary but the client should give verbal consent. Thoroughly wash and dry the client's hair, removing hair sprays, creams or oils before attaching electrodes to the scalp.

***Procedure*** *-* Place the client in a reclining chair, or supine position in bed. The client is instructed to close the eyes, relax and remain still.

***Post-procedure care*** *-* Help the client remove electrode paste from the hair. Review with the physician the reinstatement of any medications that were withheld before the test. Observe for seizure activity and provide a safe environment.

B. Cardiovascular

**1. Electrocardiogram (ECG)**

**a. Non-invasive, simple quick test**

**b. Indicates electrical activity in the heart**

**c. No ECG strips on .NCLEX exam, but do need to know the basics**

***Definition*** *-* This is a graphic representation of the electrical forces produced by the heart. It is an essential diagnostic tool that can reveal information about the status of the cardiovascular system's metabolic status, fluid and electrolyte balance, and the effects of interventions such as medications, fluids, and mechanical supports.

**ECG Analysis-** Most ECG's are 12 lead ECG's that give a three dimensional representation of cardiac conduction through different portions of the heart. Lead II is most commonly analyzed, particularly in critical care areas to determine the electrical conduction through the heart. Each portion of the ECG is analyzed to determine abnormalities in conduction.

***2.* Cardiac enzymes - Creatinine phosphokinase (CPK), Lactate dehydrogenase (LDH), Troponin**

**a. The CPK II (MB) is only released when the heart muscle has been damaged.**

**b. Begins to increase 4-6 hours after chest pain; peaks at** 12-36 **hours.**

**c. CPK II is the most sensitive and the quickest of enzymes. Levels greater than 12 indicate cardiac injury.**

**d. LDH I is produced by the breakdown of cardiac muscle.**

**e. LDH 1 is normally lower than the LDH II.**

**f. When the LDH I becomes higher than the LDH II, an "enzyme flip" has occurred and is diagnostic of a myocardial infarction**

**g. The LDH rises more slowly in response to an MI than** does **the CPK-MB. The LDH will usually elevate between *12-24*** **hours after an MI and will peak in 2-6 days**

**h. Troponin is a myocardial muscle protein released** into **circulation after an injury to the heart muscle**

I) Two subtypes in the heart that are cardio specific: troponin T (cTnT) and troponin I (cTnl)

2} Troponin T rises quickly {3-5 hours) and remains elevated for up to 3 weeks

3) Serum levels of cTnl increase 3 hours after an MI and peak at 14 to 18 hrs, and return to baseline over 5 to 7 days

***Definition*** *-* Blood tests that help diagnose MI or cardiac muscle damage.

***Client preparation*** *-* Cardiac enzymes will be monitored in the blood over several days after a suspected MI. No fasting is required before the blood is drawn.

**3. Exercise Electrocardiography (Stress Test or Treadmill Test)**

**a. A type of cardiac** stress **test.**

**b. Need to closely monitor the ECG throughout the test for changes or problems with the coronary circulation.**

**c. Test can be dangerous—may cause an MI. Stop the test immediately if any of the symptoms of MI develop, or if there are acute ECG changes.**

***Definition*** *-* This test measures the efficiency of the heart during a dynamic exercise stress period. It is valuable in diagnosing ischemic heart disease and in investigating cardiac symptoms such as angina and dysrhythmias. Exercise testing is also done to measure functional capacity for work, sport, or participation in a rehabilitation program. Stress/exercise testing can be risky for clients with chest pain of recent onset or attacks of angina several times a day. The test is usually not given to these clients at this time, but rescheduled in 4-6 weeks.

***Client Preparation*** -No food, coffee, or cigarettes are allowed prior to testing. Water is allowed. A legal consent form must be signed. Instruct the client to wear loose-fitting, comfortable clothes and walking or tennis shoes.

***Post-procedure*** *care -* If performed on an outpatient basis, the client should not leave the premises until the physician has interpreted the results.

**4. Holter monitoring**

**a. Used to monitor for dysrhythmias that may not be detected with a single routine ECG.**

**b. It is a portable ECG unit that sends a signal to an ECG monitor that is being watched** 24 **hours a day or is recorded and then downloaded to a computer.**

**c. Assess the number of ectopy occurring in a single day, or any lethal dysrhythmias.**

**d. It is usually read by computer.**

**e. Teach the client about wearing the monitor, and to keep a log of activities during the day (e.g. time he/she got up in morning,** time **he/she went for a walk, etc.)**

***Definition*** *-* Holter monitoring involves the use of a portable recorder to record the ECG for an extended period of time, usually 24 hours.

***Client preparation*** *-* The client will wear the recorder for the prescribed length of time and should not get the recorder wet or have x-rays while wearing the monitor. The client will be asked to keep a diary of unusual events such as chest pain, dizziness, syncope or dyspnea that occur while wearing the monitor so that these events can be correlated with ECG changes.

**5. Echocardiogram**

**a. Non-invasive ultrasound of the heart.**

**b. May take 45 minutes to 1 hour to perform.**

**c. Usually involves turning the client from side to back.**

***Definition*** *-* A non-invasive test examines the heart and provides information about the position, size, and movements of the valves and chambers by means of ultrasound. This test aids in diagnosing cardiomyopathies and congenital heart disease. It is a definitive test in the diagnosis of mitral stenosis, mitral valve disorders, and atrial tumors.

***Procedure*** *-* A sound-emitting transducer is applied to the client's chest and focused at the heart. Echoes are produced and recorded.

C. Respiratory

**1. Pulmonary function tests - These tests determine the presence and extent of pulmonary dysfunction caused by obstruction, restriction, or both.**

**a. These studies may reveal abnormalities in the airways, alveoli, and pulmonary vascular bed early in the course of the disease when physical examination and x-ray** tests **are still normal.**

**b. Often used to diagnose COPD.**

**c. The location of the airway abnormality can be determined.**

**d. Basic terms for measuring lung volumes follows:**

1. ***Residual volume* (RV)** - Volume of gas left in the lungs following a maximal expiration.

a) Normal adult is 1,200 mL

b) Elevated in COPD **clients**

1. ***Vital capacity* (VC) -** Maximal volume of air that can be expired following a maximal inspiration.

a) Normal adult is 4,500 - 5,500 mL.

b) Is lower than normal in COPD clients

1. ***Tidal volume*** (VT) - The amount of air that is exchanged with a normal resting respiration.

a) Normal adult is 500-600 mL.

b) Is reduced in clients with COPD.

**2. Chest x-ray - is used for screening, diagnoses, and evaluation of changes in respiratory disorders, fluid, and other abnormalities such as TB, foreign objects, pneumonia, rib fractures, etc. No particular preparation except to explain the procedure and instruct the client to remove all metal objects in the area to be X-rayed.**

***Sample Question***

**A post-bronchoscopy client develops wheezing, stridor, and cyanosis. Identify the nursing action that has the highest priority at this time.**

*A.* Check the gag reflex to make sure the local anesthetic has worn off

B. Call the client's physician about the condition

C. Assess breath sounds and maintain the airway

D. Encourage the client to cough and deep-breathe to reduce the amount of retained secretions

**3. Bronchoscopy - Direct visualization of the larynx, trachea, and bronchi through the use of a flexible fiberoptic tube.**

**a. Highly invasive procedure.** Needs **a permit.**

**b. Performed for diagnosis, assessment of changes, specimen collection, and removal of mucous plugs or foreign objects.**

**c. Generally contra-indicated in asthma, recent MI, unstable angina, and uncontrolled dysrhythmia, pulmonary hypertension, mechanical ventilation, and severe anemia.**

**d. Complications include reaction to the local anesthetic, bronchospasm, aspiration, hypoxemia, bleeding, pneumothorax, and infection.**

***Client preparation*** *-* Explain the purpose of the procedure and reassure the airway will not be blocked. Medications will be given to decrease coughing. The client is instructed to fast 6-8 hours before the procedure. An informed consent is obtained and pre-procedure medications are administered. Usually atropine and a sedative are given to inhibit vagal stimulation (to alleviate symptoms of bradycardia, dysrhythmias, and hypotension), suppress the cough reflex, and relieve anxiety. The client removes glasses, contact lenses, and dentures before the procedure.

***Procedure*** - The client is placed in a supine position and the bronchoscope is introduced once the nasopharynx and oropharynx have been anesthetized topically with lidocaine (Xylocaine). Encourage the client to relax and breathe through the nose. The nurse monitors VS throughout the procedure.

***Post-procedure*** *care* - Avoid oral intake until cough and gag reflexes have returned. Coughing, smoking, talking, and clearing the throat are discouraged for a few hours. The sputum may be pink-tinged for a few hours if a biopsy has been performed. Report frank bleeding and difficulty breathing immediately.

**a. Check gag reflex before giving any oral fluids or foods.**

**b. Watch for active bleeding. Coughing up small amounts of old bloody secretions is considered**

**c. Watch for respiratory distress, especially, stridor and wheezing.**

**4. Thoracentesis**

***Definition*** *-* This is performed to obtain pleura) fluid for analysis, remove pleural fluid, or instill medication. Is invasive and requires a permit.

***Client preparation*** *-* Explain the procedure emphasizing the importance of remaining immobile. Tell the client a feeling of pressure will be experienced during the procedure. A signed consent and thoracentesis tray are obtained.

***Procedure*** *-* Position the client upright with arms and shoulders supported on an ovcrbed table. If unable to sit, the client is placed on the unaffected side. A large bore needle is inserted through the chest wall into the pleural space. The procedure is performed using strict sterile technique. The nurse monitors the pulse and client's response during the procedure.

***Post-procedure care*** *-* Place the client on the unaffected side for one hour to allow the puncture site to close. Monitor VS frequently and monitor for expectoration of blood. Assess the client for signs of pneumothorax, shock, subcutaneous emphysema, and pyrogenic infection. Complications include: shock, pneumothorax (have chest tubes nearby), and bleeding,

D. Gastrointestinal

**1. Upper GI (Barium swallow)**

***Definition*** *-* This is visualization of the esophagus, stomach, and small bowel using contrast medium and fluoroscopy.

**a. Used to detect hiatal hernias, diverticula, varices, strictures, ulcers, tumors, and motility disorders.**

**b. Not performed if a GI perforation is suspected since a leak of the barium would produce an acute inflammatory reaction.**

***Client preparation*** *-* Inform the client of the purpose of the test, what will happen during the procedure, and what the test will examine. The client is NPO for 8-32 hours before the test and most oral medications will be held. Smoking is restricted since it stimulates motility. Inform the client lo remove all metal objects and jewelry from the x-ray field.

***Procedure*** *-* The client drinks flavored barium, 16-20 oz. and is secured to an x-ray table that is tilted into various positions.

***Past-procedure*** *care -* A laxative should be administered and light-colored stools are expected for several days. Mouth care is important immediately after the procedure to remove the taste of any barium. Since the barium may cause constipation and obstruction, the nurse assists the client in monitoring bowel movements for 2-3 days.

**2. Lower GI (Barium enema)**

***Definition*** *-* Examination of the colon with the use of fluoroscopic and radiographic visualizations after rectal administration (enema) of a contrast medium.

**a. Air may also be used for evacuation of the barium. The use of air and barium (double-contrast) technique is more precise.**

**b. Used to detect malignancies, polyps, diverticulosis, diverticulitis, bowel obstructions, celiac sprue, Hirschsprung disease, inflammatory bowel disease and rectal stenosis.**

**c. Prep and procedure are very stressful to clients.**

**d. Often done on an outpatient** basis.

***Client preparation*** *-* The client is on a low-fiber diet 1-3 days before the test. Clear liquids or water may be allowed 12-24 hours before the procedure and the client is NPO from dinner the night before. Many clients dread this test after having heard about it from friends or other clients. They expect it to be painful and embarrassing and they fear they will be unable to retain the barium during the procedure.

**a. The nurse administers cathartics, such as bisacodyl (Dulcolax), *as* ordered.**

**b. If enemas are ordered the morning of the test, they should be repeated no more than 3 times, or until the solution runs clear.**

**c. As an alternative to laxatives and enemas, GoLYTELY or other oral solutions may be used.**

**d. Assure the client that he/she will most likely be able to retain the enema but many people are unable to control it entirely and x-ray personnel are professionals accustomed to** this if **it should occur.**

***Procedure*** *-* Remind the client to keep the anal sphincter tight around the rectal tube during installation of the barium to prevent leakage. Encourage the client to take deep breaths to decrease the discomfort of cramps during installation of the barium.

***Post-procedure care*** *-* Immediately after the procedure the client should attempt to defecate. Laxatives maybe ordered.

a. Stress the need **to take liquids freely after the procedure to facilitate passage of the barium.**

**b. A laxative and/or enema after the procedure is recommended to facilitate passage of barium from the intestinal tract.**

**3. Gastroscopy**

**a. Similar to a bronchoscopy, except the tube** goes into **the stomach.**

**b. Used to detect inflammatory processes, tumors, ulcerations, hemorrhage, cancer, and** **hiatal hernia**

**c. Dentures and jewelry are removed.**

**d. A local anesthetic is applied to the throat before insertion of the endoscope to diminish** the gag **reflex.**

***e.* After the procedure, assessments are the same as for a bronchoscopy: watch for return of the gag reflex before giving fluids or food, bleeding, and respiratory problems.**

**f. Encourage the client to belch to expel the air that was inserted into the stomach during** the test.

***Definition*** *-* Visualization of the stomach used to detect inflammatory processes, tumors, ulcerations, hemorrhage, cancer or hiatal hernia.

***Client preparation*** *-* The client is NPO for 8-12 hours. Sedation may be ordered as a pre-medication and a medication such as atropine is prescribed to dry up secretions so the mucosa can be clearly visualized.

***Post-procedure*** *-* After the procedure, assess the client for the return of the gag reflex before giving fluid or food

**4. Sigmoidoscopy**

***Definition*** - Direct visualization of the rectum and sigmoid colon with flexible tube.

**a. Used to detect and diagnose rectal cancers.**

**b. Largely replaced by colonoscopy**

**c. Also indicated in the evaluation of hemorrhoids, when blood is present in the stool, when bowel symptoms are present, and in unexplained anemia.**

***Client preparation*** *-* The client does not need to fast but may be placed on a clear liquid diet the evening before the test. Laxatives and an enema may be given the night before the exam or an enema or suppository may be administered 1-2 hours before the procedure.

***Procedure*** *-* Draping the client helps alleviate embarrassment. Assist the client into a knee-chest position and inform the client the urge to defecate may occur as the scope is passed. The client is encouraged to take deep slow breaths to promote relaxation and allow the abdomen to go limp as the endoscope is passed.

***Post-procedure*** *care -* Allow the client to rest and take VS.

**a. Perforation of the bowel is a rare complication associated with pain, abdominal** distention, **and hemorrhage.**

**b. Rectal bleeding may occur when biopsies are taken.**

**5. Colonoscopy**

***Definition*** *-* Visualization of the entire colon up to the ileocecal valve to detect tumors, dilate strictures, and remove polyps using a flexible fiber optic scope.

***Client preparation*** *-* Client is on clear liquids 1-3 days and NPO for 8 hours prior to procedure. Laxatives are administered 1 -3 days before and enemas the night before the procedure. Or 1 gallon of Golytely or Colyte is administered the evening before the procedure. Conscious sedation is used for the procedure.

***Post-procedure Care*** *~* Client may have abdominal cramps as bowel is inflated with air during the procedure. Observe for rectal bleeding or signs of perforation.

**6. Paracentesis**

***Definition*** *-* Performed only for clients with ascites. It is a temporary method of removing fluid from the abdomen when it interferes with respirations.

***Client preparation*** *-* The client should urinate before the procedure to prevent puncturing of the bladder.

***Procedure*** *-* Have the client sit on the side of the bed with feet firmly placed on the floor, footstool, or chair. If the client cannot tolerate sitting up, place in a high-Fowler's position. The abdominal area is prepped with Betadine, an incision is made below the umbilicus, and the trocar inserted. The metal guide is removed and the remaining plastic cannula is connected to a drainage tube. The fluid is removed by gravity or vacuum. Removal of too much fluid can cause hypovolemia. The fluid should be removed over 30-90 minutes to prevent sudden changes in blood pressure, which can lead to syncope.

***Post-procedure*** *care -* The client is monitored for signs of hypovolemia and electrolyte imbalances. A dressing is applied over the insertion site and observed for bleeding and leakage.

**a. The ascitic fluid is high in protein and electrolytes and the body can become depleted.**

**b. Other common complications include shock, bleeding, and rupture or penetration of the abdominal organs.**

***Sample Question*** *#79*

**Why would the physician order a test for occult blood?**

A. Facilitate early detection of bleeding from the intestinal tract

B. Identify early pyloric obstruction with inflammation

C. Detect bleeding of the perineal and vaginal mucosa

D. Distinguish between active and old bleeding from the urethra

**7. Stool Tests**

**a. Occult blood/fecal occult**

1) Only a small amount of stool is needed which can be obtained with a rectal swab or gloved finger.

2} Slool is smeared on the appropriate space on a card and re-agent is applied. Color change indicates heme in the stool and may indicate bleeding somewhere in the GI tract.

3) No red meat or iron for 3 days prior to testing.

4) This is an extremely sensitive test, and may give false positives.

**b. Ova/parasites**

1) One entire stool should be sent.

2) Best if sent warm to the lab - do not refrigerate.

3) On an out-patient basis, the collecting container has a preservative in it.

4) It is used to detect enterobiasis, ascariasis, giardiasis.

**c. Fat**

1) Used to detect some malabsorption syndromes such as pancreatic insufficiency and cystic fibrosis.

2) May cither be a random or a 72 hour sample.

**d. Reducing substances**

1) May also indicate malabsorption in the colon.

2) Stool will test glucose positive.

4} Usually requires one random sample.

**E. Musculoskeletal**

1. **X-rays - Bone films determine bone density, texture, erosion, and changes in bone relationships. Joint x-rays will reveal fluid, irregularity, spur formation, narrowing, and changes in the joint structure.**

***Sample Question***

**A physician orders MRI’s for the following** four **clients. Select the client the nurse would send without questioning the order.**

A. A diabetic with an implanted insulin pump

B. A 32-weeks-gestation pregnant primigravida

C. A client with CHF and a pacemaker

D. An auto accident victim on life support systems

1. **Magnetic resonance imaging (MRI)**

**a. Non-invasive - uses strong magnetic waves to produce a picture of internal structures**

**b. Remove all metal from the client's body, e.g., rings, watches, ear rings, etc.**

**c. Notify the MR1 staff if the client has some permanent implanted metal, e.g., pacemaker, insulin pump, total knee or hip prosthesis, etc. Alters the picture.**

**d. Warn the client that the procedure is** very **noisy, and sometimes produces claustrophobia in certain** clients.

**e. Is a very expensive procedure.**

**f. Use of "open" MRI**

***Definition*** *-* Uses strong electromagnetic waves bounced off tissues indicating hydrogen density to show tissues. Computers pick up the electromagnetic echo and produce tomographic images with high contrast of soft tissue. This provides excellent visualization of soft tissue without contrast media or ionizing radiation and can help visualize lesions undetected by CT scans. MRI has the potential for identifying cerebral pathology earlier and more clearly than other diagnostic tests.

***Client preparation*** *-* Inform the client the test is painless and usually requires no dye or dietary restrictions; however, many clients are frightened about this procedure, especially due to the claustrophobic effect. Clients who have not had a head injury may be given a sedative prior to the procedure. Instruct the client to remove all metal objects and avoid excessive movement during the test as this may blur images. The client will hear a thumping sound of the magnetic coils. The client can talk to and hear the health care professionals by means of a microphone placed in the scanner. New open MRI machines reduce client claustrophobia.

***Procedure*** *-* The client is placed inside the scanner and strong magnetic waves are bounced off the various structures of the body.

1. **Computerized tomograph (CT) Scan**

a. Uses thin-slice **x-rays to produce a picture of** internal **structures.**

**c. No particular client preparation required.**

***Definition*** *-* The body scanner is used to give a clear, computerized image of the chest, abdomen and pelvis and is important in diagnosing and identifying neoplaslic and inflammatory diseases.

***Client Procedure -***Explain the procedure. The client will be placed on a table in the middle of a round piece of x-ray equipment, and it is necessary to remain motionless during the test.

***Procedure*** *-* The client is placed inside the scanner and an x-ray tube emits radiation pulses as it moves around the body.

1. **Electromyography (EMG)**

***Definition*** *-* EMG measures and the electric currents produced by skeletal muscles

**a. Small needle** electrodes are **inserted into a muscle and the electrical activity of the muscle is displayed on a screen.**

**b. This is useful in diagnosing cervical or lumbar disc** disea

***Client preparation*** *-* The small needle electrodes inserted into the muscle may be uncomfortable.

**a. Cigarette smoking or caffeine intake may be restricted before the test.**

**b. Client must be awake and cooperative to move extremities.**

**c. Avoid stimulants and** sedatives **for 24 hours before the** test.

F. Blood Chemistry Tests

**1. CBC**

**a. *Definition* - Complete Blood Count**

**b. Hemoglobin (Hgb) - male** 13-17 g/dL; **female 12-15 g/dL**

**c. Hematocrit (HCT) - male** 40-50%; **female** 37-42% **- ratio between plasma and cells**

**d. Red blood cells (RBC) - 3.6 to 5 million**

**e. Platelets - 150,000 to 400,000**

**f. White blood cells (WBC) - 5,000 to 10,000**

1) Neutrophils

2) Eosinophils

3) Basophils

4) Lymphocytes

5) Monocytes

**g. *Client Preparation -* no special preparation. Do not take sample froi**

**2. Lipid Profile**

**a. *Definition -* measures fats in blood**

1) High-density lipids (HDL) > 45 mg/dL

2) Low-density lipids (LDL) < 130 mg/dL

3) Cholesterol - 140-200 mg/dL

4) Triglycerides - 40-150 mg/dL

**b. *Client Preparation -* fast for 8-12 hours prior to testing**

**3. Electrolytes**

**a. Client preparation - same as for CBC**

**b. Alkaline phosphatase - 82-92 u/L**

1) Used to evaluate liver and bone disease.

2) Elevated in liver dysfunction.

**c. Uric acid - Male** 3.5-7.2, **mg/dL; Female 2.6-6 mg/dL**

1) Levels used in evaluation of kidney function and gout.

2) Elevated in gout.

3) May be elevated in chemotherapy.

**d. Other specific values will be discussed with the Fluid and Electrolytes**

VI. Nutrition

**A.** Vitamins

**1. A—liver, egg yolks, whole milk, green and yellow vegetables, fruits**

**2. D—fortified milk, fish oil**

**3. E—vegetable oil, green vegetables**

**4. K—egg yolk, leafy green vegetables, liver, cheese**

**5. C—citrus fruits, tomatoes, broccoli, cabbage**

**6. B—organ meats, grains, legumes**

***Sample Question***

**After the nasogastric tube is removed, the client is placed on a clear liquid diet. Which food should be included in the diet?**

A. Ice cream

B. Beef bouillon

C. Gelatin with applesauce

D. Chicken soup

A. Diets

1. Clear and full liquid

2. Soft

3. Modified protein diet

4. Bland diet

5. Potassium

a. Blood potassium level may be altered in clients with decreased renal excretion from renal disease, dehydration, shock, severe burns, crushing injuries, administration of excessive amounts of potassium; decreased intake due to anorexia, administration of potasssium-free IV fluids, abnormal loss of GI secretions, chronic wasting disease with tissue destruction.

b. The mineral is widely distributed in meat, whole grain cereals, legumes, many fruits and vegetables including oranges, bananas, dried peaches/apricots. May also give IV, or PO supplements as indicated.

**6. Sodium**

a. Clients on a low sodium diet include renal failure, cardiac disease, hypertension, and liver disease.

b. Clients on increased sodium diets include chronic diarrhea, colostomies and ileostomies, diabetes insipidus, and "hot jobs."

c. Guidelines for sodium restricted diets include discussing relationship of sodium from the diet, avoidance of foods, and medications that have high sodium content (teach to read labels carefully), add no salt while preparing food and no salt at table, season food with non-sodium

d. If sodium is limited to 2 gm/day, no additional salt added in food preparation.

e. Foods high in sodium include prepared foods, meats in general, hot dogs, ham, kosher meats, sausages, pork, sauerkraut, tomatoes, salt water fish, sardines, anchovies, cheese, ketchup, relishes, horseradish, olives, pickles, potato chips, smoked foods, flavor enhancers, MSG.

**7. Iron**

a. Clients on increased iron diets include iron-deficiency anemia, pregnancy, lactation, chronic blood loss, malabsorption syndromes, and rapid growth periods (infants and teenagers).

b. Clients on low iron diets include blood disorders as hemochromatosis, thalassemia, and sickle cell

c. Foods high in iron include for infants: iron fortified formula and cereal; for older children and adults: red meat, poultry, fish, organ meats, oysters, eggs, nuts, green leafy vegetables, kidney beans, carrots, apricots, raisins, potatoes with the skin, dried fruits, enriched breads, vegetables, and fresh fruit.

d. Teach correct administration of oral iron preparations as ordered.

e. Give ferrous sulfate in 3 divided doses/day, between meals with citrus juice, continue for 4 – 6 weeks (liquid temporarily stains teeth—use straw or drop in the back of the mouth)

f. If parental iron is prescribed, use IM Z-track method for injection.

g. Monitor for side effects (GI - nausea, vomiting, constipation, cramps).

**8. Cholesterol/Fat**

a. Clients on a low fat diet include cardiac, diabetics, liver and gallbladder disease.

b. A permanent change in eating habits is necessary if diet therapy is to be effective in lowering blood lipids.

c. Requires a fat-controlled diet that is low cholesterol, low saturated fat, Increased polyunsaturated fat.

d. Food allowed: lean meat, egg white, egg substitute, skim milk, any fresh, canned, frozen, dried vegetables and fruits, all cooked and dry cereal, vegetable oils, desserts such as angel food cake, bouillon, coffee, tea, and carbonated beverages.

e. Foods to avoid: highly saturated fats (animal), oils, fried foods, organ meats, avocados, and limit nuts.

