

This is only a **sample** of the seminar and questions. The complete set of questions are available for purchase now. The seminar is still a work in progress.

PHARMACOLOGY FOR THE NCLEX MADE INCREDIBLY UNDERSTANDABLE

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You are never going to be able to guess which drugs you will get on your test. The best thing to do is know the common suffixes that will give you a hint as to what type of drug classification the drug is a part of. Then answer based off what you know about that specific drug classification.

I will give you examples of drugs in each classification but do not try and memorize the drug. Instead, concentrate on the suffix of the classification the medication was found in as a rule of them. This works most of the time, however remember, rules vary from time to time but for the most part this really works.

If you come to an NCLEX question you don't know, just try to answer the question based on the symptoms the client is having.

Let's begin ... The NCLEX will always give you both the Generic Brand and the Brand Name of any medication, so pay attention to the suffixes of the medication in each class.

1). Beta 1 Blockers usually end in **(-olol)** and are Adrenergic Drugs

Purpose:

Adrenergic drugs have many uses. They are used to increase the output of the heart, to raise blood pressure, and to increase urine flow as part of the treatment of shock. Adrenergics are also used as heart stimulants. They may be given to a patient to reverse the drop in blood pressure that is sometimes caused by general anesthesia. They may be used to stop bleeding by causing the blood vessels to constrict, and to keep local anesthetics in a small area of the body by closing off the nearby blood vessels that would otherwise spread the anesthetic to other parts of the body. This ability to make blood vessels constrict makes adrenergics useful in reducing nasal stuffiness associated with colds and allergies. They may also be given to open the bronchi (the tubes leading to the lungs) for treatment of asthma and chronic obstructive pulmonary disease (COPD).

Example:

- Albuterol (Alupent, Ventolin, others): given by mouth or as a nasal spray to improve breathing.
- Dobutamine (Dobutrex and generic forms): used to stimulate the heart during surgery or after a heart attack or cardiac arrest.
- Dopamine (Intropin): used to increase cardiac output, blood pressure, and urine flow in treating patients with shock.
- Epinephrine (Adrenalin): used locally to control bleeding from arterioles and capillaries during surgery. It is used to treat shock, as a heart stimulant, and as a decongestant. Epinephrine may be added to local anesthetics to keep the anesthetic in the area where it is applied. Epinephrine may also be applied to the eye to reduce the symptoms of conjunctivitis (red eye).
- Isoproterenol: most widely used to ease breathing problems in asthma and COPD, but also used to control several types of irregular heartbeat until a pacemaker can be implanted.
- Phenylephrine (Neo-Synephrine): used to treat shock and low blood pressure; also used in the form of nose drops or spray to relieve nasal congestion from colds and allergies.
- Metaraminol (Aramine): used to raise the blood pressure and stimulate the heart in treating patients with shock.
- Norepinephrine (Levophed): used to increase the output of the heart and raise blood pressure as part of the treatment of shock.

Notice how not all the medications end in (olol). This is why it is important to know the classification and the suffixes but as mentioned, memorizing suffixes alone does not always work.

Side effects may include some are all of the following:

- nervousness
- rapid heart beat
- high blood pressure
- irregular heart beat
- rapid heartbeat
- chest pain
- dizziness
- dry mouth
- headache
- flushing
- nausea
- vomiting
- weakness

Drugs that may interact with adrenergic amines include:

- Furazolidone (Furoxone)

- Tricyclic antidepressants (Amapin, Asendin, Aventyl, Elavil, Endep, Norpramin, Pamelor, Sinequan, Surmontil, Tofranil, Vivactil)
- Guanethidine (Ismelin)
- Methyldopa (Aldomet)

Herbs that have been reported to interact with adrenergic amines include ephedra (ma huang), often sold in over-the-counter weight loss formulas; St. John's wort, a popular remedy for anxiety or depression; alfalfa; hibiscus; ginseng; angelica (dong quai); and yohimbe. These are just some of the herbs not a complete list.

2). Antibiotics usually end in **(-cillin, -micin)** and are used to prevent infection or to fight infection.

Purpose:

An antibiotic is given for the treatment of an infection caused by bacteria. They target only bacteria - they do not attack other organisms, such as fungi or viruses. If you have an infection it is important to know whether it is caused by bacteria, and not a virus or fungus. Most upper respiratory tract infections, such as the common cold and sore throats are generally caused by viruses - antibiotics do not work against viruses.

