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HESA 110-01-02 Medical Terminology

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HESA 110: Medical Terminology

Fall 2019

**Department of Health Services Administration
College of Professional Sciences
Xavier University**

Schedule:	Section 01 Tuesday and Thursday 10:00 am to 11:15am Section 02 Tuesday and Thursday 11:30 am to 12:45am
Classroom:	Hailstones Hall 9
Credit Hours:	Three Undergraduate Credit Hours
Prerequisites:	None
Faculty:	Edmond A Hooker, MD, DrPH Professor, Health Services Administration
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Program Administrator: Ms. Judy Janzen MEd, Schott 404 janzen@xavier.edu

Xavier Writing Center: Conaton Learning Center

HESA 110 Course Description (from the Xavier University Catalog):

“This course introduces students to the language of medicine while reviewing the major organ systems of the body.”

HSA Department Mission Statement (2011):

In keeping with its Catholic, Jesuit tradition, the mission of the Department of Health Services Administration at Xavier University is to educate knowledgeable, highly skilled, values-oriented future leaders who will contribute to the health of society by continuously improving the management of health-related organizations. HSA will accomplish its mission through:

- Challenging students in the classroom and in applied field experiences including internships and administrative residencies
- Developing internal and external collaborative relationships with academicians and with health care practitioners which lead to innovations in teaching as well as in the delivery of health services
- Incorporating research, scholarship, and collaborative projects into the classroom experiences and fieldwork.

Objectives, SLO's, Competency Level, and Assessment – HESA 110			
Course Objective	Student Learning Outcome	Minimum expected level of competence	Method of assessment
Use common and prevalent medical terminology	Be able to use common and prevalent medical terminology (BSHSA SLO 2)	2 – Competent Defines common medical terms appropriately. Is able to apply common medical terms when discussing medical care and administration.	Quizzes and Exams
Identify specialist professional roles, as they relate to the care of systems and human pathophysiology	Be able to describe the various professional roles, their respective cultures, and how they work together in the delivery of health care services (BSHSA SLO 3)	1 – Basic Identifies basic roles and cultures of the providers. Unable to articulate how these providers work together to deliver healthcare	Quizzes and Exams

Required Readings

1. The Merck Manual Consumer Version
<https://www.merckmanuals.com/home>
2. www.Medpagetoday.com- Daily news on medical topics

Grade Requirement:

Introductory Course Grades for Students majoring in Health Services Administration:

- Students must achieve a grade of B- or higher in both HESA 101 and HESA 110. Grades lower than B- will result in a student not receiving credit for that course requirement towards their Health Services Administration degree.
- Extra credit will not be offered at any point during the course. Please come talk to me if you feel that your grade will not meet the requirement for your major.

Retaking Introductory Courses:

- If a student receives a grade of C+ or below in HESA 101 or HESA 110, they may retake that course two times as per the general university policy.
- The student will be considered on departmental probation until they achieve or surpass the required grade for the designated course.
- The course must be retaken at Xavier.
- Students may retake any and all HESA courses for which they fail to meet department requirements two times.
- If a student fails to meet department grade standards after retaking a course two times, they will be dismissed from the major.
- If being dismissed, students will meet with the BSHSA Program Director and determine into which major or program they would like to be placed.

GPA Requirement for Health Services Administration Majors:

Students must maintain an overall combined major/concentration GPA of 2.67. This GPA is made up of all courses taken in the major and concentration (HESA courses), and equates to a B-average for all major courses. If the student is to change concentrations, grades from their first concentration still apply to the calculation of this GPA. See the program website for a full description of the policy.

Inclusivity Statement:

The Department of Health Services Administration and its faculty and staff are committed to providing an atmosphere for learning that respects diversity, in which all students feel comfortable and safe to learn, and in which all students feel like valued members of the HSA community. We are committed to addressing issues that put such an atmosphere in jeopardy, and to being active allies to diverse students. In order to build a positive classroom community, we ask that students:

- Appreciate the opportunity that we have to learn from each other in this community;
- Share their unique experiences, values and beliefs;
- Be open to the views of others;
- Honor the uniqueness of their peers;
- Communicate in a respectful manner;
- Keep confidential discussions that the community has of a personal (or professional) nature;
- Utilize this opportunity together to discuss ways in which we can create an inclusive environment in this course and across the Xavier community.