**9. Calcium**

a. Calcium is particularly necessary in childhood and during pregnancy.

b. Adequate calcium intake is also important to help prevent bone demineralization that occurs with aging.

c. Dairy products are the best source of calcium, but calcium may also be found in legumes, green leafy vegetables, salmon and sardines, egg yolks, calcium-enriched orange juice and many

**10. High Fiber**

1. **Used in clients with increased cholesterol, diverticulosis, IBS, immobility, and constipation.**
2. **Foods high in dietary fiber, bulk or roughage include unpeeled fruits and vegetables, edible seeds and bran, whole grains such as pasta, brown rice, and unprocessed oats.**
3. **Encourage fluid intake also**

***Sample Question***

**The nurse would know that teaching about low-residue diets was successful when the client with ulcerative colitis selects which item from the menu?**

A. Luncheon meat sandwich

B. Whole grain cereal

*C.* Fresh fruit in crearn

D. Dry cottage cheese

**11. Low Residue-(Low Residue diet: remember - LO RES-Limited fat, O (zero) milk. Real fresh fish/ground meat, Eggs boiled only, Strained foods)**

**a. Used in Crohn's disease, and ulcerative colitis.**

**b. Avoid the foods on a high-residue diet.**

**c. Avoid milk (a high-residue food) and drink hot or** cold **liquids slowly.**

***Sample Question***

**A middle** aged, **postoperative Hispanic-American client** refuses **to eat the hospital prepared food and eats only flour tortillas, beans, and rice brought in by the family. During the client's present state** **of recovery, what is the nurse’s primary concern?**

A. Ability of the diet to meet the postoperative nutritional requirements of the client

B. How to avoid offending the client and family during diet teaching

C. To help the client avoid the extra sodium in the diet

D. To explain how to choose items of preference from the hospital menu that will meet needs

***Sample Question***

**Which diet is the most appropriate for a client immobilized due to an auto accident?**

A. Low carbohydrates, high protein, and high fat

B. High calcium, low protein, and low fat

C. High calories, high glucose, and high carbohydrates

D. High protein, high calories, and high fiber

**12. Postoperative recovery diet**

**a. Depending on the type and extent of surgery,** clients progress **from [NPO to their regular diet intake as gastrointestinal motility** **returns to a functioning level.**

**b. The diet will typically progress from 1NPO to clear liquids, to possibly full liquids, then to soft, bland foods, and then** regular **diet as** tolerated.

**c. Auscultate bowel sounds to determine return of intestinal motility in all four quadrants.**

**d. Should be high in** calories **and protein to enhance the healing process; an increase in Vitamins B, C and E may *also* enhance healing.**

B. Tubes and Tube Feedings

1. **NG Tube**

**a. Select the smallest diameter of tube that will allow for feeding to** flow.

**b. Formulas that supply 1 Kcal/mL will meet most client requirements.**

**c. The formula should be room temperature.**

**d. May use gravity flow or continuous feeding pump.**

**e. Keep the head of the bed elevated 35-45** degrees **during feedings.**

**f. Weigh the client daily, accurate I & O, and hydration** status.

**g. Observe for complications of tube feeding: drying of** oral **cavity, irritation of nares, dehydration, diarrhea, constipation, nausea, gastric retention, aspiration, and dumping syndrome.**

**h. Provide adequate nasal and oral care**

**i. Tube placement must be checked before intermittent gastric feedings and every 4 hours for continuous** feedings.

1) Insert 10 to 50 rnL of air into tube while listening over epigastric area with stethoscope.

2) Aspirate gastric contents with a bulb syringe or a large catheter syringe, measure and return contents. If volume exceeds 150 to 200 mL, the current feeding is usually not given as scheduled, notify physician.

**j. Check placement and taping of tube.**

**2. G-Tube (Peg tube)**

**a. Tube goes directly** into **the stomach.**

**b. Intermittent feedings should not exceed 500 mL at a time given over 30 minutes.**

**c. Solution should be warmed to r body temper**

**d. Skin care around tube insertion site is important - gastric contents may cause breakdown of the skin.**

**e. Tube may be permanent—can cause alteration in body image.**

***Sample Question***

**In caring for a hyperalimentation catheter, why would the nurse use strict aseptic technique?**

A. The catheter functions as a foreign body in the vascular system

B. The vein provides ready access to the heart

C. The catheter must remain in place for an extended period

D. The solution is an excellent medium for growth of microorganism

C. Hyperalimentation

1. The infusion of hypertonic solutions of dextrose, nitrogen, and additives (vitamins, minerals, electrolytes, essential trace elements), directly into the blood stream via indwelling venous catheter to restore/maintain normal body composition and nutrition in individuals who are unable to meet their needs via the **Gl** tract.

2. Nursing Care

*a.* Monitor blood glucose

b. Prevent Infection

c. Avoid volume overload

d. Catheter site care

VII. Radiation Therapy

**A. Safety - A nurse can be protected from unnecessary exposure by following a few principles:**

1. Time—perform tasks efficiently: be brief

2. Distance—stay as far away from the source as possible

3. Shielding—wear a lead apron and adhere to other precautions as recommended by radiation safety offices

**B. Teaching Self-Care Measures**

1. Safety precautions if client is radioactive—limit exposure to others

2. Adequate hydration and nutrition—discuss ways to replenish nutritional deficits

3. Skin care—maintain skin markings; avoid soap; no ointments or lotions unless prescribed or recommended; avoid sun light and excess heat

4. Fatigue and potential for decreased mobility—encourage frequent rest periods; discuss ways to remain physically active

VIII. Growth and Development - Adult

A. The Young Adult (approximately 19-35 years)

1. Developmental tasks - Erikson: Intimacy vs Isolation—has developed a stable and successful identity and can establish a long-term loving relationship with another individual

2. Psychosocial concerns

a. Marriage, building a family, family planning

b. New relationships - peer to job relationships, lifestyle choices

c. Complete education - advanced degrees

d. Career choice - occupation

***Sample Question***

***A* 44-year-old client is admitted to the hospital for a right simple mastectomy. The client has been married for 20 years and has three children ages 12-17. Prior to this, the client enjoyed good health and attended aerobic classes three times a week. According to the growth and development theory, which task should be accomplished by this client?**

A. Take hold in the adult world through experimenting with career opportunities and starting a family

B. Adjust to the gap between what is wanted to be accomplished and what has been accomplished

C. Develop a healthy, intimate relationship with a significant other with minimal amounts of confusion

D. Adjust to the emotional and social changes associated with interdependence of family members

B. The Middle Adult (approximately 36-65 years)

**1. Psychosocial Development**

**a. Erikson - Generativity vs. Stagnation**

**b. Socioeconomic consolidation**

**c. Evaluation of occupation/career**

**d. Help children grow and develop**

**e. Enhance intimacy with spouse**

**f. Help aging parents**

**g. Assume responsible positions in the community**

**i. Creative use of leisure time**

**j. Prepare for retirement**

**k. Grandparenting role**

**2. Health promotion and disease prevention - health screenings**

**a. Smoking**

**b. Physical activity**

**c. Alcohol and food**

**d. Medication**

***e.* Health promotion behavior**

**3. Concerns**

**a. Physical appearance/body image changes**

**b. Retirement**

**c. Finances**

**d. Aging parents**

**4. Physical changes**

**a. Development of inherited diseases**

1) Diabetes

2) Gout

3) Heart disease

4) Glaucoma

5) Ulcers

6) Cancer

**b. Gray hair**

**c. Skin changes**

d. Sensory changes

e. Changes in vision

f. Menopause/andropause

g. Decreased metabolism

h. Arthritis

i. Osteoporosis

C. Older Adult (approximately 66 years and older)

1. Psychosocial development - Erikson-Integrity vs Despair

2. Health status, health promotion, and maintenance

3. Concerns

a. Body image

b. Retirement

e. Human sexuality

f. Elder abuse/neglect

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PHYSIOLOGIC INTEGRITY OF ADULTS

**Client Need: Physiological Integrity of Adults**

**General Concepts of Adult Nursing**

I. Pain

A. Data Collection

1. Type of pain

a. Acute

b. Chronic

c. Intractable

2. Location

a. Anatomic location

b. Radiating

c. Migrating

3. Quality of pain

a. Throbbing

b. Cramping

c. Stabbing

d. Dull

e. Sharp

4. Intensity—scale of 1 to 10

5. Onset and precipitating factors

a. Time of first sensation, surrounding events

b. Activities preceding or accompanying sensation

6. Aggravating factors

7. Associated factors

8. Alleviating factors

9. Client's behavioral response

B. Implementation

1. Reassure

2. Distract

3. Comfort measures

a. Position

b. Rest

c. Elevation

d. Heat/cold

e. Remove stimuli

4. Massage

5. Pain medications

6. Alternative controls

a. TENS unit

b. Blocks

c. Surgical procedures

II. Fluids and Electrolytes

A. Water

1. Intracellular

2. Extracellular

a. Intravascular

b. Interstitial

3. Balance

1. **Intake**

1) Ingestion

2) Oxidation

1. **Output**

1) Skin and lungs

2) Gastrointestinal

a) Saliva

b) Secretions

c) Stool

3) Urine

1. **Kidneys – urine**

**4. Dehydration - Signs and Symptoms**

a. Loss of skin turgor

b. Thirst

c. Skin warm/dry

d. Febrile

e. Cracked lips

f. Decrease in urinary output

g. Concentrated urine

h. Weight loss

i. Low central venous pressure (CVP)

**5. Overhydration - circulatory overload - Signs and Symptoms**

a. Flushed skin

b. Tachycardia

c. Venous distention

d. Increase in blood pressure and CVP

e. Tachypnea

f. Coughing

g. Dyspnea

h. Cyanosis

i. Pulmonary edema

III. Electrolytes

1. Chemistry

a. Cations - positively charged ions such as sodium, calcium, potassium

b. Anions - negatively charged ions such as chloride and hydrogen

c. Must be balance between positive and negative for homeostasis

1) Extracellular - mostly sodium, chloride, bicarbonate and protein

2) Intracellular- mostly potassium, phosphate, protein and magnesium

2. Potassium - intracellular electrolyte; normal 3.5-5.5 mEq/L

a. Attributes

1) Affects contractibility of muscle

2) Alterations require monitoring of cardiac function

b. Hypokalemia - reduced serum potassium level; less than 3.5 mEq/L

1) Results from diminished food intake, diuretics, or diarrhea

2) Signs and symptoms

a) Muscle weakness

b) PVC's

c) Anorexia

d) Apathy

e) Fatigue

f) Weak pulse

3) Predisposing factors

a) Diuretic therapy

b) Dietary lack

c) Vomiting/diarrhea

d) Nasogastric tube loss

4) Interventions

a) Replace - supplements are available in effervescent tablets, liquids and capsules

b) Prevent - by encouraging dietary sources such as bananas

c. Hyperkalemia - increased serum potassium level; greater than 5 mEq/L

**c. Hyperkalemia-increased serum potassium level; > 5 mEq/L**

1) Results from decreased renal excretion caused by renal failure, vomiting/diarrhea, and excessive urination

2) Signs and symptoms

a) Cardiac dysrhythmias

b) Muscle weakness

c) Gastrointestinal changes - nausea, vomiting, intestinal colic

3) Predisposing factors

a) Altered renal function

b) Medication therapy

c} Altered adrenal function

4) Interventions

a) Stop or reduce medication therapy

b) Polystyrene (Kayexalate)

c) Intravenous calcium gluconate

**3. Sodium - extracellular electrolyte; normal 135-145 mEq/L**

a. Attributes

1) Affects acid-base balance

2) Homeostasis is maintained by the action of the hormone aldosterone on renal tubules.

b. Hypernatremia - increased serum sodium levels; greater than 145 mEq/L

1) Signs and symptoms

a) Thirst

b) Mucous membranes sticky

c) Neurologic changes - restlessness, weakness

d) Mild elevation in body temperature

c) Often overlooked as primary reason for behavioral changes in the elderly

2) Predisposing factors

a) Water deprivation

b) Hypertonic tube feedings

c) Diabetes insipidus

3) Interventions

a) Insure adequate hydration

b) Gradual lowering of serum level by hypotonic electrolyte solution

c) Client teaching

c. Hyponatremia - decreased serum sodium levels; less than 135 mEq/L

1) Signs and symptoms

a) Neurologic changes - lethargy, confusion, convulsions

b) Muscular changes - twitching, weakness, hemiparesis

c) Gastrointestinal changes - nausea, abdominal cramping

2) Predisposing factors

a) Sodium loss

b} Aldosterone deficiency

c) Excessive water intake

3) Interventions

a) Sodium replacement

b) Water Restriction

***Sample Question:***

**A client is experiencing a tingling in the fingers and toes, muscle cramps and numbness of extremities. What change in physician orders should the nurse anticipate?**

**A. Add potassium to the IV Increase**

**B. Change in diet to include more vitamin D**

**C. Decrease in sodium intake**

**D. Change in IV rate from 200 mL to 100 mL/hour**

**4. Calcium - normal total serum calcium 8.4-10.2 mg/dL**

**a. Attributes**

1) Involved in acid-base balance

2) Changes may be associated with parathyroid dysfunction or certain cancers

**b. Hypocalcemia - total serum calcium less than 8.5 mg/dL**

1) Signs and Symptoms

a) Numbness and tingling of nose, ears, fingertips or toes

b) Tetany

c) Cardiac dysrhythmias

d) Trousseau's and Chvostek's sign

2) Predisposing factors

a) Inadequate dietary intake

b} Renal failure

c) Malabsorption

d) Hypoparathyroidism

3) Intervention

a) Increased dietary intake of calcium (CA)

b) Administer CA or vitamin D

c) May need to administer calcium gluconate in emergent

**c. Hypercalemia - total serum calcium greater than 10 mg/dL**

**1) Signs and Symptoms**

a) Cardiac dysrhythmias

b) Nausea and vomiting

c) Muscle weakness

d) Lethargy

**2) Predisposing factors**

a) Bone tumors

b) Hyperparathyroidism

c) Immobilization

d) Excessive dietary intake of calcium and Vitamin D

**3) Intervention**

a) Encourage fluid intake and limit calcium intake

b) Calcitonin

c) IV fluids and Lasix

**5. Chloride (Cl)-98-106 inEq/L**

1) Involved in acid-base balance

2) Increased with dehydration and renal failure

3) Decreased in respiratory acidosis

**6. Magnesium (Mg) - 1.3-2.1 mEq/L**

1) Affected by kidney function and metabolic disturbances

2) Elevation can slow cardiac conduction and muscle function

3) Decreases lead to muscular irritability

IV. Acid-Base Balance

1. Arterial Blood Gases (ABG's) are obtained to determine oxygenation, adequacy of ventilation and acid-base status.

1. **Normal Values:**

**pH - 7.35-7.45**

**PaO2 -80-100 mm Hg**

**O2 Sat - 90-100 %**

**PaCO2- 35-45 mm Hg**

**HCO3- 22-26 mEq/L**

1. **The pH will tell if the blood is acidic or alkaline. The pH is decreased when acidic and increased when alkaline. The respiratory system, kidneys and blood help keep the pH normal.**

2. Imbalances

1. **Respiratory Acidosis - inadequate excretion of carbon dioxide with inadequate ventilation; pH<7.35 and PaCO2>45 mm/Hg.**

1. Causes: any condition that impairs normal ventilation, such as pneumonia, atelactesis, stroke, drug overdose
2. Sign and symptoms – increased P, R, B/P, mental cloudiness, ventricular fibrillation
3. Treatment – improve ventilation to exhale CO2

b. Respiratory alkalosis - loss of CO2; pH>7.45 and PaCO2>45mm/Hg

1) Caused by hyperventilation

2) Signs and Symptoms include lightheadedness, numbness, tingling, tetany of fingers and toes, tinnitus and at times a loss of consciousness.

3) Treatment - must breathe more slowly

1. Metabolic Acid - pH<7.35 and HCO3<22 m Eq/L

1) Caused by a gain of Hydrogen ions in diabetic ketoacidosis, or a loss of HCO3 ions through diarrhea and ostomies

2} Signs and Symptoms include headache, confusion, drowsiness, increased respirations, nausea and vomiting

3) Treatment - correct the metabolic defect and administer bicarbonate as necessary

1. Metabolic Alkalosis -PH>7.45 and HCO3>26 mEq/L
2. Caused by a gain of HCO3 such as taking too much antacid or a loss of hydrogen ion through vomiting and gastric suctioning
3. Signs/Symptoms – tingling of fingers and toes, dizziness, decreased respirations
4. Treatment – reverse the underlying disorder.

V. Pre and Post-op Care

A. Pre-op— reinforce physician's teaching regarding procedures/client teaching

1. Exercises

2. Equipment to be used post-op

3. NPO

4. Medications

5. Identify anxieties

B. Post-op— immediate

1. Airway

2. Oxygen

3. Gag reflex

4. Position for ventilation

5. Level of consciousness

6. Vital signs

7. Maintain temperature

8. IV patency

9. Dressings/drains

**Sample Question**

**Following surgery, a client has increasing pain levels, sighing respirations, and decreased urine output. What should the nurse suspect is the underlying cause?**

A. Hemorrhage

B, Infection

C. Dehydration

D, Heart failure

10. Hemorrhage

**Sample Question**

**The nurse straightens the surgical client's bed, rubs the back and assists the client to reposition in bed. Why is this done by the nurse?**

A. Assists the nurse to validate whether the client's complaint is legitimate

B. The back rub will extinguish the pain

C. Repositioning always decreases discomfort

D. Allows the nurse to assess the client more fully

11. Physical Assessments

a. Skin

b. Nailbeds

c. Reflexes

d. Lips

**C. Progressive unit**

1. Airway

2. Vital signs

3. IV

**Sample Question**

**Which symptoms would require the nurse to stop the blood transfusion immediately?**

A. Headache, malaise, flushed skin, and diarrhea

B. Hives, generalized itching, and wheezing

C. Headache, chills, apprehension and low back pain

D. Urticaria, headache, vertigo, and mild edema

4. Blood Transfusions

5. Position

6. Dressings/drains

7. Turn

8. Cough

9. Deep breathe

10. Oral hygiene

11. Warmth

**Sample Question**

**Nursing care of a client with a nasogastric tube includes which nursing action?**

A. Keep the nostrils clean and lubricated

B. Position on right side to promote drainage

C. Administer saline throat irrigations

D. Offer ice chips PRN

**Sample Question**

**A surgical client complains of discomfort from the nasogastric tube and asks when it can be r red. What is the best response by the nurse?**

A, "Why don't you talk to your physician about that?"

B. "The physician will have the tube removed when bowel sounds are heard."

C. "When the physician thinks you can do without it, the tube will be removed."

D, "Sorry, but it won't be out for several days."

12. Nasogastric Tubes (NGT)

**Sample Question**

**While inserting an indwelling urinary catheter, what nursing action should be performed?**

A. Use minimal lubrication to minimize friction at the meatus

B. Cleanse the external urinary meatus with an antimicrobial before catheterization

C. Cleanse the perineal area of a female using back to front motion

D. Assess patency by irrigating catheter prior to insertion

**Sample Question**

**When an indwelling urinary catheter is removed, the client should be closely observed for which symptom?**

A. Straining at urination

B. Voiding frequently in small amounts

C. Diminished sphincter control

D. Voiding large amounts every 3 to 4 hours

13. Catheters

**D. Post-op Complications**

**I. Respiratory**

1. **Symptoms**

1) Cough, dyspnea, shortness of breath

2) Increase in temperature

3) Restlessness

4} Pneumonia

5) Atelectasis

a) Asymmetrical chest movement

b) Decreased/absent breath sounds

c) Painful respirations

d) Anxiety/restlessness

**b. Implementation**

1) Cough, deep breathe—splint

2) Turn/position

3) Mobilize

4) Suction

5) Increase oral fluids

6) Cool room

7) Auscultate

**Sample Question**

**On the fifth postoperative day, a client complains of pain in the calf of the leg. What is the immediate action should the nurse take when a positive Homan's sign is observed?**

A. Start emergency intravenous therapy to have access to the circulatory system

B. Apply ice bags to the affected limb to promote venous stasis

C. Apply TED hose to the affected limb to decrease pain

D. Place client on bed rest and position the leg according to hospital protocol

**Sample Question**

**What nursing intervention would help prevent complications for client following pelvic surgery?**

A. Encourage the client to move both legs and feet every hour

B. Place pillows under the knees to facilitate venous return

C. Massage the lower legs every two hours

**2. Thrombophlebitis**

a. Symptoms

1) Red, tender calf

2) Pain

3) Edema

4) Increase in temperature

b. Implementation

1) No knee gatch/pillows

2) Elevate lower extremities

3) Watch for circulatory difficulties

4) Respiratory complications

5) Position/turn

6) VS

7) Stockings

8) Teaching

9) Avoid standing

10) Avoid constrictive clothing

11) Consistent, moderate temperature

**Sample Question**

**Which observation of an incision is the most common occurence that would require physician notification?**

A. Brownish, desquamating rash around the incision

B. Edema, redness, and tenderness of the incisional site

C. Petechiae and maculopapulae around the incision

D. Crusting over of the incisional site

**3. Wound Infections**

**a. Symptoms**

1) Increased temperature

2) Tachycardia

3) Pain and tenderness around surgical site

4) Edema and erythema around suture

5) Increased warmth around suture

6) Purulent drainage

**b. Implementation**

1) Dressing/skin dry

2) Sterile technique

**4. Wound separation: Dehiscence = edge of incision not approximated, wound open; Evisceration = abdominal contents escaping the wound**

**a. Pre-disposing factors**

**b. Assessments**

**c. Treatment and nursing interventions**

1) Supine position or position that puts least strain on operative site

2) Cover with moist, sterile saline packs

3) Dressings

**5. Immobility problems**

**a. Pressure ulcer condition - Predisposing factors**

1) Malnutrition

2} Anemia

3) Vitamin deficiency

4) Edema

5) Obesity

**b. External rotation of hip**

**c. Foot drop**

**d. Contractures**

**e. Bladder dysfunction**

**f. Bowel dvsfunction**

**g. Hypostatic pneumonia**

**h. Stasis of secretions**

**i. Muscle atrophy**

**j. Venous thrombosis**

**k. Psychological deterioration**

Specific Care Concepts in Adult Nursing

I. Musculoskeletal System

**A. Rheumatoid arthritis versus Osteoarthritis**

**1. Systemic versus Local**

a. Rheumatoid is systemic, effects many organ systems

b. Osteoarthritis affects only joints

**2. Destroys versus Degenerates**

a. Rheumatoid destroys tissue

b. Osteoarthritis causes degenerative changes in joinls

**3. Hands and/or feet versus Weight-Bearing Joints**

a. Rheumatoid produces changes in hands and feet as welt as other joints

b. Osteoarthritis primarily associated with weight-bearing joints like knees and hips

**4. Autoimmune versus Aging Process**

a. Rheumatoid is autoimmune disorder

b. Osteoarthritis is aging process

**5. Crippling versus Functional changes**

a. Rheumatoid changes are crippling

b. Osteoarthritis causes pain that limits functioning

**6. Diagnosis**

a. Blood work will reveal changes pointing to rheumatoid arthritis

b. Osteoarthritis causes changes in X-ray only

**7. Treatment for both**

a. Encourage weight loss

b. Anti-inflammatory medications

c. Heat (paraffin) treatments

d. Physical therapy

e. Adequate rest/sleep intervals

f. Modification in self-care activities

**B. Osteomyelitis - infection and inflammation in bone tissue**

1. Observed after fractures or other traumatic events

2. Signs and Symptoms

3. Key is prevention

**C. Osteoporosis - decreased bone mass**

1. Focus on women post menopause

2. Other predisposing factors and conditions

a. Prolonged immobilization

b. Insufficient calcium

c. Endocrine disorders

3. Spine most common

4. Teaching

a. Diet

b. Activity

c. Body Mechanics

**D. Fractures - break in the continuity of bone**

1. Signs and Symptoms

a. Pain

b. Deformity

c. Edema

d. Bruising

e. Crepitus

2. Types

a. Open/compound fracture - break in the skin

b. Closed-skin intact

c. Complete - bone is completely broken through

d. Incomplete - one side of bone is broken, other side intact, although it may be bent

e. Comminuted - bone fragments or splinters, resulting from crushing

3. Cause may not j ust be trauma, but due to osteoporosis/malnutrition

4. Difference between skeletal and skin traction and the care for each

**a. Skeletal traction**

1) Pinnings

2) Halo

3) Crutchficld Tongs

**b. Skin traction**

**Sample Question**

**What is the primary reason to use Buck's extension traction following surgery for a fractured hip?**

A. Roiuce muscle spasms

B. Prevent soft tissue swelling

C. Decrease the angulation of the fracture

D. Decrease hemorrhagic complications

I) Buck's extension traction

**Sample Question**

**In evaluating a 2-year-old in Bryant's extension traction for a femur fracture, what is the most appropriate action by the nurse?**

A. Pay close attention to the skin condition in the popliteal space

B. Discuss the need to increase weights with the physician

C. Make sure legs are elevated at 90 degrees from the hip at all times

D. Encourage the child to rest hips on the mattress

2) Bryant's traction

**Russell's traction**

**5. Treatment of fracture**

**Sample Question**

**A client with a cast on the right ankle complains of pain in the leg. Which should be the first nursing action?**

A. Assess the toes for color, temperature and sensation

B. Give the client's ordered PRN analgesic

C. Take the client's vital signs, especially the respiratory rate

D. Change the position of the affected leg

**Sample Question**

**How should the nurse teach the client to relieve itching inside a cast?**

A. Find a slender object such as a knitting needle which will fit in the cast to use as a

B. Cool air from a hair dryer can be directed down the east to alleviate itching

C. Rubbing alcohol can be poured down the cast to cool the skin and relieve itching

D. Attach a toothbrush to a wire coai hanger to stimulate skin under the cast

**a. Cast**

**b. Surgical repair**

**c. Prevention of infection**

**5. Orthopedic Devices**

a. Walkers

b. Crutches

c. Canes

**E. Hip fracture—signs**

1. Leg shorter

2. External rotation

3. Treatment

**F. Total hip arthroplasty - Client teaching**

1. Do not stand with toes turned inward

2. Do not cross iegs

3. Do not sit low on a toilet or chair

4. Do not lie without a pillow between legs

**G. Knee replacement**

1. May use continuous passive motion (CPM)

2. Begin weight bearing in 3-5 hours after surgery

3. Physical Therapy for stair climbing

4. Prophylactic antibiotics with dental procedures

**H. Amputation of lower extremity**

1. Disturbed body image

2. Impaired mobility

3. Phantom pain

II. Respiratory

**A. Pneumonia - inflammation of lungs usually due to invasion of a pathogen**

1. Occurs as complication

2. First clue—temperature

3. Cough—rusty-colored sputum

4. Interventions

a. Frequent oral hygiene

b. Need to provide humidity and i cJ fluid intake

c. Need rest

d. Fowler's position

e. Medications

**Sample Question**

**As part of a routine health examination, a client is found to have a positive tuberculin skin test. What is indicated by this test?**

A. Exposure to tubercle bacilli at some time

B. An active infection is occurring

C. Active tuberculosis disease

D. Developed resistance to the tubercle bacillus

**Sample Question**

**Which is true of TB contacts who have negative reactions to tuberculin skin tests?**

A. They will be retested in 90 days

B. They will be advised to accept BCG vaccination

C. Chest X-Rays are indicated at this time

D. They will be given a clean bill of health

**B. Tuberculosis - chronic, progressive infection due to tubercle bacillus**

1. Key symptom

a. Low grade fever in afternoon

b. Night sweats

2. Other symptoms include productive cough, weight loss, hemoptysis

3. Teaching

a. Medications - isoniazid (1NH), rifampin (Rifadin), pyrazinamide (Tebrazid), ethambutol (Myambutol), Streptomycin

b. Transmission

c. Rest

d. Nutrition - high protein, high vitamin

e. Testing

**C. Chronic Obstructive Pulmonary Disease (COPD)**

**1. General term for anything that affects expiratory air flow**

**2. Asthma— spasms, edema due to allergic reaction or stress, leading to chronic bronchitis**

**Sample Question**

**An elderly client with emphysema is on bedrest receiving 60% oxygen at 6 liter minute. The client begins slow shallow respirations. This would suggest which client condition?**

A. Pulmonary embolism

B. Inadequate oxygen therapy

C. High levels of carbon dioxide

D. Oxygen toxicity

**3. Emphysema— distention of alveolar sacs which rupture with destruction of capillary beds**

**a. Signs and Symptoms**

1) Shortness of breath— big symptom

2) Other

**b. Treatment/Interventions**

1) Low flow rate of oxygen

2) Positioning

3) Reassurance

4) Decreased activity

5) Mobilization of secretions

6) Teach breathing exercises

7) Medications

**c. Teaching about smoking**

**D. Cancer of the lung**

**1. Remember— no early symptoms**

a. Persistent cough

b. Blood-tinged sputum

**2. Surgery - rarely caught early enough to be effective**

**3. Chemotherapy, radiation**

**4. Supportive care**

**E. Respiratory Care**

1. Oxygen Therapy

2. Suctioning

3. Tracheostomy Care

4. Ventilator

**Sample Question**

**A client is admitted to a surgical unit due to the development of pain used by a left spontaneous pneumothorax. Why was a chest tube inserted and attached to water-seal drainage?**

A. Re-expand the lung using negative pressure

B. Provide access for instillation of pain medication

C. Prevent microbes from entering the pleural space

D. Absorb air from the pleural cavity

**Sample Question**

**What is indicated if continuous air bubbling occurs in the water-seal compartment of closed chest drainage?**

A. Air is passing out of the pleural space

B. Air is being removed from within the lung tissue

C. Air is leaking into the drainage system

D. Nothing is wrong; such bubbling is expected

5. Chest Tubes

6. Incentive Spirometry

7. Pulse Osimetry

8. Postural Drainage

III. Cardiovascular System

**Sample Question**

**Which prodromal symptom(s) is/are associated with cerebral atherosclerosis**

A. Fatigue, decreased concentration capacity

B. Severe headache

C. Drowsiness in the early morning

D. Anxiety, hallucinations

**A. Arteriosclerosis - is a decrease in elasticity of blood vessels; Atherosclerosis - is the accumulation of plaque on the inside of blood vessels**

1. Underlies most cardiovascular (CV) disorders

2. Signs and symptoms depend on location. Do not j ust consider the cardiac symptoms

3. Nursing care/teaching

a. Prevention of atherosclerosis

b. Risk potentials

c. Safety

d. Changes

4. Surgical treatment

a. Percutaneous transluminal coronary angioplasty (PICA)

b. Coronary artery bypass graft (CABG)

**B. Hypertension**

1. Definition - Primary hypertension is due to a problem within the cardiovascular system. Secondary hypertension occurs as a result of another disease process or because of problems with another body system.