Example:

Penicillin, Ampicillin, Amoxicillin, ciprofloxacin (Cipro)

Side effects may include some are all of the following:

- Diarrhea
- Feeling and being sick
- Fungal infections of the mouth, digestive tract and vagina

Rare side effects may include:

- Formation of kidney stones (*when taking sulphonamides*)
- Abnormal blood clotting (*when taking some cephalosporins*)
- Sensitivity to sun (*when taking tetracyclines*)
- Blood disorders (*when taking trimethoprim*)
- Deafness (*when taking erythromycin and the aminoglycosides*)

Drugs that may interact with antibiotics amines include:

Antibiotics may have interactions with other prescription and non-prescription medications. The antibiotic biaxin, for example, should not be taken with the digestive system drug reglan. Penicillins can stop the contraceptive pill working properly and if you are suffering from diarrhoea or vomiting while taking an antibiotic, your pill might not be properly absorbed. In either case, it is advisable to use extra contraception while you are taking the antibiotic. Metronidazole, an antibiotic often used to treat dental infections, interacts severely with alcohol. This combination causes a violent vomiting reaction and even the slightest alcohol level can be problematic with this agent.

Foods that may interact with antibiotics:

Patients should opt for the right diet when using antibiotics because some will interact with food. Orange Juice and milk should be avoided when taking antibiotics. The acidity in orange juice decreases the effectiveness of antibiotics, as does milk. There are also potential risks when taking levaquin and cipro. These drugs belong to a strand of antibiotics known as quinolones. Quinolones are absorbed less when dairy, calcium, antacids, green leafy vegetables, or vitamins with minerals are taken within a couple of hours.

In the above example, I have only listed 2. In the complete seminar when it is finished, I will cover 26 classifications and discuss antidotes for medications in different classification as well as a discussion on herbs. This is a new approach due to feedback I am getting about the nclex.

SAMPLE QUESTIONS WITH RATIONALE

1. The surgeon orders cefazolin (Ancef) 1 gram to be given intravenously at 7:30 a.m.; the client's surgery is scheduled at 8:00 a.m. What's the primary reason to start the antibiotic exactly at 7:30?
 - a. Legally, the medication has to be given at the ordered time.
 - b. The antibiotic is most effective in preventing infection if it's given 30 to 60 minutes before the operative incision is made.
 - c. The postoperative dose of Ancef needs to be started exactly 8 hours after the preoperative dose.
 - d. The peak and titer levels are needed for antibiotic therapy.

RATIONALE:

1. 5. Answer B: The antibiotic is most effective in preventing infection, according to research, if it's given 30 to 60 minutes before the operative incision is made. When the surgeon orders the antibiotic to be given at a specific time related to the scheduled time of the surgical procedure, giving the antibiotic on time is imperative. Legally, the nurse considers 30 minutes on either side of the schedule time to be acceptable for administering medications; but in this situation, giving the antibiotic 30 minutes too soon can make the prophylactic antibiotic ineffective. The postoperative dose of antibiotic isn't timed according to the preoperative dose. Peak and titer levels are measured for some antibiotics, but in this case, the primary reason is to have the antibiotic infused before the time of the incision.
2. A 74 year old male presents to the ER lethargic and a blood pressure of 76 over 50. He states he is on the medication amlodipine (Norvasc). Upon further intake assessment the nurse determines that he has a history of HTN and had taken all his medication at once because he missed a dose. What would the nurse give as an antidote?
 - A. Atropine
 - B. Romanzicon
 - C. Epinephrine
 - D. Calcium Chloride

RATIONALE:

2. Answer D: An antidote for Ca Channel blockers is Calcium Chloride and/or Glugagen. Atropine is an antidote for Anticholinesterase medications. Romanzicon is an antidote for Benzodiazipine medications and Epinephrine and / or glucogen is an antidote for Beta Blocking agents.

3. A 55 year old male in relatively good health has been taking nitroglycerin for the past 10 years and has no known allegies. Which of the following medications should not be given with nitroglycern

- A. Viagra
- B: Isosorbide mononitrate (Imdur), or
- C. Isosorbide dinitrate (BiDil, Isordil)
- D: None of the above

RATIONALE:

3. Answer A: patients should not be treated with nitroglycerin if the patient has used Viagra in the previous 24 hours. patients who received both drugs have died after developing irreversible hypotension, a severe drop in blood pressure. B: Imdur and Isordil may be taken if no allergy is present

4. Echinacea has been touted to be able to boost the body's ability to fight off infection. However, it can cause liver toxicity and should not be taken with:

- A. Leflunomide (Arava)
- B. Methotrexate (Rheumatrex)
- C. Isoniazide (Nizoral).
- D.All the above

RATIONALE:

4. Answer: D A: Leflunomide (Arava) This medication is used to treat rheumatoid arthritis. B. Methotrexate (Rheumatrex) is classified as an antimetabolite drug which means it is capable of blocking the metabolism of cells.

C. Isoniazid is an antibiotic. All of these medication work on the body's immune response. If the patient is also taking Echinacea with any of these medications, as with most, liver toxicity can occur by over usage.

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