

Tips for success-

1. **HANDWRITE** out your study guide. If you do a really complete job, your study guide will be 8-15 pages long, depending on the size of your handwriting.
2. **WORK IN GROUPS**, *but* don't split up the parts among people in a group. The benefits of doing the study guide are gained from actually writing out the answers yourself. It's great to work in groups and discuss the answers with others, but be sure you do your own writing. Besides, if I see exact copies of study guides, no one in the group will get the extra credit for it.
3. Draw yourself diagrams, pictures and flow charts whenever you can, to illustrate processes. You can redraw the pictures for yourself on your exam and use them as models to answer questions. If you can, create a little "movie" in your head of cellular processes.
4. Focus on learning **processes** rather than just definitions whenever applicable. For example, for the vocabulary term below-"photosynthesis" you should not stop at defining it, but should be sure that you understand what kinds of organism do it, what kind of environmental conditions are required, how the process works, what are the reactants and products, etc.
5. Get a good night's sleep and eat a good breakfast before the exam. An extra hour of sleep will be more valuable than an extra hour of studying if you are exhausted. If you find yourself in this predicament often, then you need to start studying much earlier for the exam. Allow 10-20 hours of total study time for each exam. Whether you do it all at once or in small increments is up to you...

GOOD LUCK!!

Birth Control Methods

1. What are the main differences between barrier methods of birth control and hormonal methods? Specifically, which are good at preventing pregnancies as well as preventing the spread of STD's? How do barrier methods work? How do hormonal methods work?
2. List all the barrier methods described in class and briefly describe how they prevent pregnancy and whether or not they also prevent STDs. For each one, describe it, briefly. I.e. what's it made of? Where does it fit? Who wears it and for how long?
3. List all the hormonal methods described on class. For each one, describe how it is "taken". For example, pill, shot, patch, etc.
4. What is meant by "emergency contraception"? How is this taken and who takes it? How is it obtained? What's the difference between "EC" and RU486 (aka the "abortion pill")?
5. What is the "rhythm method" of birth control and how does it work? How effective is it? Is it effective against STD's?

Sexually Transmitted Diseases

1. List the three major groups of STD's and give some examples of each. Which groups are curable and which are not? Are any of these fatal if caught?
2. For each of the following STDs, describe how it is transmitted, the common symptoms, the causative agent, the treatments/cures (if any): Chlamydia, gonorrhea, syphilis, *Trichomonas*, crabs, Human Papilloma Virus, HIV and Herpes.

Nervous System

1. What are the two major divisions (and their abbreviations) of the nervous system? What are

these two divisions made up of physically (parts)? What are the general functions of these two divisions?

2. Draw and label a simplified example of a nerve cell (neuron) showing dendrites, cell body, axon and synaptic knobs.
3. What is a synapse? How do nerve signals travel from one neuron to another?
4. What are neurotransmitters and how do they work? List a few common neurotransmitters mentioned in class or in your textbook. Which neurotransmitters are especially relevant to the effects of drugs in the brain.
5. What are the major functional areas of the brain? Where (approximately) is the so-called "pleasure circuit" located?
6. For each of the following drugs describe it's common forms, how it's ingested, what the general effects are of using it and what some of the negative effects of use and/or abuse might be:
- cocaine, methamphetamine, marijuana, heroine, LSD, mushrooms, PCP, Ketamine, ecstasy, rohypnol, GBH, inhalants, alcohol, caffeine, nicotine.

Prokaryotes and Viruses

1. Describe bacterial cell shapes (coccus, bacillus, spirochete, spirillum, vibrio).
2. What is a biofilm and how is it formed? Give examples of where you might find a biofilm.
3. What is normal flora? How is that different from obligate pathogens and opportunistic pathogens? Give an example for each.
4. What are viruses? Describe their structure. Describe their shape (draw a picture).
5. Describe, in general, a viral life cycle, including how it gets into the body of the host and how it recognizes, gets into the cells, gets it's genome inside and how it replicates.

Bacterial Diseases: Strep (GAS), Meningitis, Pneumonia, Tuberculosis

Protozoans and Fungi

1. Describe the general characteristics of protists. Describe the following pathogens: *Giardia lamblia*, *Toxoplasma gondii*
2. Describe the general characteristics of fungi. Describe and give some examples of pathogens that are fungi.
3. What do athlete's foot, jock itch and ring worm have in common? What is thrush? What is *Candida albicans*?