1. Teaching
   1. Alterations in care plan

1) Smoking causes vasoconstriction; aggravates problem; teach smoking cessation

2) Lifestyle changes may need to be instituted

b. Safety due to dizziness - Teach elicnt and family precautions To prevent injuries

c. Rest periods when fatigued - Continuous high blood pressure causes fatigue

d. Headache control - Cerebral vasculature expands causing increased pressure

e. Obesity - Counsel weight reduction

f. Salt intake - Effects fluid retention: counsel reduction of sodium in diet

g. Cholesterol - Counsel reduction of fat and cholesterol in diet

h. Stress - Teach relaxation techniques

**C. Phlebitis/Thrombophlebitis**

1. Usually seen as a complication of another disease process

2. Discussed as a complication of surgery

3. Anticoagulants with need for observation - Monitor PT and PTT

**D. Embolism**

1. Sudden pain in chest particularly after surgery, trauma—suspect pulmonary embolism

2. Emboli can occur anywhere and the symptoms will be correlated with where the embolism has occurred

**E. Myocardial Infarction (MI)**

1. Cause - disruption of circulation in myocardium due to the obstruction of the coronary artery .

2. Emergency treatment

3. Signs and symptoms

a. Severe, crushing chest pain, substmial that often radiates down the left arm or into jaw

b. Dyspnea

c. Nausea, vomiting

d. Diaphoresis

e. Elevated WBC, ESR, and serum enzymes

4. Treatment

a. CPR if needed

b. If client is conscious and has a pulse, provide support and keep as quiet as possible

c. Increase O2 concentration

d. Reduce pain

e. Monitor cardiac status

f. Medications

5. Rehabilitation

6. Prevent Valsalva Maneuver

**F. Heart Failure (HF) (Congestive Heart Failure - CHF) - heart is no longer able to pump enough blood to meet the demands of the body**

**1. Left-sided causes pulmonary congestion**

a. Congestion as a result of blood backing up into the lungs

b. Signs and Symptoms

1) Fatigue

2) Angina

3) Anxiety

4) Oliguria

5) Dyspnea

6) Cough

7) Frothy blood-tinged sputum

**2. Right-sided causes systemic venous congestion**

a. Blood returning from the body is halted

b. Signs and Symptoms

1) Edema of feet and ankles

2) Hepatomegaly

3) Ascites

4) Distended jugular veins

**3. Right-sided is usually a complication of left**

**4. Treatment**

a. Digitalis to help make pump more efficient

b. Diuretics to eliminate excess fluid

c. Oxygen to increase concentration and make respirations less difficult

d. Monitor fluid and electrolyte balance

e. Monitor vital signs

f. Reduce activity to conserve energy

**G. Anemia**

1. Signs are generic - fatigue, pallor, increased pulse rate, lower blood pressure, dyspne:

2. Diet - increased iron intake

3. B12- increased

4. Safety due to bleeding problems

5. Correct underlying cause

**H. Leukemia - alteration in white blood cells; may be reduction in mature cells or**

**proliferation of immature cells**

1. Symptoms

a. Fever due to infection

b. Fatigue

c. Bruising

d. Bleeding

e. May look like anemia

2. Treatment

a. Chemotherapy

b. Infection prevention

c. Safe, gentle care

d. Pain control and support

IV. Gastrointestinal System

**A. Hiatal hernia - protrusion of stomach through diaphragm into thoracic cavity**

1. Signs and Symptoms

a. Dysphagia

b. Dyspnea

c. Pyrosis (heartburn)

2. Treatment – Surgery

**Sample Question**

A client recovering from a duodenal ulcer is being discharged from the hospital. In discussing diet with this client, what is an important consideration by the nurse?

A. Avoid foods and beverages containing caffeine

B. Between-meal antacids will reduce the client's appetite

C. Diet is the primary causative agent with this condition

D. An empty stomach decreases secretion of hydrochloric acid

**B. Ulcers**

1. Predisposing factors—implications for teaching

a. Diet (fast foods, coffee)

b. Smoking

c. Salicylates and NSAIDS

d. H. pylori bacteria

2. Signs and Symptoms

a. Burning sensation

b. Weight loss

c. Gl bleeding

3. Treatment

a. Antibiotics

b. Hyposecretory drugs

c. Antacids

d. Mucosal barriers

e. Lifestyle changes if needed

f. Surgery only in extreme instances of complication

4. Teaching

**Sample Question**

**A 21-year-old client is admitted with a diagnosis of ulcerative colitis. This client is pale and thin in appearance, reports 10-15 watery stools per day and is to have a barium enema. Why would cathartics not be ordered?**

A. They interfere with the synthesis of vitamin K in the bowel

B. The client has so many stools each day that the colon will already be clear

C. They may cause severe exacerbation of the pre-existing condition

D. They may introduce an adverse effect due to the existing diarrhea

**Sample Question**

**A client with ulcerative ulitis suddenly develops abdominal distentioi e pain and fever. Select the priority nursing intervention.**

A. Notify the physician

B. Insert a rectal tube

C. Prepare intravenous

D. Give antidiarrheal agents

**C. Ulcerative Colitis**

1. Symptoms

a. Rectal bleeding

b. Abdominal cramping and distention

c. Unpredictable bowel movements

d. Weight loss

2. Treatment

a. Drug therapy

1) Antiinflammatorics

2) Antibiotics

3) Steroids

4) Antidiarrheals

b. Diet - low residue, high protein, high calories with vitamin supplements

c. Stress control

d. Surgery

**D. Diverticulosis/Diverticulitis**

1. Diverticulum - outpouching of intestinal lining in weak area of muscle

2. Diverticulosis - multiple diverticula without signs and symptoms

3. Diverticulitis - inflammation and infection of diverticula - Signs and Symptoms

4. Treatment for diverticulitis

a. Diet - clear liquids until inflammation reduced, then high fiber, low fat

b. Teach stress management

c. Medications

**E. Hemorrhoids**

1. Usually presented as a complication related to pregnancy, chronic constipation, or prolonged sitting or standing

2. Treatment

3. Teaching

**Sample Question**

**Prior to removal of a T-tube, a clamping schedule is initiated one hour pre and post meals. Why is this done by the nurse?**

A. Promote return of normal peristaltic movements within the biliary system

B. Assess ability of the liver to manufacture bile

C. Assist the flow of bile to tlie duodenum to aid digestion

D. Evaluate the patency of the hepatic ducts

**F. Cholelithiasis/Cholecystitis**

1. Definitions- Cholecystitis is inflammation of the gallbladder. Cholelithiasis is the presence of stones in the gallbladder.

2. Signs and Symptoms

a. Pain typically in the upper-right quadrant, occurring after a fatty meal

b. Sudden onset of N/V

c. Increased pulse and respiration

3. Treatent - Mild attack is conservative with low or no fat diet

4. Surgical intervention

a. Laser surgery on an out-patient basis may be possible

b. Incisional surgery with exploration may result in having T-tube in place, bile draining

c. Dietary changes - reduce fats for first 4-6 weeks

**Sample Question**

**Which provision for a nutritious diet would be included for a client admitted with a diagnosis of hepatitis A?**

A. High residue diet

B. Low protein diet

C. Frequent small feedings

D. Low carbohydrate diet

**G. Hepatitis**

1. Type A

a. Transmitted by fecal-oral route

1) Poor sanitation

2) High incidence among children and young adults

b. Symptoms

1) Acts mild flu

2) Sudden onset of symptoms (fever, chills, severe headache, GI upset)

3) Liver symptoms (jaundice, hepatomegaly, tenderness of RUQ)

2. Type B

a. Transmitted in blood, blood products, c minuted needles, body fluids

b. Symptoms

1) Acts like liver disease

2) Sudden onset of jaundice, hepatomegaly, RUQ tenderness

3. Also types C, D, E, and G

4. Supportive care

a. Prevent transmission

b. Diet

c. Rest

d. Skin care

**H. Cirrhosis**

1. Not just alcohol-related; may follow hepatitis and/or be a complication of other disorders

2. Problems

a. Fluid retention from abnormal fluid and electrolyte balance—ascites

b. Bleeding from abnormal clotting factors - spider angioma

c. Malnutrition from abnormal metabolism

d. Toxic effects from medications due to abnormal detoxification

e. Fever and dehydration from poor nutrition, inadequate fluid intake

f. Delirium tremens from abnormal metabolism of alcohol

g. Hypoglycemia and hypoproteinemia

h. Hypertension

i. Abnormal neuro symptoms - confusion, memory loss, perceptual problems, reflexes altered, hepatic encephalopathy

j. Fatigue and weight loss

k. Esophageal varices from portal hypertension

3. Treatment

a. Diet - high in vitamins and minerals, protein restricted, low sodium and fat

b. Monitor for bleeding

c. Supportive care

**Sample Question**

**A child comes to the emergency room complaining of abdominal pain and constipation. The physician thinks the child may have appendicitis. Which nursing intervention is contraindicated?**

A. Monitor vital signs frequently

B. Administer an enema

C. Keep child NPO

D. Perform a rectal examination

**I. Appendicitis**

1. Signs and Symptoms

a. Pain in the right lower quadrant, McBurney's point, radiating down toward pelvis

b. Elevated WBC count

2. Treatment - surgery

V. Neurological System

**Sample Question**

**Increasing intracranial pressure is characterized by which sign(s)?**

A. Falling systolic pressure, dilated and fixed pupils

B. Negative Babinski, narrowing pulse pressure and rapid pulse

C. Projectile vomiting, negative Babinski, rapid respiratory rate

D. Rising systolic pressure, falling pulse and widening pulse pressure

**A. Increased intracranial pressure (IICP)**

1. Signs

a. Altered mental status

b. Vital signs

d. Dilation of one or both pupils to light

**Sample Question**

**A client is admitted to the neurological unit for craniotomy. The client complains of headache and aphasia, and behavioral changes noted by significant others. Why is morphine contraindicated for this client?**

A. Produces hypomotility of the G.I. tract

B. May induce nausea and vomiting

C. Depresses respirations

D. Masks pupillary responses

**Sample Question**

**Why is a postoperative supratentorial craniotomy client placed on prednisone (Meticorten)?**

A. Reduces cerebral edema

B. Enhances metabolic response

C. Promotes a feeling of euphoria

D. Enhances utilization of glucose

**2. Interventions - surgery last option**

**Sample Question**

**What symptoms can be expected by the nurse from a client with a left sided CVA?**

A. Positive Babinski

B. Right side hemiplegia

C. Hypotension

D. Intact memory

**Sample Question**

**Which nursing order will assist the client with left-sided CVA to communicate?**

A. Decrease environmental distractions

B. Use yes or no questions; speak distinctly

C. Allow adequate time for response

D. Ask open-ended question

**B. Cerebrovascular accident (CVA, Stroke, Brain Attack) - Portion of cerebrum dies due to loss of blood supply**

1. Data Collection

2. First 24 hours most critical

3. Nursing interventions regarding: aphasia, feeding

4. Supportive care

5. Amount of recovery unknown at time of accident

VI. Endocrine

A. Thyroid

1. Hypo versus Hyper

a. Hyperthyroidism increases body functions and metabolism

b. Hypothyroidism slows down body functions including metabolism

2. Teaching

3. Post-op positioning for thyroidectomy and assessments

4. Hormone replacement -life long

**Sample Question**

**A client, who is diagnosed as diabetic, complains of nervousness, palpitations, headache, and faintness. The nurse observes profuse perspiration and that the client's hands are trembling. What is an appropriate nursing intervention?**

A. Place the client in a supine position and take the blood pressure

B. Talk quietly to the client to reduce apprehension and anxiety

C. Encourage the client to drink a glass of orange juice

D. Administer Tylenol (acetaminophen) to relieve headache and fever

**Sample Question**

**Which nursing orders would be appropriate when there is an absence of pedal pulses and decreased response to a pinprick in the lower extremities of a diabetic client?**

A. Avoid using soap and water on lower extremities

B. Inspect lower extremities thoroughly every day

C. Allow client to ambulate in the room without shoes or socks

D. Exercise lower extremities four times a day

**Sample Question**

**Why would a diabetic client's diet be planned to provide a mid-after**

A. Minimize fluctuations of blood glucose levels

B. Ensure complete satisfaction of oral gratification needs

C. Decrease possibility of formation of a stress-related ulcer

D. Provide opportunities for dietary instruction

**B. Diabetes - alteration in glucose metabolism**

1. Underlying causes

2. Type 1 vs type 2

3. Nursing Care

4. Teaching

a. Hyperglycemia - elevated blood glucose; Diabetic Coma - Signs and Symptoms

1) Polyphagia

2) Polyuria

3) Polydipsia

4) Glucosuria

5) Dehydration

6) Headache, Flushed skin

7) Weakness

b. Hypoglycemia - low blood glucose; Insulin Reaction, Insulin Shock - Signs and Symptoms

1) Fatigue

2) Hunger

3) Tingling

4) Confusion

5) Slurred Speech

6) Pale skin

7) Diaphoretic

c. Safety

d. Infections

e. Diet

f. Exercise

g. Medication

1) Insulin

2) Oral hypoglycemics

**Sample Question**

**A client with diabetes insipidus requires fluid replacement in addition to which medication?**

A. Chlorpropamide (Diabinese)

B. Furosemide (Lasix)

C. Pitocin (Oxytocin)

D. Vasopressin (Pitrcssin)

**C. Diabetes Insipidus**

VII. Urinary System

**A. Urinary Calculi**

1. Technical names - urolithiasis/ureterolithiasis, renal calculus

2. Prevention

3. Strain urine

4. Pain usually in flank

**B. Renal Failure**

1. Acute versus chronic

a. Acute may be due to toxic effect of medication, high fever that has destroyed nephron

b. Chronic more complicated, more gradual onset

2. Signs and Symptoms

1. **Acute**

1) Oliguria

2) Elevated BUN and creatinine

3) Lethargy

4) Nausea, vomiting

5) Reversable

* 1. **Chronic**

1) Lethargy, disorientation

2) Decreased strength, anorexia

3) Muscle cramps

4) Anuria (<100ml/24hrs)

5) Elevated BUN and creatinine

3. Interventions

a. Hemodialysis

b. Peritoneal dialysis

VIII. Reproductive System

A. Benign Prostatic hyperplasia (BPH) - enlargement of the prostate

1. Symptoms - difficulty voiding, frequency, urgency

2. Treatment

a. Medications

b. Surgery

1) Transurethral Resection of Prostate (TURP)

2) Laser vaporization of tissues

3) Needle ablation with radiofrequencies

4) Microwave thermotherapy

1. Prostate Cancer

1. PSA screen

2. Symptoms - same as BPH, blood in urine, painful ejaculaHon

3. Treatment

a. Surgery —radical prostatectomy

b. Radiation

c. Hormone therapy

4. Post-op monitoring

**Sample Question**

**The mastectomy client returns from the operating room with a drainage • attached to negative suction (Hemovac). What is the purpose of the Hemovac?**

A. Prevents serum from collecting under the skin flaps

B. Monitors the postoperative blood loss

C. Prevents development of acute edema in the affected arm

D. Prepares the site for future skin grafting and prosthesis implantation

**Sample Question**

**Which activity(s) would be most useful in restoi inge of motion to the radical mastectomy early postoperative period?**

A. Wall-climbing exercises in a sitting position

C. Feeding self and eombing hair

D. Full extension of the shoulder joint

**C. Cancer of the breast**

1. Early detection - Breast Self-Examination (BSE)

2. Surgery

a. Lumpectomy

b. Simple Mastectomy

c. Modified Radical Mastectomy

d . Radical Mastectomy

1. Post-op management

**Sample Question**

**A client has a Papanicolaou smear (Pap smear) and the report reads "benign atypia/inflammation." What will be planned next?**

A. The next PAP smear will be done in 1-3 years.

B. The next PAP smear will be done in 4 months.

C. A conization will be done for cancer in situ.

D. A hysterectomy will be planned in about a week.

**D. Cervical Cancer**

1. Diagnosis - PAP smear

2. Prevention

a. Vaccination (limited to 4 strands)

b. Use of condoms

3. Treatment

**E. Cancer of the uterus**

1. Type of hysterectomy

2. Hormone replacement therapy

**F. Ovarian Cancer**

**G. Sexually Transmitted Diseases**

**Sample Question**

**A client is diagnosed as having syphilis. Which is the first manifestation of syphilis assessed by the nurse?**

A. A small, painless chancre on the genitals

B. Pustular skin lesions on the genitals

C. Painful and burning sensation during urination

D. A granulomntous inflammation known as gumni

**Sample Question**

**What teaching would be appropriate for a syphilis client?**

A. Refrain from sexual activity for 24 hours after treatment

B. Be aware that serologic tests will be positive from now on

C. Apply warm, moist packs to the chancre until healing occur:

D. The client now has lifetime immunity to this disease

1. Syphilis

3. Chlmydia

4. Herpes

5. Trichamonas

**IX. Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency**

**Syndrome (AIDS) - Virus renders immune system incapable of defending the body**

A. Disease Process

1. Virus infection attacks part of the immune system responsible for mobilizing infection control

2. Person may be HIV positive for long periods of time before beginning the symptoms of disease (AIDS)

3. Transmitted by direct contact with blood or bodily fluids or by transmission from mother to baby

B. Assessment

1. Diagnostic tests

2. Opportunistic infections

C. Treatment - Antiretroviral Medications

D. Nursing Care

1. Reduce risk for infection

2. Medication teaching

3. Nutritional status/teaching

4. Supportive therapies

5. Emotional support

**Sample Question**

**What is would the nurse expect to observe in a toddler who has been burned?**

A. Burn distribution over head, shoulders, and chest

B. Burn distribution on the trunk and legs

C. Two separate burn sites distant from each other

D. Burned hands with focal points on the palms

X. Skin - Burns

A. Extent - depth and amount of surface area involved

1. Superficial (first degree) - like sunburn

2. Partial-thickness (second degree) - scalds, flash flame

3. Full-thickness (third degree) - burn of complete skin thickness

B. Emergency care - cover area to keep clean and transport to care facility as soon as possible

C. Complications

1. Respiratory-inhaled fire

2. Infection

3. Shock

4. Contractures

5. Stress ulcers

6. Nutrition

7. Skin grafts

XI. Special Senses

**A. Eye**

1. Cataracts - clouding of the lens of the eye

2. Glaucoma - increase in intraocular pressure

3. Detached retina

**B. Ear- loss of hearing**

XII. Medical Emergencies

**A. Respiratory Arrest**

1. Breathing stops

2. Interventions

a. Maintain airway

b. Initiate rescue breathing

**B. Cardiac Arrest**

1. Heart stops

2. Interventions - initiate CPR

**C. Hemorrhage**

1. Loss of blood from internal or external bleeding

a. Blood pressure decreases

b. Pulse increases

2. Interventions - Apply direct pressure if external bleeding

**D. Shock**

1. Inadequate blood volume to sustain normal functioning

2. Interventions

a. Treat underlying cause

b. Restore blood volume

c. Monitor level of consciousness

**E. Anaphylactic Shock**

1. Severe allergic reaction, potentially fatal

2. Interventions

a. Epinephrine and vasopressor drugs

b. Observe vital signs

c. Institute CPR if needed

Geriatric Nursing

I. Integumentary System

**A. Alterations**

1. Dry

2. Thin

3. Fragile

4. Sweat glands decrease in number, activity and size

5. Subcutaneous fat loss

6. Thin, brittle, split nails

7. Keratosis

8. Senile lentigines

9. Hair changes color

10. Hair changes texture

11. Hair thins

**B. Nursing management**

1. Bathe less frequently

2. Shampoo less frequently

3. Use lotion to provide moisture

4. Careful handling

5. Pressure ulcer prevention

II. Musculoskeletal System

**A. Alterations**

1. Decreased muscle strength, size and tone

2. Increased stiffness and decreased flexibility of muscles and join

3. Brittle, porous bones

4. Height loss and changes in posture

**B. Resulting problems**

1. Increased susceptibility to fractur

2. Pain and discomfort

3. Decreased mobility

4. Impaired ability to perform activities of daily living

5. Feelings of dependency

**C. Nursing management**

1. Handle gently

2. Reduce environmental safety hazards

3. Encourage mobility and exercise

4. Allow extra time for performing activities

5. Assist with activities of daily living and exercises as needed

6. Prevent deformities

a. Proper positioning

b. Range of motion

7. Alleviate pain

a. Rest periods

b. Positioning

III. Respiratory System

**A. Alterations**

1. Decrease in lung expansion

2. Decreased oxygen and carbon dioxide diffusion

3. Decreased breathing capacity, increased residual air

4. Diaphragm becomes fibrotic and weakened

5. Diminished strength for breathing and coughing

6. Weaker, higher pitched voice

7. Increased susceptibility to upper respiratory infection

**B. Resulting problems**

1. Dyspnea

2. Chronic cough

3. Fatigue

4. Decreased activity tolerance

**C. Nursing management**

1. Encourage breathing exercises

2. Change position frequently

3. Discourage smoking

4. Place in Fowler's position to maximize hreathing efforts

5. Allow rest periods

IV. Cardiovascular System

**A. Alterations**

1. Longer and less forceful contractions of heart muscle

2. Decline in cardiac output

3. Decreased peripheral circulation

4. Loss of elasticity of vessels

5. Reduced or unaltered heart rate at rest

**B. Resulting problems**

1. Fatigue

2. Edema

3. Hypertension

4. Poor circulation to other systems and extremities

5. Delayed healing

6. Decreased oxygenadon to body

**C. Nursing management**

1. Encourage moderate activity and exercise

2. Avoid excess pressure on the skin

3. Avoid tight, constrictive clothing and shoes

4. Special foot care

a. Prevent trauma

b. Prevent infection

V. Gastrointestinal System

**A. Alterations**

1. Decrease in saliva secretion

2. Oral sensitivity loss

3. Lack of teeth or poor fitting dentures

4. Decline in digestive enzyme secretion

5. Decrease in lipase secretion

6. Decrease in gastric acid

7. Decrease in intrinsic factor

8. Decrease in iron absorption

9. Cardiac sphincter muscle tone loss

**B. Resulting problems**

1. Constipation and impaction

2. Fecal incontinence

3. Increased risk of aspiration

4. Weight loss due to poor diet

**C. Nursing management**

1. Promote nutritional intake

2. Provide good oral hygiene

3. Educate client regarding constipation and laxative abuse

4. Check bowel habits

5. Give prompt assistance to bathroom or with bedpan

VI. Urinary System

**A. Alterations**

1. Decrease in kidney size

2. Decline in renal blood flow

3. Reduced ability of nephron to filter urine

4. Reduced ability of tubule cells to selectively secrete and re;

5. Bladder capacity decreases

6. Loss of muscle tone of bladder

**B. Resulting problems - Interference with sleep and recreational patterns due to frequency, urgency and nocturia**

**C. Nursing management**

1. Encourage liberal fluid intake

2. Encourage frequent change of position to prevent stasis of urine

3. Encourage ambulation to prevent stasis of urine

4. Bladder retraining

5. Promptly respond to call for bathroom assistance or bedpan

6. Leave night light on for patients experiencing nocturia

VII. Neurologic System

**A. Alterations**

1. Decrease in weight and size of brain

2. Decline in number of neurons

3, Diminished nerve conduction speed

4. Alteration in sleep-wake cycle

a. Less deep sleep

b. Easily awakened

c. Difficulty falling asleep

d. Average 5 to 7 hours of sleep

**B. Resulting problems**

1. Safety hazards

2. Impaired senses

3. Forgetfulness and confusion

**C. Nursing management**

1. Safety

2. Establish means of communication for hearing impairment

3. Provide sensory stimulation

4. Consider forgetfulness and confusion when teaching:

a. Be Consistent

b. Provide repetition

c. Provide positive reinforcement and encouragement

**D. Cognitive Disorders - discussed in Mental Health**

VIII. Endocrine System

**A. Alterations**

1. Hormone secretion decreased

2. Glucose metabolism diminishes

3. Pancreatic secretions decrease

**B. Resulting problems - type 2 diabetes (Adult onset)**

**C. Nursing management - Diabetes management is the biggest problem**

IX. Autoimmune System

**A. Alterations**

1. Weakened antibody response

2. Atypical signs and symptoms in response to infections

**B. Resulting problems**

1. Increased susceptibility to infection

2. Increased susceptibility to disease

3. Misdiagnosis

**C. Nursing management - Careful observation and assessment**

X. Sense Organs

**A. Alterations**

1. Eyes

a. Pupil-size diminishes

b. Decrease in peripheral vision

c. Presbyopia - trouble seeing close objects

d. Decrease in tear production

e. Decrease in lens transparency and elasticity

f. Decline in ability to focus quickly

g. Decline in color discrimination

h. Difficulty adjusting to dark-light changes

2. Ears

a. Presbycusis - impairment of hearing: loss of the ability to hear high frequei

b. Cerumen accumulates

c. Eardrum thickens

3. Taste

a. Number of taste buds declines

b. Taste sensation is dulled - may be a safety issues

4. Smell - Sense of smell diminishes - may be a safety issue

5. Touch

a. Sense of touch dulled

b. Pain threshold higher

6. General

a. Diminished proprioception

b. Decrease in coordination

c. Decline in equilibrium

**B. Nursing management**

1. Sight

a. Bright, diffused light

b. Avoid glare

c. Strips on stairs improve depth perception

d. Glasses kept clean and ON

e. Use colors that increase visual acuity

f. Avoid night driving

g. Use resources and aids for visually handicapped

h. Place objects directly in front of individual

2. Hearing

a. Hearing aids

b. Reduce distractions so person can hear

c. Speak in normal tone of voice

d. Speak toward better ear

e. Get person's attention before speaking

XI. Nutrition

**A. Alterations – Decrese need for calories**

**B. Nursing management**

1. Adequate protein to prevent muscle wasting and weakness

2. Fluid intake should be 2500 to 3000 mL per day

3. Vitamin supplements to prevent deficiencies

4. Fiber, roughage, bulk to aid elimination

5. Small, frequent meals are easier to digest and conserve energy

XII. Hygiene

**A. General nursing care**

1. Water temperature should not be hot
2. Daily baths not necessary
3. Preparations containing alcohol and dusting powder not appropriate because they dry out the skin
4. Avoid friction
5. Avoid pressure
6. Susceptible to bruising and skin tears

**B. Oral hygiene**

1. Dentures should be taken out at night to prevent tissue swelling
2. Dentures should be cleaned frequently
3. Soft nylon toothbrush
4. Half-strength hydrogen peroxide rinses
5. Frequent mouth inspection for food accumulation, injury, disease and infection

**C. Ear hygiene**

1. Cotton swabs force cerumen back against the tympanum

2. Hearing aids

a. Wash mold with soft dry cloth daily

b. Check cannula for patency

c. Remove batteries when aid is not in use

d. Store extra batteries in refrigerator to prolong life

e. Turn aid to off position when inserting in ear

f. Store aid in box away from cold, heat, sunlight

XIII. Vital Signs

A. Atypical pulse

B. Abdominal breathing

XIV. Reality Orientation

**A. General**

1. Emphasis orientation to time, place and person

2. 24-hour implementation

3. Components:

a. Small groups

c. Individual work

4. Requirements

a. Address client by name and title

b. Orient client to time, place and person

c. Give positive verbal feedback

d. Do not reinforce confusion

**B. Remotivation therapy**

1. Normal behavior reinforced through structured group program

2. Participation and interest in the environment stimulated by using visual aids

**C. Reminiscence therapy**

1. Small group sessions

2. Based on life review process

**D. Cognitive training**

1. Memory exercises, problem-solving situations and memory training

2. Individual or small groups

3. Maintains mental activity

Common Pharmacologic Agents Used in

Medical Nursing

Type of drug and basic action: Narcotic

Drug: morphine sulfate

Common dose and route 5-15 mg Sub-Q or IM every 4

hours; 30-60 mg P.O. every 4 hours; injected slow l.V.

push, titrated to relieve pain

Uses: Relief of severe pain and anxiety

Side effects: Sedation, depressed respirations, hypotension,

nausea, vomiting within the first 30 minutes after injection

Type of drug and basic action: Non-steroidal antiinflammatory

agent (pro stagI an din synthesis inhibitors)

Drug: ibuprofen (Motrin)

Common dose and route: 300-600 mg P.O. qid

Uses: Arthritis, primary dysmenorrhea, gout

Side effects: Prolonged bleeding lime, epigastric distress,

occult blood loss

Type of drug and basic action: Antiarrhythmic

Drug: atropine sulfate

Common dose and route: 0.5-1 mg l.V. push, may repeat

every 5 minutes to a maximum dose of 2 mg

Uses: To treat bradycardia, junctional or escape rhythm

Side effects: Mydriasis, photophobia, blurred vision, dry

mouth, thirst, urinary retention

T\pe of drug and basic action: Antidysrhythmic

Drug: Lidocainc (Xylocaine)

Common dose and route 50-100 mg l.V. bolus at 25-5O mg

per minute. For elderly patients give only 1/2 this amount.

Repeat bolus every 3-5 minutes until dysrhythmia stops or

side effects develop. Do not exceed 300 mg bolus during 1

hour period. Constant infusion: 1 to 4mg/minute

Uses: Treatment of ventricular dysrhythmias

Side effects: Mental confusion, restlessness, lightheadcdness,

convulsions

Type of drug and basic action: Cardiotonic Glycoside

Drug: Lanoxin

Common dose and route Loading dose .05-1 mg l.V. or P.

O. in divided doses over 24 hours. Maintenance dose =

0.125-.05 mg l.V. or P. O. daily

Uses: Treatment of congestive heart failure, atrial

fibrillation, atrial flutter

Side effects: Fatigue, muscle weakness, headache, dizziness,

cardiac conduction disturbances (possibly AV block),

yellow-green halos around visual images, anorexia, nausea,

vomiting and diarrhea

Type of drug and basic action: Disaccharidc

Drug: sucralfate(Carafate)

Common dose and route 1 gram P.O. qid 1 hour before and

at bed time

Uses: Treatment of duodenal ulcers

Side effects: Dizziness, sleepiness, constipation, nausea,

diarrhea

Type of drug and basic action: H2 antagonist

Drug: cimetidine (Tagamet)

Common dose and route 300 mg P.O. qid with meals and at

bedtime. May be given l.V. as admixture or push over 1-2

minutes every 6 hours. May be given IM every 6 hours (may

be painful)

Uses: Treatment of duodenal ulcers

Side effects: Perforation of chronic peptic ulcers after abrupt

cessation of drag

Type of drug and basic action: Anticoagulant

Drug: Heparin

Common dose and route 5,000 to 10,000 units l.V. push then

adjust dosage according to PTT results. May be given l.V. or

Sub-Q.

Uses: Treatment of deep vein thrombosis, myocardial

infarction pulmonary embolism, or prophylaxis of embolism

Side effects: Hemorrhage: Antagonist: Protarnine Sulfate

Drug: warfarin (Coumadin)

Common dose and route 10-15 mg P.O. for 3 days, then

dosage based on daily prothrornbin times. Usual

maintenance dose: 2-lOmg/day

Uses: Treatment of pulmonary emboli, deep vein thrombosis,

myocardial infarction, rheumatic heart disease with heart

valve damage. Prevention of deep vein thrombosis

Side effects: Hemorrhage; Antagonist: Vitamin K

Type of drug and basic action: Vasodilator

Drug: nitroglycerin

Common dose and route 1 subn'ngual tablet may be repeated

3 times at 5 minute intervals

Uses: Relief of angina pain

Side effects: Headache, orthostatic hypotension, flushing,

palpitations

Drug: isosorbide (Isordil)

Common dose and route: 5-30 mg P.O. qid

Uses: Prophylaxis of angina pain

Side effects: Headache, orthostatic hypotension, tachycardia,

palpitations

Type of drug and basic action: Antidysrhythmic (betablocker)

Drug: propranolol (Inderal)

Common dose and route: 1-3 mg l.V. diluted in 50 ml

solution infused at not more than 1 nig/minute. Maintenance

dose: 10-80 mg P.O. tid or qid

Uses: Treatment of Supra-ventricular, ventricular and atrial

Side effects: Fatigue, vivid dreams, bradycardia,

hypotension, increased airway resistance, hypoglycemia,

Type of drug and basic action: And hypertensive (betablocker)

Drug: propranolol (Inderal)

Common dose and route Initial dosage: 80 mg P.O. daily in

2-4 divided doses. Maximum daily dose=640 mg usual daily

dose=160-480mg

Uses: Treatment of hypertension

Side effects: Same as above

Drug: methyldopa (Aldornet)

Common dose and route 250 rng P.O. bid to tid for initial 48

hours, then increase as needed every 2 days. Maintenance

dose-500 mg to 2 grams daily in 2-4 divided doses

Uses: Treatment of sustained hypertension

Side effects: Sedation, headache, decreased mental acuity,

orthostatic hypotension, edema, dry mouth, nasal stuffiness,

gynecomastia

Type of drug and basic action: Diuretic (k+ sparing) antihypertensive

Drug: spironolactonc (Aldactoae)

Common dose and route: 25-200 mg P.O. daily in divided

doses

Uses: Treatment of hypertension

Side effects: Hyperkalemia, dehydration, hyponatremia,

gynecomastia in males and menstrual disturbances in

Type of drug and basic action: Spasmolytic

Drug: theophylline (Aminophyllin)

Common dose and route 500 mg immediately, then 250-500

mg every 6-8 hours P.O/.I.V.: inject slowly over a minimum

of 4-5 minutes. Do not exceed 25mg/minute infusion rate

Uses: Treatment of acute or chronic bronchial asthma,

bronchospasm

Side effects: Restlessness, headache, insomnia, heart

palpitations, hypotension, flushing, increased respiratory

rate, nausea, vomiting, bitter after taste

Type of drug and basic action: B

Drug: terbutaline (Brelhinc)

Common dose and route 2.5-5 mg every 8 hours P.O.

Uses: Treatment of COPD

Side effects: Nervousness, headache, tremors, heart

Type of drug and basic action: Glucocorticoids

Drug: beclomethasone (Vanceril)

Common dose and route: 24 inhalations tid or qid. Maximum

daily dosage=10 inhalations

Uses: Treatment of steroid dependent COPD

Side effects: Fungal infections of mouth and throat, dry

mouth, hoarseness

Type of drug and basic action: Antitubercular

Drug: ethambutol (Myambutol)

Common dose and route Initial treatment 15mg/kg/day P.O.

Retrcatment=25mg/kg P.O. daily for 60 days then

15mg/kg/day

Uses: Treatment of pulmonary T.B.

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Side effects: Peripheral neuritis, optic neuritis, anorexia,

nausea, vomiting, headache, mental coniusion

Drug: isoniazide (INK)

Common dose and route: 5mg/kg/day P.O. or IM. up to

300rng/day for 9 months to 2 yrs.

Uses: Treatment of active T.B.

Side effects: Aplastic anemia, peripheral neuropathy,

parasthesias of hands and feet, epigastric distress, hepatitis,

hyperglycemia

Drug: Streptomycin sulfate

Common dose and route: ] gram I.M. daily for 2-3 months,

then 1 gram 2-3 times/week if rcna! function is normal

Uses: Primary treatment of T.B.

Side effects: Transient parasthesias, muscle weakness.

ototoxicity, nephrotoxicity

Type of drug and basic action: Antibiotic

Drug: neomycin sulfate (Neobiotic)

Common dose and route: 1 gram P.O. every hour for 4 doses

then every 4 hours for the balance of the 24 hrs. 1-3 grams

P.O. qid for 5-6 days

Uses: Suppression of intestinal bacteria pre-op Adjunctive

treatment of hepatic coma

Side effects: Headache, tinnitus, hearing loss, nausea,

vomiting, nephrotoxicity

Type of drug and basic action: ammonia detoxicate

Drug: lactulose (Cephulac)

Common dose and route: 15-30ml. P.O. daily

Uses: Treatment of constipation

Common dose and route 30^5 ml tid or qid until 2-3 soft

stools daily. Usual dose-90-150 ml in divided doses daily

Uses: Treatment of hepatic coma

Side effects: Abdominal cramps, diarrhea, flatulence,

belching

Type of drug and basic action: Sulfonamide

Drug: sulfasalazine (Azulfidine)

Common dose and route Initially: 34 grams P.O. daily in

divided doses. Maintenance dose = 1.5-2 grains P.O. daily in

divided doses every 6 hours

Uses: Treatment of ulcerative colitis

Side effects: Aplastic anemia, heniolytic anemia, headache,

nausea, vomiting, diarrhea, jaundice, stomatitis

Type of drug and basic action: Antineoplastic Alkylating

agent

Drug : cyclophosphamidc (Cytoxan)

Common dose and route Initial: 40-5Omg/kg P.O. or IV. in

2-5 daily doses. Maintenance: 1.5-3 mg/kg/daily P.O. or 1015

mg/kg/day l.V. for 7-10 days

Uses: Treatment of cancer

Side effects: Leukopenia, thrombocytopcnia, anemia,

anorexia, nausea, vomiting, stomatitis, rnucositis,

hemorrhagk cystitis, alopecia

Type of drug and basic action: Antimetaboiite

Drug : azathioprine (Imuran)

Common dose and route: Initially: 3-5mg/kg/day P.O.

Maintenance: l-2mg/kg/day

Uses: Imrnunosuppression in kidney transplant

Side effects: Leukopenia, anemia, thrombocytopenia, nausea,

vomiting, pancreatitis

Type of drug and basic action: Antineoplastic Hormone

alteration

Drug: tamoxifen: Nolvadex

Common dose and route 10-20 mg P.O. bid

Uses: Treatment of advanced breast cancer

Side effects: Transient full of WBC's, vaginal discharge and

bleeding

Type of drug and basic action: Antineoplastic Vinca

Alkaloid

Drug: vincristine (Oncovin)

Common dose and route: l-2rng/mq I.V. weekly

Uses: Treatment of cancer

Side effects: Mild anemia and leukopenia, peripheral

neuropathy, loss of deep tendon reflexes, constipation, ileus,

ptosis. urinary retention

Type of drug and basic action: Solute Diuretic

Drug: Mannitol (Osmitrol)

Common dose and route 1.5-2g/kg as a 15%-25% solution

I.V. over 30-40 minutes

Uses: To reduce intra-oeular pressure or intracranial pressure

Side effects: Rebound increase in intracranial pressure 8-12

hours after diuresis, headache, confusion. Circulatory

overload during infusion, tachycardia, thirst, nausea, and

vomiting. Fluid and electrolyte imbalance, water

intoxication, cellular dehydration.

Drug : furosemide (Lasix )

Common dose and route 20-SOmg P.O. daily. Second dose

may be given 6-8 hours. May give up to 600mg/day if

needed 20-40mg TM or IV. Increase by 20mg every 2 hours

until response is achieved

Uses: To reduce edema, circulatory overload

Side effects: Dehydration, orthostatic hypotension,

hypokalemia after initial dose

Type of drug and basic action: Glucocortkoid

Generic name of drug (common brand name): Prcdnisone

Common dose and route 2,5-15mg P.O. bid, tid, or qid.

Maintenance dose given once daily or every other day

Uses: To reduce severe inflammation or to suppress the

Side effects: Fluid retention, hypertension, insomnia if drug

given in evening or at night, mental charges, e.g., euphoria.

GI irritation, possible peptic ulcer formation, hypokalemia,

hyperglycemia, delayed \vound healing, acne, hirsuitism,

increased susceptibility to infections, Adrenal insufficiency

if drug withdrawn abruptly.

Type of drug and basic action: Glucocorticoid

Drug: methylprednisolone (Solu-Medrol)

Common dose and route: PO: 2-60mg in 4 divided dos

I.M.:40-80mg daily. I.V.:10-250mg every 4 hours

Uses: Decrease severe inflammation or to suppress the

immune system

Side effects: Same as Prcdnisone

Type of drug and basic action: Antacid

Drug : aluminum hydroxide (Alu-Cap)

Common dose and route 500 mg to 2 grams bid to qid

Uses: To treat hyperphosphatcmia in renal failure

Side effects: Constipation, hypophosphatemia

Common Pharmacologic Agents Used in

Surgical Nursing

Type of drug and basic action: Anticoagulant Drug::

Heparin

Common dose and route: 5,000-20,000 units. Parenteral

administration. Intermittent or continuous IVdrip; adjust

dosage according to PTT results. May be given Sub-Q.

Uses: Prolong clotting time of blood. Deep vein Thrombosis.

Pulmonary Embolism. Myocardial Infraction. Any condition

in which there is excessive or undesirable clotting.

Side effects: Hemorrhage. Antidote: Protamine Sulfate. IM.

administration may cause local irritation or hemorrhage.

Clotting time should be checked frequently.

Drug : warfarin (Cournadin)

Common dose and route Initial dose 20-60 mg. Average

maintenance 2-10 mg. Oral, I M., I.V. Oral most usual.

Dosage computed on plasma prothrombin time.

Uses: Recurrent phlebitis. Chronic occlusive arterial disease.

Myocardial infraction. D.V.T. Pulmonary embolism.

Side effects: Hemorrhage Antagonist: Vitamin K

Type of drug and basic action: Narcotic analgesic

Drug: morphine sulfate

Common dose and route 8-15 mgq3hprn. Oral orparenteral

I.V. titrated to relieve pain.

Uses: Severe pain. Preopcrative medication. Produces mood

elevation, euphoria, relief of fear and apprehension.

Side effects: Depressed respirations. Pinpoint pupils. Nausea.

vomiting, constipation. Tone of smooth muscle in the

sphincters is increased. Controlled substance.

Drug: codeine

Common dose and route 15-60 mg. q3h pm. oral or

parenteral

Uses: l/6th as strong as morphine. Less depressing to

respirations. Depresses cough

Side effects: Similar to morphine but less pronounced.

Controlled substance.

Drug: rncperidine {Demcrol)

Common dose and route 50-100 mg. Oral orparenteral.

Uses: Moderate pain. Same as morphine. Intermittent pain,

Preanesthetic agent.

Side effects: Dizziness, nausea, vomiting. Toxic effects are

said to produce more physical impairment than that caused

by other narcotic drugs. Controlled substance.

**Type of drug and basic action: Narcotic Antagonist**

Drug: naloxone (Narcan)

Common use and route 0.4 mg., repeated at intervals of 2-3

minutes

Uses: Reverses respiratory depressant actions of narcotics

and pentazocine

Side effects: Precipitates abstinence syndrome when given to

addicts. Continued observation as drug may wear off before

depressant effect of narcotic decreases.

Type of drug and basic action; Synthetic non-narcotic

analgesic

Drug; pentazocine (Talwin)

Common dose and route 30-50 mg. q3-4 hours Oral or

parenteral

Uses: Potent analgesia. Relief of pain associated with.

surgical procedures. Contraindicated in head injury.

Side effects: Nausea light-headcdness, vomiting, euphoria.

Narcan is the only effective antagonist.

Drug: aspirin

Common dose and route 0.3-0.6 CM q3-4 hours. Oral or

rectal

Uses: Mild-rnodcrate pain Anti-inflammatory Anti-pyretic

Side effects: May mask fever in surgical pt. Gastrointestinal

irritation (severe with milk)

Drug: Generic name of drug (common brand name):

Acetaminophen (Tylenol)

Common dose and route 325-650 mg. q3-4 hours

Uses: Mild-moderate pain. Anti-pyretic

Side effects: Side effects negligible. Toxic effects on kidneys and liver.

Type of drug and basic action Non-steroidal anti-inflammatory

agent .

Drug: ibuprofen (Motrin)

Common dose and route 300-600 mg. PO. qid.

Uses: Mild-moderate pain effective in pain relief where

prostaglandins produced

Side effects: Gastrointestinal distress Offer milk

Type of drug and basic action: Analgesic Additives

Drug: promethazine (Phenergan)

Common dose and route 25-50 mg. q 3-4 hours Parenteral

Uses: Pre and postoperative sedation, motion sickness,

apprehension

Site effects: Causes irritation if extravasation occurs.

Postural hypotension and other symptoms associated with

pbcnotbiazines.

Drug: hydroxyzine (Vistaril)

Common dose and route 25-100 mg. Oral or parenteral

tier Anti-emetic Mild sedative

Side effects: Postural hypotension, irritating to tissues

Type of drug and basic action: Anti-emetic

Drug: trimethobenzamide (Tigan)

Common dose and route: 100-250 mg. Oral, parenteral, or rectal.

Uses: All forms nausea and vomiting. Motion sickness

Side effects: Adverse effects low. Dizziness, drowsiness

Type of drug and basic action: Antibiotics

Drug: ampicillin (Omnipen)

Common dose and route 250-500 mg. q.i.d. Oral, parenteral

Uses: Broad spectrum

Side effects: Pain at injection site, dizziness, drowsiness

Drug: tetracycline (Erythromycin)

Common dose and route: 50-500 mg. q.i.d. Oral, parenteral

Uses: Broad spectrum

Drug: gentamicin (Gararnycin)

Common dose and route: 60-30 mg. q8 hours IM or IV

Uses: Bactericidal

Side effects: Ncphrotoxic

Type of drug and basic action: Osmotic Diuretic

Drug: mannitol (Osmitrol)

Common dose and route: 2-10-20% concentration prn. I.V.

Uses: Relieve cerebral edema, reduce elevated intraocular

pressure, oiiguria from transfusion reactions.

Side effects: Headache, nausea, chills. Low serum sodium and chloride.

Type of drug and basic action: Diuretic

Drug: furosemide (Lasix)

Common dose and route: 20-30 mg. Oral, parenteral (20

mg/minute)

Uses: Whenever a potent diuretic is required

Side effects: Dehydration, reduction blood volume, postural

hypotension, hypokalemia

Type of drug and basic action: Glucocorticoid Steroid

Drug: dexarnethasone (Decadron)

Common dose and route: 4-20 mg. Parenteral

Uses: Reduce cerebral edema Anti-inflammatory

Side effects: Gastric irritation. Taper drug

MEDICAL NURSING REVIEW

GLOSSARY

ACETYLCHOLINE—(Ach) An ester of choline in tissues

and organs. Important in transmission of nerve impulses at

synapses and myoneural junctions of the parasympathetic

nervous system. Quickly destroyed by cholinesterase

(Tensilon, Pyridostigmine).

ACID-BASE EQUILIBRIUM—State of hydrogen ion

concentration in arterial blood. pH 7.35 to 7.45. Disturbances

cause acidosis or alkalosis. pH is regulated by buffer systems

of blood, and respiratory and rena! system.

ADA DIET—Diabetic diet distributes the carbohydrate,

protein and fat calories to give 20% at breakfast, 30% at

lunch, 40 % at supper and 10% at bedtime. Diet planned

according to weight and activities. Restricts concentrated

sources of carbohydrates. Multiply ideal weight by 10 to get

general basic caloric requirement. Emphasize foods allowed,

not what is forbidden.

AFFERENT-impulses toward a cell send message to the brain. The opposite of efferent.

ANAPHYLAXIS - An Antigen antibody reaction. A

hypersensitive state of the body to a foreign protein or a

drug. Mild symptoms arc fever, redness of skin, itching,

urticaria. An acute reaction can produce shock. Anaphylactic

vJiock is sudden, and may include increased irritability,

and death (resulting from spasm of muscles of bronchioles).

Asthma, hay fever, urticaria are thought to be of an

anaphylactic nature. Rx—vasopressors (epinephrine),

corticosteriods, oxygen. CPR.

ANTICHOLINERGIC DRUGS — Counteract

acctylocholine in the CNS. Side effects; dry mouth, blurred

vision, urinary retention, constipation, mental disorders.

Artanc, Procyclidine, Diphenhydraminc, (Benadryl) an

antihistamine.

ALTONOMIC NERVOUS SYSTEM — Spontaneous,

self-controlling. Regulates involuntary body functions

(glands, smooth and cardiac muscles). Includes sympathetic

or thonicolumbar and para sympathetic or craniosacral

SNS—{sympathetic nervous system) vasoconstrict, genera

increase in BP, pupil dilation, goose bumps, decrease GI

activity, increase HR. Fright or flight associated with

expenditure of energy. Mediated through release of

transmitter agent, norcpinephrine.

PNS—(parasympathctic nervous system) Vasodilation,

general fall in BP. pupil contraction, copious salivation.

increased GI and slow HR. Effects are specific rather than

general. Mediated by motor vagus.

BRONCHITIS (Chronic)—Chronic inflammation of

bronchial mucous membrane accompanied by fibrotic and

atrophic changes in the mucous membrane, persistent,

productive cough, exertional dyspnea.

BUERGER'S DISEASE—A chronic, recurring

inflammatory occlusivc disease usually of lower extremities .

It is associated with venous and arterial thrombosis and

frequently leads to gangrene. Affects men 20-45. Dependent

position of extremity - rubor and elevate above heart level pallor

indicates arterial insufficiency. Cool, numb, tingling,

cramps, easy fatigue and ulcers. Intermittent claudication

(cramps in legs after exercise but relieved by rest). No

smoking; avoid temperature extremes; adequate hydration,

protect from trauma and infection, good foot care.

BLIN—Blood urea nitrogen. An index of renal excretory

capacity. Dependent on body's urea production and on urine

flow. Values elevated with marked renal damage or renal

function impairment and dehydration.

CALCULUS—"Stone" composed of mineral salts. Common

in kidneys, ureter, bladder and urethra. Etiology abnormal

parathyroid gland, uric acid disorder, excessive milk and

alkali. Most unexplained,

CANCER WARNING SIGNALS—Unusual bleeding or

discharge: a lump or thickening:a sore that docs not heal; a

change in bowel or bladder: hoarseness or persistent cough:

indigestion or difficulty swallowing; change in size, shape or

appearance of a wart or mole; unexplained loss of weight.

CRANIAL NERVES—

I. Olfactory—sense of smell

II. Optic—vision

III. Oculomotor—pupil constriction, elevation of

upper lid, most EOM movements

IV. Troehlear—downward, inward movement of

eye

V. Trigeminal—motor—jaw clenching muscles,

lateral jaw movement

Sensory - facial (I. ophthalmic; II. maxillary;

III. mandibular). Tic Douloureux

VI. Abducens—motoreye, moves eyeball outwards

VII. Facial—motor—muscles of the face, including

those of the forehead, around the eyes and mouth

(Bell's Palsy) Sensory—taste on anterior 2/3 of tongue

VIII. Acoustic—hearing fcochlcar) and balance

(vestibular)—sensitive to drugs

IX. Glossopharyngeal—sensory—pharynx and

posterior tongue, including taste

Motor—palate, pharynx and larynx

X. Vagus—sensory—pharynx and larynx—gag

reflex Motor—palate, pharynx and larynx—palate

movement

XI. Spinal Accessory—motor— stemomastoid,

upper portion of trapezius, neck movement

XII. Hypoglossal—motor—tongue

DIC—Disseminated Intravascular Coagulation is

widespread clotting in small vessels of the body, consuming

clotting factors and platelets. Paradoxically, client presents

with bleeding, septicemia, placenta separation, malignancies,

transfusion reactions, and trauma may predispose to DIC.

DYSRHYTHMIA—A clinical disorder of the heart beat; it

may be a disturbance of rate, rhythm or both. A derangement

of heart function, not structure.

EDEMA—A general or local condition in which body

tissues contain an excessive amount of fluid. Generalized

edema is sometimes called anasarca. It results from increased

permeability of the capillary walls; increased capillary

pressure due to venous obstruction or heart failure;

lymphatic obstruction, disturbances in renal function,

decreased plasma protein (albumin); sodium retention,

malnutrition, starvation or chemical substances. Occurs by

diffusion, osmosis or dialysis.

EMPHYSEMA—Alveoli of lungs become distended or

rupture. A result of interference with expiration, or loss of

elasticity of the lung. It is irreversible airway obstruction

caused by collapse of the airways during expiration.

EPILEPSY—A symptom-complex characterized by attacks

of unconsciousness that may or may not be associated with

convulsions, sensory phenomena or abnormalities in

behavior. Thought to be an electrical disturbance in the

nerve cells of the brain. EEC diagnosis brain electrical

discharge pattern.

CTT—Glucose Tolerance Test—The most sensitive test for

diabetes. Normally carbohydrate diet 3 days before test,

overnight fast, draw blood. 50 -100 gm. carbohydrate load

(Glucola) is given. Three blood samples drawn, one each

hour (for a 3 hour GTT).

HEMOPHILIA—Hereditary x-linked bleeding disorders.

Hemophilia A due to lack of Factor VIII, while hemophilia B

is due to lack of Factor IX.

INSULIN—Secreted by beta cells of pancreas islets of

Langerhans and works to lower the blood glucose by

facilitating the uptake and utilization of glucose by muscle

and fat cells and by decreasing the release of glucose from

the liver. Insulin is necessary for the normal metabolism of

fat and protein. There is a narrow margin between the

therapeutic and toxic (hypoglycemic) effects of insulin, it is

important that both the client and the nurse know when

hypoglycemia is most likely to occur with each type of

insulin. Very rapid acting (Humalog, lispro, peaks in % to 1

hour); rapid acting (Regular, semi lente, peaks 3 hours);

intermediate (Globin, NPH, lente peaks 8 hours) (Lantus has

no peak, onset 1.1 hour with duration of 24 hours); slow

(Protamine Zinc, ultralente, peaks 16 hours). The dosage of

insulin is adjusted according to the degree of glycosuria and

the time it appears. Insulin injection sites must be

systematically rotated.

IVP—Intravenous Pyelogram—Introduction of a radiopaque

contrast material intravenously, in order to visualize the

kidneys, ureter and bladder. Renal excretion clears the

material from the blood. Used for initial investigation of

renal problems. Prepare client to avoid overhydration, which

dilutes contrast and decreases visualization. Elderly patients

with poor renal reserve may need hydration. Question

allergies.

MENIERE'S DISEASE—Also referred to as Meniere's

Syndrome - An inner ear problem stemming from labyrinth

dysfunction. Triad of symptoms - paroxysmal whirling,

vertigo, tinnitus, and sensorial hearing loss.

MULTIPLE SCLEROSIS—A chronic progressive CNS

disease, characterized by small patches of demyelination.

Patients may have a wide range of symptoms (weakness,

abnormal reflexes, nystagmus, diplopia, tremor, ataxia,

paresthesias, impaired vibration and position sense) with

many remissions and exacerbations.

M YASTHENIA GRAVIS—Disorder in the neuromuscular

transmission (acetylcholine) of the voluntary muscles of the

body. Characterized by extreme muscle weakness.

Symmetrical muscles are involved, first those innervated by

cranial nerves. Diplopia (double vision) and ptosis (drooping

eyelid) are early symptoms. Progressive weakness of

diaphragm and intercostal muscles can be acute emergency.

Neostigmine (anticholinestcrase delays destruction of

acetylcholine, producing temporary remissions. Any delay in

drug administration may result in loss of swallowing ability.

Pro vide client with bell.

PANCREATITIS—Inflammation of the pancreas brought

about by the digestion of this organ by the enzymes it

produces, principally trypsin. Gallstones and alcohol are

etiologic factors. Elevated amylase and lipase levels are

found. P - pain, A - antispasmodics, N - nasogastric suction,

C - calcium, R - replace fluids and electrolytes, E endocrines,

A - antibiotics, S - steroids.

PARKINSON'S DISEASE—A chronic nervous system

disease characterized by a fine, slowly spreading tremor;

muscular weakness and rigidity; shuffling, propulsive gait

and mask-like expression. Levodopa is effective in

controlling symptoms. Side effects: N-V, anorexia,

twitching. Pyridoxine (B6) cancels effect of Lcvodopa;

therefore, eliminate from diet.

PHEOCHROMOCYTOM A—A chromaffin cell tumor

producing hypertension by excreting epinephrinc and

norepinephrine. It usually occurs in the adrenal medulla, and

is usually benign.

PITUITARY GLAND—The master gland which controls

hormone production of the other endocrine glands. The

anterior lobe produces sornatotropin (growth). LTH,

prolactin. ACTH, TSH, FSH, LH and MSH. The posterior

lobe is connected to the autonomic nervous system. It

produces vasopressin (corrects low blood pressures through

antidiuretic action), ADH (regulates distal tubules in

nephron) and oxylocin.

RAYNAUD'S DISEASE—Condition caused by abnormal

degree of spasm of the blood vessels of the extremities,

especially in cold weather. Changes in color (pale to red),

pallor, cyanotk, rubor.

THROMBOCYTOPEIN1A PURPURA—Platelet

deficiency. Antiplatelet antibodies are produced. Sudden

onset with petechiae and mucosal bl^linc. Cmlirasteriods

is treatment.

SURGICAL NURSING REVIEW

GLOSSARY

ACIDOSIS—Disturbance of the acid-base balance of the

body resulting in an acid condition in the serurn; pH below

7.35.

ALDOSTE RONE—Hormone produced by the adrenal

cortex whieh regulates the volume of blood and extracellular

water through the rcabsorption of sodium by the kidneys.

ALKALOSIS— Increase in body alkalinity resulting in a

base excess in the serum; pH above 7.45.

ANABOLISM—Constructive metabolic processes that

build up the body substances.

ANALGESIA—Absence of pain.

ANGIOGRAPHY—Technique of injecting dye into the

vascular system to outline blood vessels.

ANTIDIIJRETIC HORMONE—Decreases urinary output

by promoting water reabsorption by kidney nephron.

ATELECTASIS—Obstruction of passage of air to and from

the alveoli resulting in that portion of the lung becoming

airless.

BIOPSY—Obtaining of tissue for microscopic examination.

CATABOLISM—The breaking down of nutrients into

simpler substances, most of which are excreted.

CATECHOLAMINES—The hormones epinephrine and

norcpinephrinc produced by the sympathetic nervous system.

CRANIOTOMY—A surgical opening of the skull.

DEHISCENCE—Rupture of an abdominal wound. The skin

remains intact.

ELECTROLYTES—Substances that, when dissolved in

water, dissociate and form electrically charged particles

called ions.

EMBOLUS—Foreign body hi the blood stream, i.e. may be thrombus, fat or air that becomes dislodged from its original site and is carried along in the blood.

EXUDATE—Protein-containing fluid that collects within tissues as a result of pressure changes brought about by increased capillary permeability.

EVTSCER ATION—Skin breaks open and abdominal viscera arc extruded.

GLUCOCORTICOIDS—Hormones of the steroid class produced by the adrenal cortex.

GLUCONEOGENESIS—Glucose created by the conversion of protein and fat.

GLYCOGENOLYSIS—Conversion of liver glycogen to glucose.

HEMATURIA—Blood in the urine.

HOMAN'S SIGN—Pain in the upper posterior calf on dorsiflexion of the foot with the knee extended or slightly flexed.

HYDRONEPHROSIS—Distention of the pelvis and calyces of a kidney from obstruction of urinary flow.

HYPERPNEA—Increased breathing.

HYPOKALEMIA—Decreased scrum potassium.

HYPONATREMIA—Decreased sodium in the blood.

HYPOVOLEMI A— Diminished circulating blood volume.

INFLAMMATION—A protective mechanism exhibited by tissues in response to insults of various origins. Characterized by redness, heat, swelling or tenderness.

INTEGUMENT—Skin.

LOBECTOMY—Removal of a lobe of a lung. Chest tubes necessary.

NEPHRON—Functional unit of Ihe Kidney.

OLIGURI A—Urinary volume less than 400 ml/24 hours.

OOP HORECTOMV—Removal of the ovaries.

PARALYTIC ILEUS—Paralysis of the wall of the intestine, involving distention and symptoms of obstruction.

PARENTERAL HYPER ALIMENT ATI ON—Infusion of large amounts of basic nutrients to achieve tissue synthesis and growth.

PERISTALSIS—Progressive action caused by the contraction and relaxation of the muscles of the gastrointestinal tract.

PHLEBOTHROMBOSJS—Intravascular marked inflammation of the vein.

PNEUMONECTOMY—Removal of an entire lung.

PNEUMOTHORAX—Collection of air in the pleural space.

POTASSIUM—Major intracellular positive ion.

PULMONARY EDEMA—The presence of excess fluid in the lung, eifher in the interstitial spaces or in the alveoli.

PULMONARY EMBOLISM—Obstruction of one or more pulmonary arteries a thrombus.

RALES—Abnormal respiratory sounds produced by the passage of air through bronchi which contain secretions or are constricted by spasms.

SALPINGECTOMY—Removal of the fallopian tubes.

SENSORIUM—Degree of mental alertness.

SKIN TURGOR—Degree of tension of the skin.

STRICTURE—The narrowing of the lumen of a tube.

THROMBOSIS—Inflammation of a vein in association with clotting of the blood.

THROMBOPHLEBITIS—Inflammatory change and

thrombus formation in a vein.

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PHYSIOLOGIC INTEGRITY OF CHILDREN

**Physiological Integrity of Children**

**Sample Question**

**Which statement is true regarding growth through the lifespan?**

A. Growth occurs evenly from infancy through adolescence

B. Growth occurs intermittently only during school age years

C. Growth occurs most rapidly in infancy to adolescence

D. Growth is rapid in infancy and then slows to a steady rate

I. Physical, Cognitive, Social, and Emotional Growth and Development

A. Infant (Birth -I year)

1. Definitions

a. Neonatal period - Birth to 28 days

b. Infancy period - 29 days to 1 year

2. Developmental Tasks

a. Psychosocial - Erikson: Trust vs mistrust - need a "mother" or nurturing person to love and care for them

b. Cognitive - Piaget: intuitive (sensor!motor) 0-24 months- reflexes, repetitive behavior, object permanence, language.

c. Moral – Kolberg: Level 1—Preconventional—Stage 0 (birth-2years)—Infant is not aware of right or wrong

3. Developmental Norms

**a. Physical**

1) Regains birth weight by 2 weeks of age (loses an average of 10% of birth weight in 1st few days of life)

2) Doubles weight by 6 months

3) Triples weight by 12 months

4} Grows approximately 9-11 inches (22-27 cm) in first year

Sample Question

When a nurse obtains a developmental history from a parent, which infant behavior may cause concern?

A. Rolls from abdomen lo back at 5 months

B. Is unable to maintain sitting position at 6 months

C. Stands up, holds on to furniture at 10 months

D. Refuses spoon feedings at 4 months

**b. Motor - Milestones**

1) Four months - turn over by self

2) Four-six months - grasps objects with palm

3) Six months - sit with support

4) Seven months - transfer objects from one hand to the other

5) Eight-nine months - sits without support

6) Nine months - pulls to stand (cruising), pincer grasp

7) Twelve months - walks, drinks from cup

**c. Nutrition - 115 cal/kg wt/day**

1) Breast milk

2) Formula

3) Formula or breast milk for first year

4) Begin solid foods at 4-6 months starting with rice cereal

**d. Play/Appropriate toys**

1) Play - onlooker and solitary play (self-contained activity)

2) Toys - mobiles, teething toys, plastic blocks, rattles, non-breakable

**4. Implications for Care**

**Sample Question**

**What should a parent be taught regarding diaper rash?**

A. Apply cornstarch after every diaper change to prevent diaper rash

B. Leave the baby's bottom open to air to heal diaper rash

C. Use baby oil with every diaper change to prevent diaper rash

D. Place the child under a heat lamp for 15 minutes every 2 hours to heal diaper rash

a. Parenting skills

b. Safety

1) Use rear facing car seat for first year of life

2) All states require car scat use until at least 3 years and 30 pounds or longer

3) State laws vary about how long car seats need to be used - always use scat belt

4) Most states require booster seats for several additional years

c. Child abuse - shaken baby syndrome

d. Bottle Mouth Caries Syndrome

**5. Hospitalized infant**

a. Pre-attachment—4-5months

Maternal deprivation Syndrome (non-organic failure to thrive related to lack of maternal-infant bonding)

b. Attachment -5 months to 1 year

c. Response to pain - use FACE pain scale

**6. Nursing Responsibilities**

a. Counsel parents

b. Encourage parent participation in care

c. Assume role of absent mother

B. Toddler (1-3 years)

**1. Developmental Tasks**

**Sample Question**

**Based on Erickson's theory, what characterizes the behavior of a 1- to 3-year-old child?**

A. Happily relies on others to meet needs

B. Concentrates on learning new knowledge and skills

C. Experiments with social behaviors when outside the home

D. Asserts own desires and capabilities

a. Erikson: Autonomy vs shame/doubt - self control via appropriate choices - favorite word is NO!!

b. Piaget: Preoperational thought: preconceptual phase (2-4 years) - comprehension and vocabulary increasing. Egocentric - can't see another's perspective

c. Kohlberg - Level 1- Preconventional - Stage 0 (birth to 2 years) and Stage 1 (2-3 years) starting to know right or wrong by punishment or reward

**2. Developmental Norms**

**a. Physical**

1) Birth weight quadruples by 24 months

2) Gains approximately 3-5 inches per year and approximately 5 pounds per year

3) If the height at age 2 years is doubled, it is the approximate expected adult height

**b. Motor**

1) Feeds self with spoon by 12-18 months and holds cup with both hands

2) Likes familiar routine

**Sample Question**

**What should parents understand about the normal eating habits of toddlers**

A. Are usually hungry at normal mealtimes

B. Enjoy new foods with new tastes

C. Appetite and preferences change daily

D. Eat what is served in order to please parent

**c. Nutritional**

1) Appetite decreases

2) Picky eater

3) Diet needs high protein for brain development

4) Needs mid-morning and mid-afternoon snack

5) By 12-15 months, recommend table food and whole milk with

vitamin D

**Sample Question**

**What would the nurse most likely observe when two toddlers are playing?**

A. Playing next to each other but not together

B. Sharing toys and building a block tower together

C. Fighting over who should draw on the black board next

D. Cooperating in preparing a tea party for other children

**d. Play/Appropriate toys**

1) Play - solitary and parallel play: imitative play

2) Toys - manipulation toys, blocks, shapes, crayons, telephones, kitchens, etc.

**3. Implications for Care**

a. Safety - aspiration of small objects and foods; environmental

b. Child abuse - battered child

c. Sexual abuse

d. Emotional abuse (neglect)

**Sample Question**

**Induced vomiting is generally an immediate treatment for which commonly ingested substance?**

A. Salicylates

B. Paini thinner

C. Gasoline

D. Drain cleaner

**e. Poisonings**

1) Types

a) Caustic/Corrosives (Drano, lye solutions)

b) Hydrocarbons (Gasoline, kerosene, cleaning solutions)

c) Medicine ingestion

d) Lead poisoning

2) Prevention

a) Teach families to keep medications locked up

b) Keep caustic materials locked up

3) Treatment

a) Call poison control center

b) Induction of vomiting for medications

c) No vomiting for caustics

d) Observe for respiratory problems with some hydrocarbons

**4. Hospitalization**

**a. Separation anxiety and stress**

1) Behavior is goal directed - to get parents to stay

2) Pleads with parents

3) Temper tantrums

4) Refusal to comply with normal routines

5) Withdrawal

**b. Regression - separation interferes with developmental striving for autonomy; loss of control**

**c. Fear of pain and injury**

**d. Response to pain**

**5. Nursing responsibilities**

a. Explain procedures in simple terms

b. Leave "special" object in child's crib (blanket, toy, etc.)

c. Puppet play

d. Do not punish for regressive behavior

C. Preschool Child (4-5 years)

**1. Developmental Tasks**

**a. Erikson: Initiative vs Guilt - enterprise, imagination, conscience**

**b. Piaget: Preoperational thought**

**c. Kohlberg: Level I, State 2 - Preconvenrional (4-7 years old); decisions based on a desire to please others and avoid punishment**

**2. Developmental Norms**

a. Physical - Gains 5 Ibs and grows 3 inches per year

b. Motor - Refined; increased strength/agility

1) 3-years old - rides tricycle, copies a circle

2) 4-years old- throws ball overhand and catches ball, copies a square

3) 5-years old -jumps rope, balances on one foot, ties shoes, uses scissors

c. Nutrition -appetite gradually decre s- needs 1,80(1 cal/day-food fads and strong taste preferences

d. Play - associative and cooperative

**3. Implications for Care**

a. Safety

b. Sexuality

**Sample Question**

**When a preschool child enters the hospital, what is included in the nursing plan of care?**

A. Explain all procedures in detail to the child

B. Estimate how long it will take to get well

C. Ensure methods to avoid body mutilation

D. Tell the child that it's okay to be angry at parents

**4. Hospitalization**

a. Tolerates brief periods of separation

b. Develops substitute trust

c. Less separation anxiety

d. Regression from loss of control

e. Play therapy

f. Fear of injury and pain

g. Reaction to pain - gradually increases tolerance

**5. Nursing responsibilities**

a. Child will be cooperative for noninvasive procedures

b. Play therapy

c. Playmates for socialization

D. School-age Child (6-12 years)

* 1. **Developmental Tasks**

**Sample Question**

**A 6-year-old child takes great pride in bringing home school papers. This demonstrates which of Erikson’s developmental tasks?**

A. Trust vs. mistrust

B. Autonomy vs. shame and doubt

C. Initiative vs. guilt

D. Industry vs. inferiority

**a. Erikson: Industry vs Inferiority - need to master tasks and gain competence**

**b. Piaget: (7-11 years) - concrete operations - inductive reasoning (taking an incident and generalizing from it -a systematic way of solving problems but not in an abstract way); beginning logic**

**c. Kohlberg: (7-llyears) - level 2: conventional - an internal set of standards is important; rules are followed to please others**

**2. Developmental Norms**

a. Physical

b. Motor activities

c. Nutrition - 1,800 to 2,200 cal/day

d. Play - Cooperative and competitive (achievement oriented)

**3. Implications for care**

a. Safety

b. Drug, alcohol, and tobacco use - prevention education

**4. Hospitalization**

a. Copes with parental separation

b. Include child in planning care

c. Concerns for privacy

d. Fear of mutilation

e. Reaction to pain

**5. Nursing responsibilities**

**Sample Question**

**An 8-year-old child comes to the hospital for surgery on a broken foot. Which nursing action would be helpful in preparing this child for surgery?**

A. A physician-nurse game with roommates

B. Honest explanations with opportunity to see and toucl

C. A talk with a child of similar age who previously had surgery

D. Tell the parents frankly that the child is frightened

a. Explain procedures

b. Let child socialize

c. Let child make choices

d. Protect privacy

e. Assist with school work so child does not get behind

E. Adolescent (13-18 years)

**Sample Question**

**An adolescent may perplex the parents because of constant challenges to their authority and criticism of their lifestyle. The youth is working through which stage?**

A. Identity

B. Intimacy

C. Role diffusion

D. Communication skills

**1. Developmental Tasks**

**a. Erikson: Identity vs Role diffusion - develops a sense of self related to the environment and others**

**b. Piaget: Formal operations - deductive reasoning (from generalizations to specifics).**

**1) They can consider alternative outcomes in an abstract way.**

**2) Can make hypotheses and test them.**

**3) Can deal with contradictions in the world.**

**4) Can draw logical conclusions from set of observations**

**c. Kohlberg: (12 and older) Post conventional**

**1) Ethical standards are internalized**

**2) Decisions are based on these standards, social responsibility is recognized**

**3) Individual can consider 2 different moral approaches to problems and a decision made**

**2. Developmental Norms**

a. Physical

b. Motor - adult

c. Nutrition - up to 3,500 caUday

d. Play

1) Cooperative, more adult level play-competition and adhering to rules

2) "Horse Play" to establish self

**3. Implications for Care**

a. Human sexuality/body image changes

b. Safety - learning to drive

**Sample Question**

**Parents come to the school nurse and express concerns about their 14-year-old daughter. Her grades are dropping, and she has become preoccupied with dance classes. Which statement by the nurse indicates an understanding of adolescent adjustment problems?**

A. "It's probably a phase she's going through."

B. "Does she want to be a dancer?"

C. "Have you noticed any other changes in her behavior?"

D. "Tell her the grades will have to improve or she'll have to give up dance."

c. Parental guidance - family relationships

d. Rejection of authority

**4. Hospitalization**

a. Adult-like coping mechanisms

b. Compromised body image/fear of mutilation

c. Separation from peers and friends

d. Reaction to pain

e. Psychosomatic complaints

**5. Nursing responsibilities**

a. Room with peers

b. Privacy

c. Telephone

d. Encourage independence

II. Preterm Infant

A. Assessments

1. Thin skin

2. Lanugo prominent

3. Little fat

4. Unstable body temperature

5. Poor muscle tone

6. Feeble cry

7. Weak gag and sucking reflexes

B. Respiratory status

1. Color

2. Flaring of nares

3. Grunting retractions

4. Stimulate by gently rubbing chcstor tapping on child's foot

C. Nursing Care

1. Lots of rest

2. Aseptic technique

3. Check for bleeding

4. Gavage feeding

III. Immune System

**Sample Question**

**A 3-year-old child who has not received an MMR contracts measles (rubeola). Which statement is true?**

A. The child may contract the disease again al some point later in life

B, An immunization given at the onset of the illness may limit the severity of the disease

C. The child should have received MMR immunization by this age

D. Because of the young age, the child will not be contagious

**Sample Question**

**A 10-year-old client was brought into the emergency room after stepping on a nail at home. Before kindergarten, the child received a fifth DPT immunization. Which immunization would be administered next?**

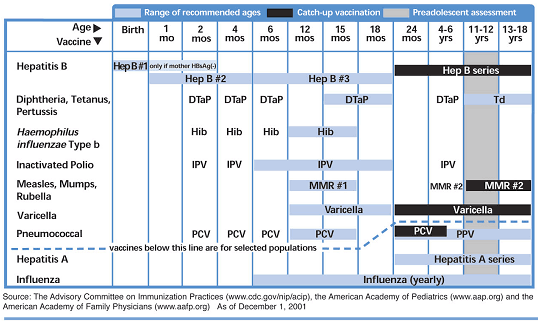
A. Tetanus immune globulin

B. Telanus toxoid

C. DPT injection

D. Gamma globulin

A. Immunizations



**Sample Question**

**When is a child with varicella (chicken pox) no longer contagious?**

A. When the child has been afebrile for 48 hours

B. When the child feels like playing normally again

C. After all the lesions have scabbed over

D. After all the lesions are gone

**B. Chickenpox**

1. Characteristics

a. Virus

b. Sudden onset

c. High fever

d. Maculopapular rash

e. Vesicular scabs

f. Incubation 10-21 days

2. Transmission

a. Spread by droplet

b. Scabs not infectious

3. Nursing care

a. Isolate

b. Treat symptoms

c. Tylenol, fluids for fever

d. Prevent scratching

**C. Mumps**

1. Characteristics

a. Virus

c. Potential complications

2. Transmission

a. Spread by droplet and direct and indirect contact with saliva of infected person

b. Most infectious 48 hours prior to swelling

3. Nursing care

a. Prevent by vaccination

b. Isolate

c. Treat symptoms; ice pack to neck and force fluids

d. Watch for symptoms of neurological involvement: fever, headache, vomiting, stiff neck

**D. Measles (Rubeola)**

1. Characteristics

a. Virus

b. Characterized by conjunctivitis, bronchitis, Koplik's spots on buccal mucosa

c. Dusky red and splotchy

d. Rash 3 to 4 days

e. Photophobia

f. Complications to respiratory tract, eye, ear and nervous system

g. Incubation 10 to 12 days

2. Transmission—spread by droplet or direct contact

3. Nursing care

a. Symptomatic

b. Bed rest until fever subsides

c. Force fluids

d. Dim lights in room

e. Tepid baths

f. Lotions to relieve itching

**E. German Measles (Rubella)**

1. Characteristics

a. Virus

b. Slight fever, mild coryza, and headache

d. Incubation 14-21 days

2. Transmission - Spread by direct and indin ontact with droplets

3. Nursing care

a. Symptomatic

b. Bed rest until fever subsides

**Sample Question**

**When caring for child with type 1 diabetes, the nurse should bw awate of which condition?**

A. Presenting symptoms of thirst and polyuria differ from those of the adul

B. Infection and hormonal swings may increase need for insulin

C. The pancreas abruptly and completely stops making insulin

D. Obesity is a major factor in development of type 1 diabetes

**F. Diabetes**

1. Assessment

a. Polydipsia, Polyuria, Polyphagia

b. Weightloss

c. May have family history

2. Treatment

a. Teaching parents is of vital importance

b. Need for Insulin for life

c. Blood glucose testing

d. Diet

e. Identify hypoglycemia versus hyperglycemia

IV. Respiratory System

**A. Respiratory Distress Syndrome (RDS**)

1. Assessment

a. 60 respirations per minute or higher

b. Retractions

c. Cyanosis

d. Expiratory grunting

e. Lack of activity

2. Nursing care

a. Warmth

b. IV until lungs develop

c. Oxygen

d. Keep parents informed

**Sample Question**

**Which finding would pertain to a child with croup?**

A. Exposure to another child with croup

B. A harsh, barking cough

C. Expiratory stridor

D. Thick, yellow sputum

**B. Croup**

1. Assessment

a. Hoarseness

b. Harsh, barking, "croupy" cough

c. Inspiratory stridor

2. Treatment

a. Cold moist air

b. Hospitalization if fever

c. Fluids

**C. Asthma**

1. Assessment

a. Tight, nonproductive cough

b. Expiratory wheezing

c. Respiratory distress

2. Treatment

a. Avoid triggers

b. Maintain medication regimen

c. Use of PRN inhalers

**Sample Question**

**Which is a clinical manifestation of cystic fibrosis?**

A. Rhonchi and wheezing

B. Allergy to wheat bread

C. Decreased urinary output

D. Generalized seizures

**Sample Question**

**What desirable effect would a nurse observe when giving replacement enzymes for cystic fibrosis?**

A. Increased mucus excretion in stool

B. Decreased fat excretion in stool

C. Increased expectoration of rnucus

D. Decreased production of saliva

**D. Cystic Fibrosis (CF)**

1. Assessment

a. Excessive mucus porodution

b. Abnormal secretion of sweat

c. Large foul-smelling stools

d. Chronic cough

e. Sweat chloride test

f. Poor absorption of Vitamin D

2. Nursing care

a. Prevent respiratory infection

b. Parent support and teaching

c. Liquidation of mucus

e. Diet

1) Increase salt intake

2) Well balanced diet

3) Increase protein

f. Replacement enzymes

**E. Sudden Infant Death Syndrome (SIDS)**

1. Assessment

a. 2-4 months

b. Increased in winter

c. Low income families

d. Low birth weight

e. Occurs during sleep

f. Second-hand smoke

2. Possible precipitating factors

a. Congenital anomaly

b. Use of tobacco, cocaine, or heroin during pregnai

c. Teenage mother

d. Short interval between babies

3. Preventive measures

a. Sleep on back

b. Use firm mattress and no pillows

c. Prevent over heating baby

d. Avoid tobacco smoke

e. Breastfeed - appears to help prevent SIDS

4. Nursing care

a. Assist parents with grief process

b. Support group

V. Cardiac System

**Sample Question**

**RhoGAM is given to suppress foreign antibodies. Which new mother might be a candidate for RhoGam?**

A. Rh positive mother, Rh negative baby

B. Rh positive mother, Rh positive baby

C. Rh negative mother, Rh negative baby

D. Rh negative mother, Rh positive baby

**A. Rh Incompatibility: Hemolytic Disease, the Destruction of Red Blood Cells**

1. Assessment

a. Anemia

b. Jaundice

c. Edema

d. Blood incompatibility

e. Bilirubin elevated

2. Prevention - RhoGam

3. Treatment

**Sample Question**

**What is an appropriate nursing intervention in the care of a child with acute lymphocytic leukemia undergoing induction chemotherapy?**

A. Take rectal temperatures every 4 hours

B. Use gown, mask, and good handwashing technique

C. Protect from direct sunlight during play

D. Promote acceptance of death and loss

**B. Leukemia**

1. Types

a. Acute lymphoblastic leukemia (ALL) - 75%

b. Acute myelogenous leukemia (AML) -15-20%

c. Acute nonlymphoblastic leukemia (ANLL) - remaindei

2. Effects on body

a. Reduced number of red blood cells

b. Reduced platelet count

c. Increased numbers of white blood cells in immature forms

3. Chemotherapy

a. Induction

b. Intensification

c. CNS prophyaxis

d. Maintenance

e. Reinduction therapy (if relapse)

4. Bone marrow transplant - used as last resort after relapse

5. Nursing interventions

a. Prevent infections

b. Mouth care

c. Prevent hemorrhage

d. Packed cells and platelet infusions

e. Manage constipation

f. Control vomiting

g. Nutrition

h. Assist parents with grieving if death imminent

i. Medications

**Sample Question**

**What is a likely result for a child with sickle cell disease if the disease goes unchecked?**

A. Overwhelming infection

B. Severe dehydration

C. Infarction of major organs

D. Hemorrhage

**C. Vaso-occlusive Disease (Sickle Cell Disease)**

1. Assessment signs

a. Anemia - abnormal crescent shaped RBCs

b. Abdominal and joint pain

c. Enlarged spleen

d. Jaundice

2. Vaso-occlusive Crisis

a. Painful joints

b. Edema hands/feet

c. Severe abdominal pains

3. Nursing care

a. Analgesics

b. IVs

c. Support for child and parents

e. Crisis prevention

**D. Rheumatic Fever**

1. Assessment

a. Follows and caused by strep infection

b. Low grade fever

c. Joint pain

d. Nonpruritic rash over trunk and extermities

2. Nursing care

a. Bed rest is important

b. Monitor vital signs

c. Parent teach ing

**E. Heart anomalies**

1. Patent Ductus Arteriosis - connection between pulmonary artery and aorta fails to close

a. Normally closes in 1 week after birth

b. Assessment

c. Treatment

2. Atrial Septal Defect - opening between right and left atria

a. Assessment

b. Surgery

3. Ventricular Septal Defect - opening between right and left ventricles

a. Assessment

b. Surgery

4. Coarctation of the Aorta - narrowing of the aorta

a. Assessment

b. Surgery

5. Tetralogy of Fallot

a. Associated anomalies

1) Ventricular defect

2) Pulmonary stenosis

3) Overriding of the aorta

4) Hypertrophy of right ventricle

b. Assessment

1) Cyanosis

2) Squatting activity

3) Slow growth

4) Blacks out

**Sample Question**

**What is included in the nursing care planning for client with Heart Failure?**

A. Force liquids, stimulate infant

B. High sodium formula, maintain warm, moist atmosphci

C. Keep the infant in supine position, vital signs daily

D. Daily weights, place infant in an infant seat

**6. Heart Failure - may result from my congenital heart condition or surgery**

VI. Sensory System

**A. Otitis Media**

1. Assessment

a. Pain

b. Rubs ear

c. Fever

d. Irritability

2. Nursing care

a. Supportive to physician

b. Parent teaching

c. Myringotomy—incision through tympanic membrane

**B. Tonsillitis (Chronic Inflamed Tonsils)**

1. Assessment

a. Sore throats

b. Colds

2. Post-op care

a. Routine

b. Swelling indicates bleeding

c. Clear liquids

d. Increase diet

VII. Neurological System

**A. Spina bifida (incomplete closure of spine)**

1. Assessment

a. Occult (not seen on outside)

b. Meningocele

c. Myelomeningocele

d. Infection of open area

e. May have associated hydrocephalus

2. Post-op care

a. Normal post-op care

b. Place on abdomen

c. Neurological disturbance

d. Parent teaching and their expectations

**B. Hydrocephalus**

1. Assessment

a. Check fontanels

b. Scalp veins

c. Sunset eyes

d. Lethargic

e. Much crying

2. Surgical correction

3. Post-op care

**C. Cerebral Palsy (CP)**

1. Assessment

a. Hypertonicity of muscles

b. Muscle spasms

c. Delayed motor development

2. Nursing care

a. Parent teaching

b. Care similar to that given to adult

c. Prevent contracture

**Sample Question**

**Which is true about generalized seizures?**

A. May be caused by polarization of electrical energies

B. A high fever may trigger seizures

C. Infants do not experience a tonic phase

D. There is no genetic predisposition

**Sample Question**

**When providing care for a child during a seizure, which nursing intervention should be implemented?**

A. Place a tongue blade between the child's teeth

B. Protect the child from injury and allow seizure to continue

C. Call the physician immediately when convulsions begin

D. Give diazepani (Valium) 5 mg IM per physician order

**D. Seizures**

1. Types

*a. Generalized siezures*

1) Generalized tonic-clonic (grand mal)

2) Absence (petit mal)

3) Atonic (drop seizures)

4) Myoclonic

5) Infantile spasms

*b. Partial seizures*

1) Simple partial motor

2) Simple partial sensory

3) Complex partial

2. Nursing Care

a. During a seizure

1) Prevent from harm

2) Allow seizure to finish

3) Remain with the child

4) Observe and record

b. Treatment

1) Determine cause

2) May use surgery for some

3) Medications

4) Understand need to wear medic alert bra

5) Support groups

**Sample Question**

**What is included in the nursing care plan of the child with meningitis?**

A. Elevate head of bed 20°

B. Force oral fluids

C. Place in a well-lighted room

D. Encourage normal play activities

**E. Meningitis**

1. Assessment

a. Most common is bacterial

b. Intracranial irritation symptoms

c. Severe headache

d. Infants - high-pitched cry

2. Treatment

a. Spinal tap (lumbar puncture) for diagnosis

b. Isolation

c. Antibiotics

d. Seizure prevention

**F. Down Syndrome**

1. Assessment signs

a. Round face

b. Thick protruding tongue

c. Almond-shaped eyes

d. Muscles flaccid

e. Short, fat hands

f. Single palmar crease

g. Little fingers curve inward

2. Nursing care

**G. Fetal Alcohol Syndrome**

VIII. Gastrointestinal System

**A. Cleft lip and Palate**

1. Assessment

2. Nursing care

a. Large nipple, long nipple for palate

b. Breastfeeding

c. Feed opposite side (lip)

d. Bubble frequently

3. Surgical repair

4. Post-op care

a. Arm restraints

b. No crying, no resting on abdomen (lip)

c. For palate surgery, place on abdomen for drainage

d. Feed from opposite side (lip)

e. Clean after each feeding

**B. Phenylketonuria (PKU)**

1. Assessment

a. Cannot metabolize phenylalanine (amino acid)

b. Causes mental retardation

c. PKU test after birth

2. Treatment - Diet containing no phenylalanine - LoFenalae

**C. Hyperbilirubinemia**

1. Assessment

a. Jaundice

b. Pallor

c. Lethargy

d. Feeds poorly

2. Nursing care

a. Fluids

b. Warmth

e. Phototherapy

1) Unclothed

2) Cover eyes

3) Change position

**Sample Question**

**Which assessment finding is true of pyloric stenosis**

A. It has an abrupt onset with small, frequent spit ups

B. Infant will not accept feedings and gags on the nipple

C. If dehydrated, the infant may develop metabolic acidosis

D. A small, firm mass is palpable in the right upper abdominal quadrant

**D. Pyloric Stenosis**

1. Assessment

a. Prominent in males

b. 4-6 weeks after delivery

c. Projectile vomiting after feeding

d. Failure to gain weight, although intake adequate

e. Repaired with surgery

2. Nursing care

a. Elevate head of bed

b. NPO

c. Keep child from dehydrated condition

d. Parent teaching and expectations

**E. Celiac Disease (Malabsorption Precipitated by Eating Gluten) Intolerance to**

**Wheat/Rye/Oat/Barley Products**

1. Assessment

a. Diarrhea

b. Distended abdomen

c. Milky, foul-smefling, pale, frothy stools

2. Nursing care

a. Parent teaching

b. Diet - no gluten

c. Slow feeding

**Sample Question**

**What question would be appropriate for the nurse to ask to the parent of a child who is vomiting?**

A. "Why do you think the child vomits'1"

B. "What happens when the child vomits?'

C. "Does the child burp often?"

D. "How much does your child throw up?"

**Sample Question**

**What would indicate to the nurse that a toddler is dehydrated?**

A. Decreased urine output

B. Edema in hands and feet

C. Petspiration on face

D. Increased skin turgor

**F. Gastroenteritis and Dehydration**

1. Causes

a. Virus or bacteria

b. Loss of fluid and electrolytes

c. Dehydration very easy

2. Assessment

a. Number of stools

b. Weight

c. Mucous membranes

d. Decreased urine output

e. Skin turgor

3. Treatment

a. Severe requires hospifalization

b. NPO then clear liquids

c. No milk, then half-strength, then full

d. Monitor I & O

**Sample Question**

**How does the nurse obtain a sample from a child to test for pinworms?**

A. Place a nasal swab on blood agar with a cotton-tipped applicator

B. Collect a stool specimen in a sterile container

C. Collect a blood specimen in a red-topped tube

D. Swab the perianal area with a cellophane tape-covered swab

**G. Pin Worms**

1. Assessment

a. Diarrhea

b. Anorexic

2. Nursing care

a. Medications

b. Parent teaching

**Sample Question**

**What instruction is given to the family after head lice infestation?**

A. Disinfect the sinks and toilet daily with chlorine bleach

B. Wash everyone's clothing, linen, and towels in hot water

C. Keep children home from school for a week

D. Bathe the children daily in prescription soap solution

**H. Head Lice**

**Sample Question**

**Which statement is true regarding hernias?**

A. All hernias require immediate surgical repair

B. A strangulated hernia is reduced wiih an abdominal binder

C. An incarcerated hernia can no longer be reduced

D. Following a simple hernia repair, nasogastric suction is usually required

**I. Hernia**

1. Assessment

a. Mass in inguinal area

b. Strangulated hernia causes severe pain

2. Treatment

a. Surgery

b. Usually outpatient unless strangulated

IX. Genitourinary System

**Sample Question**

**When a child enters the hospital with glomerulonephritis, what type of infection is usually a part of the history?**

A. None, since it is an autoimmune disorder

B. Staphylococcal

C. Influenza

D. Streptococcal

**A. Glomeruloncphritis**

1. Assessment

a. Periorbital edema

b. Decreased urine output

c. Mild to moderate hypertension

2. Treatment

a. Restricted activity

b. Restricted sodium diet

c. Medications related to symptoms

**B. Wilms' Tumor (Malignant Tumor of Kidneys)**

1. Assessment

a. Few symptoms

b. Abdominal mass

2. Nursing care

a. Use care when handling—do not palpate abtiom

b. Prepare for surgery—done immediately

c. Chemo and/or radiation

X. Musculoskeletal System

**Sample Question #162**

**The nurse in the orthopedic clinic sits down to talk with a 15-year-old with scoliosis to discuss why the client must wear the Milwaukee brace at all times. What is the nurse's best approach?**

* 1. Explain that the back will become continually more curved throughout life if not corrected
  2. Discuss the life-threatening, painful surgery necessary if the brace is not worn
  3. Help determine what clothes could look nice while wearing the brace
  4. Tell the client that “Beauty is as beauty does” and to concentrate on good grades in school

**A. Scoliosis**

1. Assessment

a. Difficulty getting clothes to fit

b. Back appears crooked when viewed from the back bent at the waist

2. Treatment

a. Milwaukee brace

b. Surgery

**B. Clubfoot**

1. Congenital deformity of the foot and ankle

2. Most common (talipes equinovarus) -ankle turned inward

3. Treatment

a. Serial casting

b. Gentle manipulation and stretching exercises

c. Treatment begun soon after birth

**C. Developmental ysplasia of the Hip (Congenital Hip Dysplasia)**

1. Assessment

a. Asymmetrical thigh/gluteal folds

b. Ortolani’s sign - hip click

2. Diagnosis- ultrasound

3. Treatment

a. Pavlik harness - up to 6 months of age

b. Surgical reduction

c. Hip spica cast - older than 6 months or if Pavlik harness does not work

COMMON PHARMACOLOGIC AGENTS USED IN PEDIATRICS

NARCOTIC -as opiate derivatives, interfere with

activities of various neurotransmittcrs producing pain

reduction, sedation, mental clouding and mood changes.

Side effects: (all narcotics): drowsiness, lethargy, reduced

physical activity, decreased GI activity and GI distress,

urinary retention; respiratory depression.

Nursing implications: (all narcotics)- Maintain safe

environment for child. Give PO with food/fluids. Offer

extra fluids. Observe elimination patterns. Can be habit

forming. Drug effect increased in client taking other

CNS-active drug.

Drug: meperidine (Demerol)

Uses: postopcratively, posttrauma for analgesia; also,

prcoperatively for anesthesia induction.

Common dose and route: 1 mg/K/dose q 3-4 hours

Side effects: hypotension

Drug: codeine

Uses: To relieve cough as well as pain.

Common dose and route: analgesic: 3mg/K/d in 6 doses.

antitussive: 1-1.5 mg/K/d in 6 doses, tabs and elixir

available for PO administration. May be given

parenterally.

Drug: morphine

Uses: postoperative, posttrauma

Common dose and route 0.1-0.2 mg/K7dose q 4-6 hours

IM or IV. newborn: overdose is fairiy common- keep in

mind that appropriate MS dose will be about 1/lOth the #

of mg that a meperidine dose would be.

ANALGESIC/A N Tl PYRETICS:—reduces body

temperature by acting on the hypothalanws; raise the

body's pain threshold

Drug: acetaminophen (Tylenol)

Uses; for colds, teething, viral illness, minor trauma

Common dose and route 1 Gr./ycar of age/ dose; PO or

suppository. Available in several dosage forms with

differing strengths. Also available with codeine in ciixir

form (2 Gr. with 12 mg codeine/5 ccs.) and in tablet form

(5 Gr with 30 mg. codeine)

Side effects: usually none: overdose: liver damage may

result

Nursing implications: Is a nonprescription medication

and used safely in millions of homes. In instructing the

parent, stress the differing strengths of commercial

preparations. Ask parent to demonstrate drawing up and

giving medication. Provide written instructions to parent.

Fever over 72 hours should be evaluated by a physician.

Drug: salicylate (aspirin)

Type of drug and basic action:—inhibit prostaglandin

synthesis for anti-inflammatory activity

Uses: same as above; also for juvenile rheumatoid

arthritis and is a mild anticoagulant. Usually not used in

children less than 16 years of age due to risk of Rcye's

Syndrome.

Common dose and route analgesia 1 gr/ year of age/ dose

q 4 hr. JRA- 65-100 rng/K/d in 4 doses given PO or supp.

Side effects: indigestion, nausea, anorexia; overdose:

metabolic acidosis, hyperventilation, seizures.

Nursing implications: Give with food/fluids. Blood levels

may be drawn in long-term use- explain to child/parent

importance of these.

ANTICONVULSANTS decrease brain excitability by

affecting electrical or chemical activity in the brain.

Drug: diazcpam (Valium)

Common uses: to terminate status epilepticus

Common dose and route: 0.04-0.2 mg/K/dose, not to

exceed 5 mg. for child 1 mo-5 yrs- or 10 mg. if older than

5 years. Given IV for seizures.

Major side effects: sedation, ataxia, respirator}

depression possible, potentiated by ETOH and other

CNS- active drugs.

Nursing implications: Must be given IV "push" because

is incompatible with other drugs in bottle or syringe flush

IV tubing before and after giving. Antianxicty use of

diazepam not usually done in pediatrics.

Drug: phenobarbital (Luminal)

Common uses: maintenance and acute medication for

seizures

Common dose and route loading dose: 1 Omg/K loading ;

(PO or IV), maintenance: 3-5 mg/K/day in 1 or 2 doses

(POorlV)

Major side effects: sedation, sleepiness, ataxia and

nystagmus are signs of high blood level. May increase

hyperactivity in susceptible children.

Nursing implications: Instruct parents to give drug as

prescribed. Tell parents that med is not addictive. If

therapy discontinued - taper off

Drug: phenytoin (Dilantin)

Common uses: for seizures, a maintenance medication

Common dose and route: loading dose: 10-20 mg/K/d in

3-4 doses until seizure is controlled (PO or IV).

Maintenance: 4-7mg/K/day in 1-2 doses (PO or IV)

Major side effects: As above, also bone marrow

depression, GI distress, gingival hypertrophy

Nursing implications: IV must be patent- can cause

severe tissue damage. Teach child/parent good oral

hygiene and recommend regular dental care.

ANTIHISTAMIMES—antagonize actions of histamine

by relaxing smooth muscle and nerves, so they relieve

bronchospasm and redness and edema of tissues.

Drug: diphenhydramine (Benadryl)

Common uses: bee stings, transfusion reaction, urticaria

Common dose and route 5 mg/Kg/d in 3-4 doses, PO, IV,

orIM

Major side effects: (all antihistamines) -sedation, dry

mouth, hyperactivity can occur.

Nursing implications: Nonprescription cold remedies are

closely related to antihistamine drugs and often ingested

by children.

Drug: hydroxyzine (Vistaril, Atarax)

Common uses: as above; potentiates narcotic analgesia

Common dose and route years: 50mg/d in 3-4 doses: 6

years:50-100mg/d in 3-4 doses PO or IM

Major side effects: (all antihistamines) -overdose,

excitation, convulsion, dilated pupils, skin dry flushed anil

hot

Nursing implications: Observe clients with seizure

history carefully.

Drug: promcthazine (Phenergan)

Common uses: as above; also as anticmetic

Common dose and route 0.1-0.5 mglC/dosc q 6 hr -PO,

IM, IV or suppository

ANTIMICROBIALS:

AMIrVQGLYCOSIDES-inhibit protein synthesis in

bacteria

Drug: gentatnicin (Garamycin)

Common uses: wide gm+ and gm-spectrum, i.e., staph, E

Coli, protcus, pseudomonas

Common dose and route 0-7 days old: 3-5 mg/K/d in 2

doses; 7 days up: 5-7.5 nig/K/d in. 3 doses given IV, IM,

or intrathecally

Major side effects: ototoxicity, renal toxicity

Nursing implications: Keep accurate I and O; check

sp.gr. and urine dipstix q shift; support good oral intake of

fluids; if child complains of tinnitus, notify MD.

ANTHELMINTICS -inhibit glucose uptake in parasitic

worms

Drug: mcbendazole (Vcrmox)

Common uses: hookworm, roundworm, pinworm and in

Common dose and route 2-years-old: 100 mg in single

dose and repeated in 2 weeks for pinworm; for others, 100

mg bid x 3 days; PO

Major side effects: occasional diarrhea and abdominal

pain

Nursing implications: have child chew up tablets

Drug: pyrantel (Antiminth)

Common dose and route: for children less than 2 years

PO 1 1 mg/Kg as a single dose (max 1 G). Repeat in 2

weeks. Dispense: oral suspension 50 mg/ml; caps, soft

gel 180 mgeaeh.

Major side effects: rash, CNS disturbances, GI irritation

Nursing implications: watch closely for seizures. Teach

proper hygiene and disinfecting procedures, compliance,

food prep and wear shoes.

ANTIFUNGALS-increase fungal cell membrane

permeability and cause loss of the cell's contents Drug:

amphotericin B (Fungizone)

Common uses: systemic candidiasis

Common dose and route dose is increased slowly up to

max. of 0.5-1 mg/K/day or 15 rng/lC/qid; given IV or

intratriecally

Major side effects: nausea and vomiting during infusion.

Bone marrow depression, renal toxicity, chills, fever,

hypotension

Nursing implications: infusion apparatus is commonly

protected from light-new studies show this is unnecessary

if drug given within 8 hours; do accurate I and O; sp. gr.

urine dipstix q shift, antipyretics and anlihistamines may

be ordered

Drug: nystatin (Mycostatin, Nilstat)

Common uses: oral Candida, i.e., thrush

Common dose and route newborn-1 mo: 200.000400,000

units in 4 doses-older than 1 mo 600,0002,000,000

units in 3-4 doses/day; given PO

Major side effects: possible GI upset

Nursing Implications: med must be in contact with legion

to be effective -give after feeding

Type of drug and basic action: Cephalosporins bactericidal

action results from inhibition of cell wall

synthesis

CEPHALOS POR1NS

Common dose and route: 25-50 mg/k/day in 3-4 divided

doses; IM or IV

Major side effects: (all cephalosporins): skin rash, nausea,

poss. anaphylaxis

Nursing implications: (all cephalosporins):

contraindicated if pt. is allergic to penicillin

Drug: cepbalexin (Keflex)

Common uses: as above

Common dose and route 30-50 mg/K/day in 3-4 doses;

given PO

Nursing implications: observe for fungal super infection

Drug: cefazolin (Ancefezonce, Kefzol)

Common uses: broad spectrum; spectrum; gm(+) and gm(-)

infections

Drug: cephalothin (Keflin)

Common uses: as above

Common dose and route same as cefazolin

Nursing implications: may cause false + Coombs' test

PENICILLINS - inhibit cell wall synthesis in bacteria

Drug: amoxicillin (Amoxil)

Common uses: gm+ and gm- organisms; i.e.., H flu,

salmonella

Common dose and route: 20-40 mg/K/day in 3 doses; PO

Major side effects: (all penicillins): skin rash GT upset

Nursing implications: (all penicillins): give on an empty

stomach; instruct parent to give all of medication

Drug: arnpicillin (Omnipen)

Common uses: as above

Common dose and route wide dosage range: 50- 200

mg/K/day in 4 doses; PO, IM, IV

Major side effects: pink-tinged liquid stools especially in

children younger than 3-years-old

Nursing implications: IV form of ampicillin must be used

within one hour of reconstituting: contraindicated if pt. is

allergic to Pen G

Drug: cloxacillin (Tegopen)

Common uses: wound infection of pcn-rcsistcnt staph and

strep

Common dose and route: 50 mg/K/day in 4 doses; PO

Major side effects: as above

Nursing implications: as above

Drug: methicillin (Staphcillin)

Common uses: infection of penicillinase- producing staph

i.e., in blood

Common dose and route 100 mg/K/day in 4 doses; IM.

IV

Major side effects: as above; also may cause renal

toxicify

Nursing implications: as above; also, keep accurate I and

0, sp. gr and dipstix urine q shift

Drug: penicillin G

Common uses: nonpenicillinasc producing gm+ bacteria

i.e., pneumococci, strep, staph, meningococci,

Common dose and route: aqueous G (short-acting);

50,000-400,000 U/K/d in 4-6 doses;

procaine pen (two-week action): 25,000- 50,000

units/K/day in 1-2 doses- IM only; benzathine pen (3-4

week action); 60< 5bs., 600,000 units, if 60 Ibs., 1,200,000

units q 2-week or 30 days; IM only, phenoxymethyl pen

(oral form): same as Pen G

Major side effects: as above; allergic reactions vary, from

urticaria to anaphylaxis

Nursing implications: a child receiving penicillin for the

first time should remain at the health provider's office for

20-30 min. of observation

SULFONAMIDES - inhibit folic acid metabolism in

bacteria

Drug: trimethoprim & sulfamethoxazole (Septra,

Bactrim)

Common uses: wide spectrum; used often for UTI and

otitis media

Common doses and route solution has 40mg T1200 S/5

ml. Usual dose for a 10 K child, 5 nil q 12 hr- 20 K child,

10 ml q 12 hr; 30 K child, 15 ml q 12 hr; 40 K child, 20

ml q 12 hr, given PO only

Major side effects: rash, fever, GI distress, bone marrow

suppression

Nursing implications: give with plenty of fluids, ongoing

medical supervision necessary for long-term use

OTHER ANTIBIOTICS:-inhibit bacterial protein

synthesis

Drug: chloramphenicol (Chloromycetin)

Common uses: wide spectrum; used in ampicfllinre

si slant meningitis

Common dose and route 50 mg/K/day in 4 doses; usually

IV, PO avail

Major side effects: bone marrow depression, "gray baby

syndrome"

Nursing implications: make sure ordered blood work is

done; observe general condition closely

Type of drug and basic action: inhibits bacterial protein

synthesis

Drug: erythromycin (E-mycin, Ilosone)

Common dose and route: 30-50 mg/K/day in 4 doses; IV

andPO

Major side effects: GI distress, jaundice, photo sensitivity

Nursing implications: give on empty stomach, some PO

forms must be swallowed whole, check each package

insert

AMTINEOFLASTICS - all inhibit D"NA or RNA

synthesis blocking tumor reproduction

Drug: actinomycin D (Cosmegen)

Common uses: Wilms' tumor, neuroblastoma, Ewing's

Common dose and route all antineoplastic drug doses are

very individual, depending on the protocol at each

institution

Major side effects: common to all include: nausea,

Nursing implications: Child must be kept from infectious

sources. Nurse should realize the WBC differential (type

of cells) is important to level of immunosuppression

Drug: cyclophosphamide (Cytoxan)

Neuroblastoma

doses are calculated using body surface area (a calculation

using both height and weight) instead of just weight.

Major side effects: may cause alopecia and perhaps

hcmorrhagic cystitis

Nursing implications: Parents need support to bring child

in on assigned schedule so that drug protocol will not be

disrupted.

Drug: doxorubicin (Adriamycin)

Common uses: leukemia, lymphoma other tumors

resistant to therapy

Common dose and route Most antincoplastic drugs are

given IV: Cytoxan, methotrexate and predmsone may also

beg nPO

Major side effects: discoloration of urine and cardiac

toxicity may occur with doxorubicin

Nursing implications: If an immunosuppressed child does

become infected he will be treated aggressively with

antimicrobials

Drug: methotrexate (Folex)

Common uses: ALL osteogenic sarcoma,

rh abd omyo sarcoma

Common dose and route: In trainee al admin, of

methotrexate is used to kill Icukcmic cells that try to

escape to the CNS.

Major side effects: Oral ulceration may occur with

methotrexate

Nursing implications: IV infiltration of any

chemotherapeutic drug may cause extensive tissue

damage

Drug: prednisone (Deltasone):

Common uses: corticosteroid used in many

chemotherapeutic protocols

Major side effects: May cause hyperglyccmia,

hypertension, and Cushingoid body features

Drug: vincristinc (Oncovin):

Common uses: leukemia, lymphoma, other solid tumors

Major side effects: Vincristinc may cause sensory

impairment, muscle weakness and constipation

BRONCHODILATORS —act on smooth muscle to

expand bronchioles, facilitating gas exchange in the lungs

Drug: epinephrine (short-act ing) (Adrenalin); Sus-phrine

(long- acting)

Common uses: asthma; also in Code Blue situations

Common dose and route 0.01 ml/K/dose of 1:1000

solution q 20 min, for no more than 3 doses; Sub-Q Susphrine

dose: 0.005 ml/K/dose, Sub-Q. Usually Sus-phrine

is given as the 3rd dose, when 2 doses of epinephrine

have primarily cleared an asthma attack.

Major side effects: (all bronchodilators): tachycardia,

elev. BP., palpitations, nausea, flushing, nervousness

Nursing implications: (all bronchodilators): Watch pulse

and BP closely. If client nauseated/vomiting, notify

physician.

Drug: metaproterenol (Alupent)

Common uses: patients with asthma (maintenance)

Common dose and route: yrs. or 27 Kg: 10 mg. q 6-8 hr;

9 yrs. or 27 Kg.: 20 nig. q 6-8 hr.; PO. Inhalation form not

recommended for children, status asthmalicus

Major side effects: overdose: convulsions may occur

Nursing implications: watch IV patency closely; if

infiltrated tissue sloughing may occur

Generic name of Drug: theophylhne (Elixophyllin, Slo-

Phyllin; parenteral form, Aminophyllin)

Common uses: maintenance of asthma patients; also

acute attack

Common dose and route

maintenance: (IV) 6 wk to 6 mo: 0.5 mg/kg/hr; 6 mo to 1

yr: 0.7 mg/kg/hr: I to 9 yr: 1.2 mg/kg/hr; 12 to 16 yr: 0.7

mg/kg/hr.

Nursing implications: need to monitor serum drug levels

to maintain in therapeutic range; also monitor heart rate,

respiratory rate, and rate of apnea spells, plus blood gases

if applicable.

CARDIAC MEDS Digitalis - strengthens the force of

contraction and lowers heart rate; increases kidney blood

flow which leads 10 increased urine output

Generic name of drug: digoxin (Lanoxin) Common

uses: congestive heart failure

Common dose and route digitalizing dose 0.04 - 0.06

mg.K.g' IV or PO maintenance: 1/5 -1/3 digitizing dose

Major side effects: bradycardia, nausea/vomiting,

anorexia, arrhythmias

Nursing implications: Nurse preparing med must check

ordered dose carefully, have another RN check

calculations and med drawn up in syringe. Take apical

pulse before each dose given- for infants and small

children notify physician if pulse is less than 90; for older

child, call if pulse less than 70 - or if child 's pulse is

irregular or has a different rate or rhythm than usual.

Nurse should remember the IV form and green elixir form

are markedly different strengths.

DIURETICS—affect water and electrolyte excretion/

rcabiorption in the kidney

Generic name of drug: chlorothiazide (Diuril)

Common uses: congestive heart failure, hypertension

Common dose and route 10-40 mg/K/day in 1-2 doses

PO or IV

Major side effects: hypokalemia, hyponatremia and their

symptoms: fatigue, lethargy muscle weakness,

Nursing implications: Recommend foods rich in

potassium to parents. Instruct parents not to give 2nd dose

any later than 4p, so that child's night sleep will not be

interrupted. In diabetic children, thiazide use may

increase blood glucose-observe for glycosuria

Generic name of drug: furoscmide (Lasix):

Common uses: congestive heart failure, renal failure,

pulmonary edema

Common dose and route 0.5-6 mg/Kg/dose given IV, 1M,

PO

Major side effects: as above; also dose-related ototoxicity

Nursing implications: If receiving any potassium-

excreting diuretic with digitalis the nurse should

remember that a hypokalemic client may be more prone

to dig. toxicity.

PANCREATIC ENZYMES - contain Iipase, amylase,

trypsin, and chymotrypsin so that the person's body will

digest fat, starch, and proteins

Generic name of drug: Viokasc, Pancrease, Cotazym

Common uses: cystic fibrosis chronic pancreatitis

Common dose and route: dose is individualized to

eliminate fecal excretion of fat and nitrogen; PO

Major side effects: The enzymes are protcolytic and may

cause mouth sores.

Nursing implications: Enzymes should be mixed in cool,

nonprotein, low fat foods. Powder and capsules should be

swallowed, not allowed to remain in mouth. Parents,

child, and s.o. need to understand that these supplements

will always be necessary.

SEDATIVE MEDICATION - provide short-term

sedation necessary for some medical procedures (i.e.,

EEG)

Generic name of drug: chloral hydrate (Noctec)

Common uses: sedation

Common doses and route 8-20 mg/K/dose, given PO or

by suppository/max, dose = 1 gm.

Major side effects: malaise ataxia, nausea, vomiting

Nursing implications: After administration, child should

be put to bed in a quiet room with side rails

up and other safety measures observed.

NURSING OF CHILDREN GLOSSARY

ACHALASIA—A spasm of the cardiac sphincter of the

esophagus resulting in a decreased ability to pass food

and fluids into the stomach.

ADJUVANT FEEDINGS—The inclusion of foods in an

infant's diet that supplement formula or breast feedings.

AMEBIASIS—An infection of the colon caused by a

protozoan parasite.

ANOXIA—A state of oxygen deprivation within the

body.

ANTERIOR FONTANEL—A characteristic "soft spot"

or space between the bones of the infant's skull. Bounded

by the frontal and parietal bones, this fontanel is diamond-

shaped and closes by the time the child is 18-months-of

age.

ASCARIASIS—A roundworm infestation.

ATELECTASIS—Incomplete expansion of the alveoli

of the lungs.

ATRESIA—A congenital anomaly in which a normal

anatomical opening is absent. For example, atresia of the

esophagus prevents food from being transported to the

stomach, and choanal atresia prevents nasal breathing.

BRADFORD FRAME—An apparatus that consists of

narrow strips of canvas attached to a metal frame which is

supported by blocks to elevate it from the mattress. It is

most often used for corrective positioning of the spine.

CAPUT SUCCEDANEUM—Edema of the scalp usually

associated with the birth process. Discoloration due to

subcutaneous hemorrhage may be present. This condition

differs clinically from cephalhematoma in that the

swelling is not limited to the surface of one cranial bone.

CARDIAC CATHETERIZATION—A diagnostic

procedure which involves passing a catheter through a

cut-down site, directly into the heart and large vessels, in

order to obtain a blood specimen and measure pressure

within the heart chamber.

CELIAC SYNDROME—An impaired ability to absorb

fats, resulting in malnutrition, vitamin deficiency, and

symptoms such as foul, bulky stools and a distended

abdomen. "Celiac disease" involves an intolerance to

gluten; "mucoviscidosis" involves pancreatic lesions, and

the development of abnormally viscous mucous

CEPHALHEMATOMA—A subperiosteal hemorrhage

usually associated with the birth process. The swelling is

limited to the surface of one cranial bone.

CEREBRAL PALSY—A disorder of the motor centers

and pathways of the brain. It may be congenital or

acquired before the central nervous system matures.

CLAPPING—Clapping the cupped hands on the chest

wall over a segment of lung to be drained is thought to set

up vibrations thai are transmitted to the bronchi, where

they help dislodge and move secretions. The cupped hand

traps a cushion of air, softening the impact of the clap and

making an effective impulse or vibration. It should be

done over soft, comfortable clothing. It is done for 1 to 2

minutes over each lung segment for a total of 30 minutes.

patients should be encouraged to cough after each

clapping.

CLEFT LIP AND PALATE—A congenital anomaly

due to a partial or complete nonunion of the mandibular

bone, palatal bone, and upper lip. The cleft lip is usually

repaired surgically before the age of 1 month, and the

cleft palate before the age of 2 years.

CLUB FOOT—A congenital orthopedic anomaly in

which the shape or contour of the foo! is distorted.

CROUP— An inflammatio

Laryngotrachcobronchitis is t

CRYPTORCHIDISM—A condition in which the

testicles fail to descend into the scrotum. Also known as

"undescended testicles". Hormonal or surgical therapy is

usually instituted prior to puberty in order to preserve the

fertility of the child.

DENTS BROWNE SPLINT— An orthopedic appliance,

used for children with club foot consisting of two separate

foot plates attached by a cross bar. The foot plates are

fitted to the child's shoes to maintain a corrective position.

DOWN SYNDROME— Also known as mongolism; a

chromosomal anomaly that causes a form of mental

retardation.

DUCTUS ARTERTOSUS (PATENT)—A congenital

anomaly in which the opening between the aorta and the

pulmonary artery fails to close after birth.

associated with allergic responses to food proteins.

ENURESIS— The inability to control urination in a child

over 3-years-of age, due to an organic or psychological

problem. (Bladder control is usually established by the

third year of life, unless a disease condition exists.)

ENTEROBIASIS—A pinw .nfeslalio also

E PI ST AX IS—"Nose-bleeding." This condition may be

caused by local or systemic factors.

ERYTHROBLASTOSIS—A physiological tiemolytic

anemia that results from a blood incompatibility. This

condition is usually associated with the offspring of Rh

positive fathers and Rli negative mothers.

EXSTROPHY OF THE BLADDER—A congenital

defect in which the lower urinary tract is everted and

exposed on the abdominal wall.

FONTANELS— Openings at the point of union of skull

bones, often referred to as "soft spots" on the infant's

head. The posterior fontanel is often difficult to palpate in

the newborn because of the molding that takes place

during the birth process. The anterior fontanel usually

closes by the age of 1 8 months.

FORAMEN OVALE (PATENT)— An opening in the

septum between the right and left atria of the heart that

remains patent after birth. Cardiac catheterization may be

performed for diagnostic purposes. Surgery may or may

not be indicated.

GASTROENTERITIS— An inflammation of the

gastrointestinal tract characterized by vomiting and

HEMANG1OMA—A benign tumor of the skin invokin g

blood vessels.

HEMOPHILIA—An inherited disease which is

characterized by an abnormal tendency to bleed.

HIRSCHSPRUNG'S DISEASE—Also known as

"megacolon"; a condition in which the colon is enlarged

without evidence of mechanical obstruction. Congenital

absence of ganglionic cells in the distal segment of the

colon is a frequent cause of this condition.

HYDROCEPHALL1S—A congenital cerebral anomaly

resulting in an excess of ccrebrospinal fluid within the

ventricles of the brain.

HYDROPS FETALIS—A generalized edema of the

newborn due to cardiac failure and/or hypoproteinemia.

The condition is often associated with crythroblastosis

fetalis.

HYPERALIMENTATION—The infusion of a nutrient

-lolution directly into the vena cava to maintain a positive

nitrogen balance and to maintain growth and development

during prolonged illness.

HYPOSPADIAS—A congenital anomaly in which the

urethra opens on the lower surface of the penis in males

or into the vagina in females. Circumcision of male

infants with hypospadius should be postponed.

IMMUNIZATION—The process of rendering a child

resistant to a disease by the injection of antitoxins or

toxoids.

INTUSSUSCEPTION—A condition in which one

portion of the intestine "telescopes" into an adjacent

portion of the intestine, causing a mechanical obstruction.

JAUNDICE—A symptom characterized by a yellowish

tinge of the skin and sclera. If associated with lethargy,

dehydration and increased serum bilirubin levels, jaundice

may have serious implications.

KERNICTERUS—Staining of the basal ganglia of the

brain, which occurs as a result of increased serum

bilirubin. It is associated with hemolytic disease of the

newborn and infant

LARYNGOTRACHEOBRONCHITIS—A serious

trachea, and bronchi.

LEAD POISONING—Also known as plumbism; a toxic

response of the body to lead which may have been

ingested or inhaled. A marked degree of toxicity may

cause severe and permanent brain damage.

LEUKEMIA—A blood disease characterized by a

massive increase in white blood cells.

MENINGOCELE—A congenital anomaly characterized

by a protrusion of the meninges through an opening in the

spinal column.

MENINGOMYELOCELE—A congenital anomaly

characterized by a protrusion of the meninges and the

spinal chord through an opening in the spinal column.

MILIARIA—Also known as prickly heat, this

inflammatory skin condition is caused by an obstruction

of the sweat ducts.

MVOCLONIC SEIZURES (INFANTILE)—A

the head and flexion of the arms that may be repeated

several hundred times a day.

OMPHALOCELE—A herniation of abdominal contents

into the umbilical cord.

OPHTHALMIA NEONATORUM—A highly

communicable disease also known as gonorrheal

conjunctivitis.

PAROTITIS, INFECTIOUS—Mumps, a highly

communicable viral disease affecting the salivary glands.

PERTHES' DISEASE—Legg-Calve-Perthes' d

an aseptic necrosis of the cpiphysis of the femur.

PERTUSSIS—A highly . nunicable disease c: r

respiratory tract, also know whooping cough.

PHENYLKETONURIA (P.K.U.)—A

metabolic defect in which the ability to metabolize 2

specific amino acid is impaired. The resulting r^; \_r

phcnylalanine in the blood affects skin pigmentation arc

causes irreversible mental retardation.

PHIMOSIS—A narrowing of the prepuce of ibe

uncircumcised penis.

POSTURAL DRAINAGE—A physical method to aid

pulmonary hygiene and relieve bronchial obstructions

caused by accumulated secretions. Indications for this

treatment include conditions of increased production,

increased viscosity and inadequate removal of bronchial

secretions. The technique employs gravity to assist the

drainage from the tracheobronchial tree. The client should

be instructed to cough following the procedure; he can be

suctioned or can expectorate into disposable tissues. In

the head- down position, infants and children should be

supported by a pillow to prevent slipping.

PYLORIC STENOSIS—A congenital narrowing of the

pylorus of the stomach caused by a hypertrophied muscle.

REGURG1TATION—The act of returning food to the

mouth from the stomach immediately after ingcstion. It is

neither forceful nor associated with nausea.

RETINOPATHY OF PREMATURITY—A spasm of

the retinal vessels resulting from high concentrations of

oxygen administered to a newborn, causing permanent

blindness.

RHEUMATIC FEVER—A collagen disease associated

with group A streptococci and characterized by migratory

polyarthritis, Sydenharn's chorea, and carditis. This

disease can cause severe cardiac damage.

ROSEOLA INFANTUM—Also known as "Exanthem

subitum"; this viral communicable disease is

characterized by a period of high fever abruptly

terminated with the eruption of a generalized

maculopapular rash.

RUBELLA—Also known as German measles; this viral

communicable disease is common to children and is

characterized by a tender enlargement of the cervical

nodes, a maculopapular rash and general flushing of the

skin.

RUBEOLA—Also known as measles; this highly

communicable viral disease is manifested by catarrhs!

symptoms, a maculopapular rash, and fever.

SCARLET FEVER—An acute allergic reaction to a

hemolytie streptococcal infection.

SPINA BIFID A—A congenital defect in which the bony

portion of the spinal column fails to close.

STRABISMUS—An imbalance of the extraocular

muscles causing "crossed eyes".

TETANV—An increase neuromuscular irritability

associated with a deficiency of vitamin D or calcium.

TETRALOGY OF FALLOT—A congenital heart

defect, involving pulmonary stenosis, dcxtropostiion of

the aorta, right ventricular hypertrophy, and ventricular

septal defect.

THALASSEMTA—A hemolytie type of anemia of

genetic origin.

THRUSH—A mild fungus infection of the skin and

mucous membranes of the mouth characterized by pearly

white, curdlike lesions, caused by Candida albkans.

TINEA—A highly contagious fungus infection, also

known as ringworm. Tinea capitis involves the head,

while tinea corporis involves the skin, and tinea pedis is

"athlete's foot."

VARICELLA—Also known as chickenpox, this

communicable viral disease is characterized by a

vcsiculopustular rash.

VARIOLA—Also known as smallpox, this highly

communicable infection causes general sepsis and is

characterized by a vesicular rash.

VIBRATION—Helps stimulate flow of secretions during

expiration. Press firmly with flat or cupped hands on the

chest wall. Vibration is performed during exhalation with

client exhaling as completely as possible and making a

"sss" sound. Usually used with clapping and postural

drainage therapy.

VOLVULUS—A twisting of the mobile loops of the

small intestine, causing intestinal obstruction.

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HEALTH PROMOTION & MAINTENANCE

Client Need: Health Promotion and Maintenance

**Antepartum (Pregnancy)**

I. Physiological Changes during Pregnancy

A. Reproductive organs

1. The uterus increases

2. Contractions occur throughout pregnancy

3. Broad ligaments in pelvis become elongated

4. Cervix shorter

5. Vascularity of vagina

6. Vaginal discharge - leukorrhea

7. Vascularity of perineum

8. Ovulation

B. Breasts

* 1. Montgomery's glands
  2. Size and firmness
  3. Nipples
  4. Areola— deepens in color
  5. Superficial veins— become prominent
  6. Colostrum— third month; need to teach mother to expect discharge from nipples

C. Abdomen

**Sample Question**

**What skin changes might a client expect to see during her pregnancy?**

A. Lighter color of the nipples and areola of the breasts

B. Marked decrease in sweating during exercise

C. Noticeable increase in the growth of hair

D. Darkening of a line from the pubic symphysis to the umbilicus

D. Skin

E. Circulatory system

1. Volume of blood increases

2. Heart - slight enlargement

3. Cardiac output - increases

4. Blood pressure - stays about n

5. Iron requirements

6. Palpitations

F. Respiratory system

1. Thoracic cage

2. Diaphragm

3. Oxygen consumption - increases

4. Shortness of breath

G. Digestive system

1. Nausea

2. Constipation

3. Flatulence and heartburn

H. Urinary system

1. Renal function

2. Frequent urination

I. Joints, bones, teeth and gums

1. Softening of pelvic cartilages

2. Postural changes

3. Vascularity of gums

J. Endocrine system

1. Adrenal cortex (estrogen)

2. Thyroid enlarges

3. Placenta becomes endocrine gland

K. Metabolism

**Sample Question**

**A client, 32-weeks pregnant, has gained 10 pounds since becoming pregnant. She now weighs 118 pounds abd us 5’ 6”tall. How would you describe this client's weight gain?**

A. Appropriate for length of gestation

B. Inadequate, should have gained 10-12 pounds

C. Inadequate, should have gained 15-20 pounds

D. Inadequate, should have gained 20-24 pounds

1. Body weight increase

2. Retention of fluid

3. Diuresis

4. Basal metabolic rate

5. Gestational diabetes

L. Nutritional guidelines

1. Iron and folk acid

2. Additional calories needed

II. Fetal Development

A. Embryo

1. Gestational weeks 3-8

2. All systems begin formation

B. Fetus

1. Remainder of gestation

2. Systems develop and mature

C. Placenta

1. Begins functioning about the 3rd week

2. Transports nutrients, oxygen and waists between mother and baby

**Sample Question**

**Which is a function of amniotic fluid?**

A. Provides oxygen to the fetus

B. Provides a constant temperature for the fetus

C. Rids the fetus of waste products

D. Provides nutrients for the fetus

**D. Amniotic fluid and membranes**

1. Fluid maintains temperature

2. Fluid provides cushioning for baby

3. Membranes protect baby from infection

III. Signs of Pregnancy

A. Presumptive signs (Subjective Findings)

1. Amenorrhea —

2. Nausea and vomiting

3. Breast changes

4. Urinary frequency

5. Quickening

6. Pigmentation changes in skin

B. Probable signs

1. Uterine enlargement

2. Hegar's sign

3. Goodell's sign (softening of the cervix)

4. Chadwick's sign (bluish vaginal mucosa)

5. Braxton Hicks contractions

6. Positive pregnancy test (90-98% Reliable)

C. Positive signs

1. Feral heart sounds—as early as 6 weeks

2. Fetal movements felt by examiner

3. Ultrasound

IV. Major Discomforts and Relief Measures

**A. Nausea and vomiting—1st**

1. Meals daily

2. Between meals

3. Carbohydrates

4. Rest period

5. Nausea

**B. Urinary frequency— 1st and 3rd**

**C. Heartburn— 2nd and 3rd**

1. Foods

2. Feedings

3. Antacid

**D. Flatulence— 2nd and 3rd**

1. Gas-forming foods

2. Bowel movement

3. Anti-flatulents

**E. Constipation— 2nd and 3rd**

1. Fluids

2. Roughage

3. Exercise

4. Stool softener

**F. Hemorrhoids— 3rd**

1. Constipation

2. Rest

**G. Insomnia—3rd**

1. Position

2. Exercise

3. Warm showers

**H. Backaches—3rd**

1. Posture

2. Abdominal support

3. Shoes

4. Exercises

5. Rest

**I. Varicosities, legs and vulva—3rd**

1. Standing or sitting

2. Resting position

3. Circulation

4. Support hose

**J. Edema of legs and feet—3rd**

1. Elevate feet

2. Adequate fluid intake

**K. Cramps in legs—3rd**

**L. Pain in thighs or aching of perineum—3rd**

1. Alternate periods of standing and sitting

2. Rest

**M. Shortness of breath—3rd**

1. Sit up straight

**N. Supine hypotensive syndrome—2nd & 3rd**

1. Change position

2. Avoid lying on back

**O. Vaginal discharge—3rd**

1. Cleansing and hygiene

2. Avoid douching

3. Vaginal infection

V. Assessment During Pregnancy – Routine assessments during pregnancy

**A. Weights**

**B. Uterine growth**

**C. Urinalysis**

**D. Blood pressure**

**E. Headaches and visual disturbances**

**F. Nausea**

**G. Educational needs**

VI. Antepartum Testing

**A. Ultrasound**

**B. Amniocentesis**

**C. Non-Stress Test**

**D. Oxytocin Challenge Testing**

VII. Emotional Preparation for Pregnancy

A. Perception of Pregnancy

B. Support Systems

C. Coping Mechanisms

**VIII. Antepartum Complications**

A. Bleeding problems

**Sample Question**

**A 34-week pregnant client arrives in labor and delivery complaining of bleeding. She states she woke up "feeling wet" and found blood stains through her clothes with a pool on the bedding. She acknowledges no particular discomfort other than fear. The client has already called her physician who is now on the way. What should be done first by the nurse?**

A. Start an IV and call surgery to prepare for an immediate cesarean delivery

B. Put the client in the shower to provide for personal hygiene

C. Reassure her and place the external fetal and uterine monitor on her

D. Examine her to determine the cause of bleeding

**Sample Question**

**A 34-week pregnant client has intense abdominal pain that does not relax and has some dark red vaginal bleeding. From the given data, what is happening to this client?**

A. Abruptio placenta

B. Advanced labor with heavy show

C. Placenta previa

D. Fetal bleeding from a ruptured fetal vessel

1. Placenta previa

2. Placenta abruptio

3, Threatened abortions

**B. Hyperemesis gravidarum**

**C. Pregnancy Induced Hypertension/Preeclampsia**

**Sample Question**

**A 16-weeks pregnant client has been diagnosed with gestational diabetes. Which intervention would be appropriate?**

A. Teach her how to administer her own insulin

B. Enroll her in regular diabetic education classes

C. Teach her about diet and how to count carbohydrates

D. Plan for her next office visit in 3 weeks

**D. Gestational Diabetes**

Process of Labor (Intrapartum)

I. Labor

A. Terms

1. Lightening

2. Show

3. Effacement

4. Dilation

5. Presentation

6. Position

7. Station

8. Crowning

B. Cardinal movements of labor

1. Descent, engagement and flexion

2. Internal rotation

3. Extension

4. External rotation

5. Expulsion

C. Contractions

1. Frequency

2. Duration

3. Intensity

D. Stages of labor

1. First stage

**Sample Question #169**

**A client, who is gravida 3, para 2, is presently in active labor. A vaginal exam reveals that she is 5 cm dilated and 100% effaced at minus 3 station. At the peak of a contraction, fluid gushes from her vagina. What should the nurse do?**

A. Take the fetal heart tones

B. Help her to the bathroom

C. Place her in a knee-chest position

D. Prepare her for a cesarean delivery

b. Active phase

c. Transitional phase

2. Second stage

3. Third stage

4. Fourth stage

E. Assisting the coach

F. Relaxation techniques for the laboring client

G. Fetal assessment of cardiac activity

1. Normal fetal heart rate: 120-160

2. Bradycardia: less than 120

3. Tachycardia: greater than 160

4. Fetal distress

**Sample Question**

**What might be expected if meperidine (Demerol) is given to in expectant mother late in labor?**

A. Labor contractions stop

B. Interference with the effects of anesthesia

C. Depressant effect on the baby's respirations

D. Ineffective for pain relief so close to delivery

**H. Medications used in labor**

**Sample Question**

**Which statement is true about regional anesthesia?**

A. it can elevate uterine tone and enhance labor

B. It's effects are related directly to the blood level of the drug use

C. Women receiving it remain awake during labor and delivery

D. Fetal respiratory depression is a common side effect

I. Epidural anesthesia

**II. Complications and Signs of Stress in the Mother**

A. Infection

B. Exhaustion

C. Dehydration

**III. Complications and Signs of Distress in the Fetus**

**Sample Question**

**What is the most immediate danger associated with footling breech?**

A. Hemorrhage

B. Prolapse of the cord

C. Infection

D. Infant's head too large

A. Asphyxia

B. Generalized infection

**Postpartum Period and Newborn**

I. Involution: Process Occurring in Time Period from Delivery until the

Reproductive Organs Return to the Non-pregnant State (6 Weeks)

II. Assessments

A. Fundus

1. Should be firm

**Sample Question**

**A mother reports to the nurse that while nursing the baby she feels cramps in her abdomen. What is the best response by the nurse?**

A. "That’s unusual. We'd better call the physician."

B. "That's because you aren't emptying your bladder regularly."

C. "When the baby nurses, the stimulation causes your body to produce pro stag land his, which causes cramping."

D. "When the baby nurses, the stimulation causes your body to produce oxytocin, which causes uterine cramping."

2. Cramping sensations or after pains

**Sample Question**

**Describe lochia occurring 2 hours following delivery.**

A. Serosa

B. Alba

C. Rubra

D. Sanguineous

**B. Lochia: vaginal discharge after delivery**

1. Rubra

2. Serosa

3. Alba

4. Amount should he scant

5. Report foul odor or increase in bright red blood

C. Perineum and rectum

1. Check for intactness, bruising, edema or hematoma

2. Check for hemorrhoids

3. Apply ice packs or anesthetic sprays as ordered

4. Teach perineal care and proper application of perineal pads

**Sample Question**

**The mother complains of perineal pain two days after delivery. A midline episiotomy without lacerations was performed during delivery. What would relieve this client's perineal discomfort?**

A. Steroid base cream

B. Sitz bath

C. Narcotic analgesic

D. Ice pack

5. Sitz bath

D. Vital signs

1. Temperature

2. Pulse

3. Blood pressure

E. Elimination

1. Urination

2. Defecation

3. Diaphoresis

F. Weight loss

**Sample Question**

**When the breasts of a nursing woman become engorged, what should be done first by the nurse?**

A. Decrease the fluid allotment

B. Offer medication for pain

C. Urge frequent emptying of the breasts

D. Apply ice bags to the breasts

**G. Lactation**

**Sample Question**

**A client stated during labor that she did not want to have a baby. Which is a sign that she is adapting poorly to her baby?**

A. Calls the baby J. R. instead of John Ross, his given name

B. States she does not want to breastfeed and asks for a bottle of formula

C. Undresses the baby and checks him thoroughly the first time she sees him

D. Does not look at the baby's face when holding or feeding him

**Sample Question**

**A baby has developed hyperbilirubinemia which necessitates a stay in the nursery. What nursing action would promote maternal attachment?**

A. Tell the client that she cannot care for the baby until the infant's condition has sia

B. Explain to the client exactly why the baby must stay in the nursery

C. Provide opportunities for the mother to go into the nursery and care for the baby

D. Arrange for the mother to be discharged early to prepare for the baby at home

**H. Bonding and attachment**

III. Complications of Postpartum

**Sample Question**

**Immediately following the delivery of the placenta, the physic! i orders pitocin to be added to the IV. What is the main outcome of the medication?**

A. To prevent Rh hemolytic disease

B. To stimulate lactation

C. To stop bleeding in the vagina

D. To promote and sustain uterine contractions

**Sample Question**

**A client delivered 3 hours ago. Her fund us has been firm and 2 fingers below the nbilicus. Each time she is checked, the nurse finds large amounts of lochia rubra. There are no clots, and the lochia c ntinues to drip from the vagina. What should be suspected by the nurse?**

A. Cervical or vaginal lacerations

B. Atony of the uterus

C. Retained placcntal cotyledons

D. Retained fragments of membranes

**A. Postpartum hemorrhage: blood loss greater than 500 mL**

1. Causes

a. Uterine atony

b. Retained placental tissue

c. Lacerations in the reproductive tract

2. Control and correction of hemorrhage

**B. Puerperal infections**

1. Endometritis

a. Predisposing factors

b. Assessment

c. Treatment and nursing interventions

2. Mastitis (inflammation of the breasts)

a. Predisposing Factors

b. Assessment

c. Treatment and nursing intervention

**Sample Question**

**A 36-year-old gravida 6 para 6 delivered 2 days ago and reports that she is having pain in her leg. The nurse suspects the area and finds it swollen, reddened and very tender. Which is the proper nursing action?**

A. Massage the leg to improve circulation

B. Give an analgesic per order

C. Report your findings to the physician

D. Give an oxytocin per order

**C. Thrombophlebitis**

1. Etiology

2. Assessments

3. Preventive measures

**D. Urinary tract infections**

1. Predisposing factors

2. Assessments

3. Treatment and nursing interventions

**IV. The Neonate: Refers to the First 4 Weeks of Life**

A. Nursing Care after Delivery

**Sample Question**

**Keeping in mind priorities of care, what should the nurse do for a newborn immediately after delivery?**

A. Test for primitive reflexes

B. Place in an incubator

C. Suction secretions to clear airway

D. Provide with positive pressure breathing

**Sample Question**

**While working in the nursery, the nurse notices that a baby, 5-hours-old has turned blue. Closer inspection reveals a large amount of frothy mucus in the infant's mouth. What immediate intervention should be done by the nurse?**

A. Immediately aspirate mouth and nasopharynx with a bulb syringe, holding the neonate with its head down.

B. Call a physician and report the change in the baby's respiratory status

C. Immediately aspirate mouth with a syringe holding the infant with its head elevated, apply oxygen and then call a physician

D. Take an apical pulse, change infant to side-lying position and take vital signs every 15 minutes

1. Respiratory Care

**Sample Question**

**Five minutes after birth, a baby's heart rate is 140, respirations 48, extremities flexed, and the baby cries when stimulated. The child was given oxygen because its color was still blue. What Apgar would the nurse expect for this baby?**

* + 1. 10
    2. 8
    3. 7
    4. 5

2. Apgar Assessment

a. Apgar assessment-1 and 5 minutes (see following chart)

1) Heartbeat

2) Respiratory effort

3) Muscle tone

4) Reflex irritability

5) Color

b. Interpretation

1) 7-10 = good (no oxygen, suctioning, resuscitation)

2) 4-6 = fair (needs air assages cleared, oxygen)

3) 0 - 3 = poor (needs rt scitation)

c. Babies normally have a low PaO2 at birth, but it increases quickly after birth.

d. Almost always scores lower on 1 minute Apgar due to blue color from cyanosis

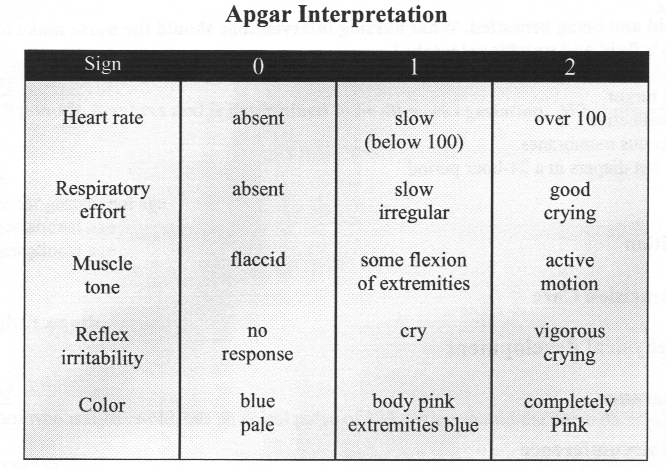


Figure : APGAR Interpretations[[5]](#footnote-6)

**Sample Question**

**Newborns are treated with Erythromycin ointment to prevent which condition?**

B. Ophthalmia nconatorum

C. Erythema neonatorum

D. Vitamin K deficiency

3. Eye Prophylasis

**Sample Question #186**

**Which condition is prevented when vitamin K (Aqua Mephyton) is given to a newborn?**

A. Hemorrhage

B. Hemolytic disease

C. Ophthalmia neonatorum

D. Erythropoiesis

**4. Vitamin K (AquaMEPHYTON)**

**B. Normal Newborn Care**

1. Cord Care

**Sample Question**

**A baby is 24-hours-old and being breastfed. What nursing interventions should the adequacy of the baby's fluid and nutritional intake?**

A. Elastic skin turgor

B. Color of conjunctiva

C. Color of mucous membranes

D. Number of wet diapers in a 24-hour period

2. Nutrition

3. Circumcision Care

**C. Normal physical development**

1 . Appearance

2. Head circumference

**Sample Question**

**A 1-day-old infant has a somewhat pointed head that feels slightly spongy in the occipital region. These findings are most consistent with which condition?**

A. Molding and caput succedaneum

B. Closed anterior and posterior fontanels

C. Fused suture lines

D. Cephalhematoma

3. Caput succedaneum

**Sample Question**

**What is cephalhematoma?**

A. An edematous swelling of the soft tissue of the scalp, present immediately after birth

B. A collection of blood between the periosteum and skull bone, present several hours after

C. A collection of blood anywhere in the cranial vault, occurs after birth

D. Purplish discoloration on the baby's head indicating trauma immediately after birth

4. Cephalhematoma

5. Cardiovascular

**Sample Question**

**Which characteristic observed in the i i newborn at birth would cause the nurse to be concerned?**

A. Grasp reflexes bilaterally

B. Stronger flexor muscle tone

C. Jaundice in the first 24 hours

D. Startle activity

**Sample Question**

**A newborn weighed 9 pounds, 8 o and is determined to be 40-weeks gestation. What description is given for this baby?**

A. Postmature

B. Appropriate for gestational age

C. Large for gestalional age

D. Small for gestational age

7. Weight/Length

**Sample Question #192**

**A quiet, awake newborn that is 2-days-old has an apical pulse of 175. What should the nurse do next?**

A. Call the physician

B. Nothing, this is nomal

C. Check the chart for previous rates

D. Begin oxygen by face mask at 2 L

8. Vital signs

9. Feces

10. Reflex activities

**Sample Question**

**Which newborn reflex normally remains testable in a child up to 1-year-old?**

A. Moro

B. Tonic neck

C. Palmar grasp

D. Babinski

**Reflexes**

**a. Moro - "Startle reflex" elicited by a sudden loud noise or change of position. Infant flexes legs, has embrace position of arm, thumb and index finger forms the letter "C". Goes away by 3.**

**b. Tonic neck—“Fencing Reflex” elicited by laying infant on the back and turning head to one side. The arm and leg on the side the child is facing extend, arm and leg on the opposite side are flexed. Goes away by 2-3 months.**

**c. Stepping Reflex - "Dancing Reflex" elicited by holding infant upright with feet just touching a**

**hard surface. Will make little walking/stepping movements with feet. Goes away by 1 month.**

**d. Rooting Reflex - Turns head toward anything that touches the cheek to help find food. Present in full term babies, often absent in premature infants.**

**e. Grasp - Full term newborn will grasp anything placed in his hand strong enough so the child can be lifted, then let go. Absent in premature infant.**

**f. Babinski - When the sole of the foot is stroked from heel to across the toes, the toes will flare out.**

**D. Sensory development - All senses developed by birt**

**COMMON PHARMACOLOGIC AGENTS USED IN**

**MATERNITY NURSING**

Drug: Meperidine (Demerol)

Usual Dose: IM: 50-100 rng. IV: 25 nig diluted in 5 ml

saline given slowly over l-l 1/2 min. Antagonist; Narcan

Uses: In labor and for postoperative pain of cesarean

deliveries and postparturn for severe pain

3. Note: dosage should be reduced when given with

phcnothiazvnes or tranquilizers which potentiate the effect of

the Demerol

Side Effects: respiratory depression, dizziness, sedation,

nausea, vomiting , sweating . constipation, urinary retention.

hypotension.

OB effects: uterine activity may increase if given too early in

labor, effective contractions may decrease . Neonatal

depression especially in infants born 1-3 hours after injection

(peak 2 hours). Is excreted in breast milk-watch for

drowsiness and poor feeding

Drug: promethazine (Phenergan)

Usual dose: 25-75 nig, IM preferred, NOT to exceed 100 mg

in 24 hours.

Uses: Primarily used in labor or postop C-section as an

adjunct to narcotic analgesic; potentiates me sedative effect

of other medications and relieves nausea

hypotension, tachycardia, and allergic reactions. OB side

effects: enters fetal blood stream and equilibrates by 15

Drug: hydroxyinc(Vistaril)

Usual dose: 25-100 mg IM pre and post delivery, q 4-6

hours. DO NOT GIVE IV or SC Following inadvertent intraarterial,

IV or subcutaneous injection pain or induration at

injection site, endocarditis, thrombosis, and digital gangrene

have occurred.

Uses: Treatment of anxiety, tension or psychornotor

agitation; to control emesis, reduce narcotic requirements

prior to or following surgery. Most commonly used to

anxiety.

Side effects: drowsiness, dry mouth, marked discomfort at

she of IM injection. Rarely: tremors, convulsions. Has

produced fetal abnormalities in lab animals. Clinical data for

human beings is inadequate to establish safety in early

pregnancy (PDR). Given in correct doses, no adverse effects

on infant during recovery. Is not known whether drug is

Drug: diazepam. (Valium)

Usual dose: 2-10 mg IM, IV or PO q 3-4 hours

Uses: Treat anxiety, tension, alcohol withdrawal-as muscle

relaxant, and anti-convulsive agent. Used prior to

gastroscopy, csophagoscopy, preoperativeiy and prior to

cardioversion. Treatment of status epilepticus. Adjunct in

cerebral palsy, paraplegia or tetanus. Premedication or

adjunct to anesthesia induction, immediate post delivery,

canning agent. Not recommended for pregnancy, labor or

lactation.

Side effects; drowsiness, fatigue, ataxia, phlebitis, slurred

speech, constipation, urinary retention, C.V. collapse,

respiratory depression, laryngospasrn and paradoxical

response. Toxic effects: deep sleep, confusion, coma,

decreased reflexes, hypotension, respiratory depression.

Risk of congenital malformations with first trimester use.

When used in labor, loss of beat-to-beat variability, fetal

tachycardia, cord levels higher than maternal plasma levels

12 minutes after IV administration. Infant has gestationalagc-

related degrees of prolonged lethargy, hypotonia.

hyperactivity, respiratory depression, failure to suck and

depressed reflexes up to 72 hours after delivery. Cold stress

common. During lactation, crosses into milk causing infant

lethargy, poor sucking reflexes

Drug: naloxone (Narcan)

Usual dose: Adult: 0.4 mg IV, IM, SQ (0.4 mgmL)

Nconates: 0.01 mg/kg IV, IM, SQ (0.02 mg/mL) may repeat

q 2-3 min. x 3 doses. Duration 3-5 hours.

Uses: treatment of respiratory depression secondary to

narcotic administration (including asphyxia neonatonim):

administered to cither mother or newborn in case of

respiratory depression

Side effects: Narcan is a "pure" antagonist. Doesnt have

"agonist" properties- in the absence of narcotics or agonist

effects it exhibits essentially no pharmacologic activity

Drug:

category: Oxytocics

oxytocin (Pitocin, Syntocinon), Ergonovine (Ergotrate).

methylergonovine (Methergine)

Usual dose: Induction or stimulation of labor. IV infusion 10

U (I ml) in 1 liter of D5W, Piggyback per infusion pump at

beginning rate of 3-6 milli units/rnin. Adjust rate according

to institutional policy, uterine contractions and fetal

response. IV oxytocin is the only means currently approved

by ACOG for induction/stimulation of labor. Postpartum

hemorrhage: IV infusion: 10-40 U in 1 liter of D5W (Pitocin

or Syntocinon); IM 0.2 mg q 24 hours max 5 doses

(Methergine and Ergotrate). For severe hemorrhage-life

threatening emergency, Methergine and Ergotrate may be

given 0.2 mg IV over 1 min., closely monitoring blood

pressure and uterine contraction. Following initial IM or IV

dose may give 0.2-0.4 mg P.O. q 6-12 hours for 2-7 days;

milk ejection: 3 drops or single spray into one or both

nostrils 2 or 3 min. before nursing or pumping breasts

(Syntocinon nasal spray)

Uses: to initiate or improve uterine contraction at term only

in carefully selected clients and only after cervix has begun

to dilate and vertex presentation of fetus has occurred, to

stimulate let-down reflex in nursing mother and relieve pain

abortion, stimulation to overcome uterine inertia, control of

postpartum hemorrhage, to correct postparturn uterine

atomy, to induce abortion in the second trimester.

Side effects: fetus-bradycardia, tachycardia, PVC's,

asphyxia, hypoxia, increased risk of hyperbilirubincmia,

intracranial hemorrhage, trauma from too rapid propulsion

through pelvis, death. Mother-hypers en sitivity leading to

uterine hypcrtoxicity tetanic-contractions, uterine rupture,

anaphylactic reactions, postpartum hemorrhage, cardiac

dysrhythmias, pelvic hematoma, N and V, hypertensive

episodes, subarachnoid hemorrhage, increase blood flow and

afibrinogenemia, severe H20 intoxication hypotension, ECG

changes, anxiety, dyspnea precordial pain, edema, cyanosis

or redness or skin, CV spasm and collapse.

Drug: Magnesium Sulfate

Usual dose: Avail in !0, 15, or 50 % concentrations. Each

gram contains 8.1 mEq of mag. sulfate. Various dosage

schedules are used for preeclampsia or eclampsia. Initial

dose of 4 Gm of mag sulfatc in 250 ml of 5% dextrose may

be given IV; this dose may be followed by 4-5 Gm IM into

each buttock. Foilowed by IM doses of 4-5 Gm given at 4

hour intervals as needed. Drug may be given IV or IV push

(20 ml of a 10% solution) injected slowly (5 ml, every 30 sec

and repeated after 1 or more hours. Drug may be given IVPB

(4 mg in 100 ml of 5% dextrose in water) over 30 min.

period, following by IV infusion (10 mg in 900 ml of 5%

dextrose in water) at 100 drops/min. No more than 20-25

Gm should be given over 24 hours, or toxic effects may

develop. Determinations should be made of the client's

serum magnesium levels and urinary excretion of

magnesium. Drug effect is immediate when given IV and

action fasts about 30 min. When given IM, onset of action

occurs in 1 hour and lasts 3-4 hours. IV mag sulfate given

during 2 hours preceding delivery since magnesium may

cause ncuromuscular or respiratory depression in infant. IM

rnag sulfate usually does not adversely affect the newborn.

Uses; One of most important drugs in treatment of preeclampsia.

Is effective to counteract uterine tetany that may

occur after large doses of oxytocin, or it may be used when

the myomctrium is contracting abnormally.

Antidote: Calcium Gluconate; Must have on hand prior to

administering mag sulfate.

Side effects', premonitory symptoms of magnesium toxicity

including "feeling hot all over" and extreme thirst.

Disappearance of the patellar reflex is a useful clinical sign

to detect onset of magnesium toxicity. Patellar reflex loss

usually occurs when serum magnesium level exceeds 4 mEq

per liter. Adverse effects include flushing, sweating,

hypotension, depression of reflexes, flaccid paralysis,

hypothermia, circulatory collapse, and depression of cardiac

and CNS function. The most immediate danger to life is

respiratory paralysis. Abrupt injection of large doses of mag

sulfate can cause cardiac arrest. Additive CNS effects occur

when narcotics, barbiturates, general anesthetics, or other

CNS system depressants are given concomitantly with

magnesium sulfale; thus dosages of these drugs must be

carefully adjusted. If calcium is used to treat magnesium

toxicity in a digitalized client, heart block may occur.

Drug: Calcium

Usual dose: Calcium Gluconate for Magnesium Sulfate

Toxicity: 1-20 ml of 10% solution (IBB) 500 mg IV initially

(Nsg 80)

Calcium gluccptatc for exchange transfusion: 0.11 g IV after

each 100 ml blood exchanged. Give IV route only

Uses: Calcium is essential element for regulating the

excitation threshold of nerves and muscles, for blood clotting

mechanisms, for cardiac function (rhythm, toxicity,

contractility) for maintenance of body skeleton and teeth.

Calcium Gluconate has positive inotropic effect on heart;

used to treat neg. Ca balance as in neonatal tetany,

hypoparathyoidism, vitamin D deficiency, alkalosis and

intestinal malabsorption states. Also used to overcome

cardiac toxicity of potassium, for CPR, to prevent

hypocalcemia during exchange transfusion, acute symptoms

of lead colic, sensitivity reactions and insect stings. Most

common use in OB is as an antidote for magnesium sulfate

toxicity.

Side effects: tingling sensation, "heat waves", syncope,

hypotension, chalky taste, hyp ere ale emi a, polyuria, renal

calculi, venous irritation, bradycardia and other

dysrhythmias. Symptoms of Toxicity: Cardiac arrest.

Contraindications: extremely cautious use with clients

receiving digitalis glycosides, renal insufficiency, history of

lithiasis.

Drug: Terbutalinc (Brcthinc, Bricanyl)

Usual dose: Terbutaline: Titrated infusion of 10-25

mcg/min. (Hospital Protocol) Suggest: starting at 10

mcg/min and increasing 5 mcg/min q 30 minutes until

contractions cease or max is reached. Follow with 250 meg

SubQ qid x 3 days at same time give 5 mg P.O. tid and

maintain client on P.O. dose until end of 36th week. Not

approved for general use-consent required.

Use: original purpose was for treatment of asthma, now

being researched for suppression of preterm labor.

Side effects: Maternal hypotension, tachycardia, nausea,

vomiting, dizziness, rash or erythema, palpitations,

anxiety.

MATERNITY NURSING REVIEW

GLOSSARY

ABORTION—Termination of pregnancy of a fetus

weighing less than 500 g. or of a pregnancy of less than 19

completed weeks after conception. "Spontaneous" occurring

without assistance; lay term, "miscarriage." "Induced"

brought on by exiemal methods; D and C (dilation and

curettage), vacuum aspiration, salmlzation.

ABRUPTIO PLACENTAE—Tearing away of the placenta

from the wall of the uterus, accompanied by pain; there may

be concealed bleeding or overt, visible bleeding.

ACROCYANOSIS—Cyanotic or bluish discoloration of the

hands and/or feet of the newborn as a result of inadequate

circulation or coldness.

AFTERPAINS—Discomfort caused by the contraction of

the uterus postpartum as it returns to its prcpregnant

condition; usually occurring in the multipara.

AMINOCENTESIS—Removal of some of the amniotic

fluid from the amniotic sac by way of a needle inserted

through the abdominal wall of the mother for the purpose of

examining the fluid.

AMNION—Inner layer of the fetal i mbrancs or sac,

which secretes amniotic fluid.

AMNIOTOMY—Rupturing of the amniotic sac by artificial

ANTENATAL -Prenatal, before birth.

Bl 1.1 RUBIN—I'h c red-orange pigment that results from the

breakdown of hemoglobin and which can cause jaundice of

the skin when the level rises above 5 mg/100 ml in the

newborn.

BRAXTON HICKS CONTRACTIONS—Painless,

intermittent contractions of the uterus which occur

throughout pregnancy; often mistaken for labor contractions.

BREECH—Buttocks; "breech presentation"—delivery in

which the buttocks or feet of the fetus are presented at the

outlet, instead of the vertex (head). "Footling"—one or both

feet present at the opening. "Frank" - buttocks are the

presenting part. "Full" or "Complete"—buttocks and feet

present at the pelvic brim.

CAPL'T SUCCEDANEUM—Swelling or edema on the

head of the infant occurring during labor and/or delivery.

CEPHA L HEMATOMA—Trauma of labor and delivery in

a collection of blood on the head of the fetus between the

bone and the periosteum, defined by the suture lines.

CERCLAGE PROCEDURE—Pn cedure for the treatment

of incompetent cervix.

CHLOASMA GRAVIDARUM—Brownish-yellow patches

of pigmentation occurring during pregnancy, particularly on

the face and neck. Syn., mask of pregnancy.

CHORION—The outermost membrane of the developing

fetus, which gives rise to the fetal portion of the placenta and

extends to form the outer layer of the amniotic sac.

CHORIONIC G ON ADOTROPIN—Hormone produced

by the chorion and excreted in the urine of the pregnant

woman; its presence in the urine is a possible sign of

pregnancy.

CHORIONIC VILLI—Fingerlikc projections of the

chorion which invade the decidua basalis and form the fetal

portion of the placenta.

COLOSTRUM—Yellowish white fluid expressed from the

breast during pregnancy preceding the formation of milk;

caloric and cathartic values of this substance arc questioned.

CROWNING—The appearance of the vertex, or head, at

the external vaginal orifice.

DECIDUA—Enriched endometrial lining of pregnancy shed

after pregnancy terminates. "Basalis" - the portion of the

endometriiim underlying the embedded embryo and from

which the material portion of the placenta is formed.

"Capsularis" - that outer portion of the decidua enveloping

the embryo. "Vera" - the remainder of the endometriurn not

containing the embedded embryo.

Dl LATATION—Enlargements of an organ or orifice of the

cervix; the state of enlargement or opening of the cervix to

allow for passage of the fetus,

DYSTOCl A—Difficult abnormal labor.

ECLAMPSIA—Abnormal reaction of the body to

pregnancy, resulting in convulsions and possible

usually preceded by hypertcr

ECTOPIC PREGNANCY—Pregnancy that occurs outside

the uterine cavity.

EFFACE MENT—Thinning of the cervix to allow for

passage of the fetus; in primigravidas, occurs prior to

dilatation, and in multigravidas, occurs simultaneously with

dilatation.

ENGAGEMENT— Descent of the fetus into the pelvis until

the presenting part reaches the level of the ischial spines.

ENGORGEMENT— Stasis of blood and lymph in the

breast, causing tenderness, firmness, and discomfort prior to

onset of lactation.

EPISIOTOMV—A surgical incision of the perineum, to

enlarge the external vaginal opening to prevent laceration of

the vulva, perineum, and adjacent structures.

FONTANEL— The space at the junction of three or more

fetal and cranial bones, covered with a tough membrane.

"Anterior Junction" of sagittal, frontal, and coronal sutures;

on anterior portion of skull. Syn., "soft spot," greater

fontanel. "Posterior" junction of lambdoid and sagittal

sutures. Syn., lesser fontanel.

FUNDUS— The upper portion of the uterus.

GRAVTDA—A pregnant woman. "Primigravida"

pregnant for the first time. "Multigravida" woman pregnantfor the second time or more.

HEMORRHAGE— In obstetrics, loss of blood i

500 ml. after the third stage of labor.

INVOLUTION— Returning of the pelvic organs and

structures to resemble their prepregnanl state or condition.

JAUNDICE— Yellowish color of skin, sclcr

membrane, and excretions. Syn., icterus.

LANUGO— Soft, fine, downy hair found on preterm and

LIGHTENING—The dropping of the fetus forward and

downward into the true pelvis; occurs 2 or 3 weeks before

the end of gestation in the primigravida. or at the beginning

of labor in many multigravidas.

LOCHIA—Uterine discharge after delivery which consists

of the sloughing decidua, tissue, blood, and cells; last 2 or 3

weeks.

MOLDING—Temporary changes in the shape of the head

of the newborn, as it accommodates to the birth canal during

labor and delivery.

PARTURITION—The act of giving birth.

PLACENTA PREVIA—Abnormally low implantation of

the placenta in the uterus.

POSITION—The relationship of a designated point on the

presenting part of the fetus to a designated point in the

maternal pelvis which has been divided into four quadrants.

POSTPARTUM—The period of tin • folli ving delivery.

PREECLAMPSIA—Abnormal bodily reaction to

pregnancy characterized by edema, hypertension, and

protcinuria, and occurring after the twentieth week of

pregnancy; often referred to as toxemia.

PRESENTING PART—That anatomic part of the fetus that

is closest to the cervix and felt by the examiner on vaginal or

rectal examination—usually the head or buttocks.

QUICKENING—The first active movements of the fetus

detectable by the mother, at approximately 16 to 18 weeks of

gestatio

SHOW—Blood-tinged mucous discharge occurring during

labor as the cervix dilates. Syn., bloody sho\v.

TRIMESTER—Approximately one-third of the gestational

period when using LMP. "First trimester" the first day of the

last normal menstrual period through 14 weeks gestation.

"Second trimester" fifteenth through twenty-eighth weeks of

gestation. "Third trimester" twenty-ninth through forty-

second completed week of gestation and birth.

UMBILICAL CORD—Life line between the fetus and

placenta through which nourishment and waste pass;

contains two arteries and one vein surrounded by Wharton's

jelly.

WHARTON'S JELLY—Gelatinous connective tissue

which surrounds the umbilical vessels giving support to the

umbilical cord.

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1. Taken from https://www.ncsbn.org/2008\_PN\_Test\_Plan\_Web.pdf [↑](#footnote-ref-2)
2. Adopted from [www.eriworld.com](http://www.eriworld.com) [↑](#footnote-ref-3)
3. Illustration notes taken from lectures by Amy Villarete, R.N., B.S.N. [↑](#footnote-ref-4)
4. Taken from Silvestri, L. (2010). *Comprehensive Review for the NCLEX-PN Examination.* Charlestown: Saunders/Elsevier. [↑](#footnote-ref-5)
5. Taken from Silvestri, L. (2010). *Comprehensive Review for the NCLEX-PN Examination.* Charlestown: Saunders/Elsevier. [↑](#footnote-ref-6)