Attendance Policy:

Reasonable attendance at all class meetings is expected. If a student is unable to attend a class, **the responsibility of missed class content is the sole responsibility of the student.** Tests and written assignments will include content covered in class or in the assigned readings. See University Catalogue.

Attendance Procedure:

- 1) You will be documented as **present** if you are in class and on time.
- 2) The instructor will document student attendance.
- 3) **Excused absences include:**
 - 1) A funeral, with a program, obituary or holy card
 - 2) A required activity for another class or university sponsored athletic event, with a memo from the professor or program director
 - 3) A documented medical event, with dated, timed and signed documentation (all other Protected Health Information may be redacted)
 - 4) A documented legal event, with dated, timed and signed documentation (all other confidential information may be redacted)

You have **one week from the date of your return** to class to submit documentation for excused absences to your instructor. Failure to submit documentation within one week will result in your absence being unexcused.

4) Unexcused absences

Unexcused absences include, for example:

- Social events, such as weddings, parties, etc.

- Events related to outside employment, such as job training, orientation, business travel, etc.
- Personal travel, such as leaving campus early or coming back late from a holiday break
- Problems due to poor planning on your part, such as missing class due to oversleeping or exhaustion due to staying up all night to complete an assignment, etc.

You are allowed a specified number of unexcused absences without penalty.

- One unexcused absence for courses that meet once per week
- Two unexcused absences for courses that meet twice per week
- Three unexcused absences for courses that meet three times per week

You are advised to save these “free” days for unavoidable weather, minor illness and personal events.

Penalty: Unexcused absences, greater than the number specified above, will result in the reduction of the student’s final grade of 1.5% for each unexcused absence.

- 5) Final determination is at the discretion of the instructor for the course. Courses with teams, projects and community service may have additional specifications.

Quizzes

There will be a total of 20 quizzes during the semester. These will be closed book. They will occur at the beginning of the class and be a combination of multiple choice and short answer. There will be a time limit of 10 minutes to complete the quiz. The quiz will cover the assigned readings for the week. All students are expected to have read and studied the week’s terminology prior to class. In order to help students, I have included a list of important terms and objectives for the readings. However, there will be some questions each week from the readings that are not listed in the syllabus. This is to ensure that students actually read the assignments.

Community Service Project

- Cardiopulmonary Resuscitation (CPR) can be life-saving. Unfortunately, many people, when faced with a person who is unconscious and not breathing, do not perform CPR. In recent years, CPR has been changed to eliminate pulse checks and mouth-to-mouth breathing (rescue breathing). Therefore, compression only (hands only) CPR can be taught much more easily.
 - In order to increase the number of people who are capable of performing CPR, every student in this class is going to be asked to take a training kit and train 10 people. Each person can be trained in less than 10 minutes.
1. You have three options for training
 - a. You can use the DVD that is inside of each box
 - b. You can use the online video that I produced (that stars me). It is found at <https://www.youtube.com/watch?v=0Slr3nkBA8E>
 - c. You can just talk with them, but here are the important points

1. No mouth-to-mouth. Compressions are what saves lives
2. NO pulse check. Unconscious adult or teenager that is not breathing needs chest compressions
3. AED is safe- It gives all instructions and never delivers a shock unless needed, the patient is dead.
4. Do not worry about hurting the patient. They are DEAD. You cannot make them more dead
5. Do not worry about being good enough or strong enough. ANY CPR is better than NO CPR!
6. Do not worry about doing it wrong and being sued. Good Samaritan laws protect you.
7. You do not need a current CPR card, or for that matter, a CPR card at all. JUST DO IT!!

2. Before you start, please have them record on a piece of paper their answer to the following question. You will need to print out this question on a piece of paper. Do not look at their answer. They will be asked to put this answer on the survey at the end

Before being trained today, how likely are you to perform CPR on a victim of cardiac arrest?

- extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

3. Train them using the CPR manikin. Make sure that they are using the heel of one hand with another hand on top. They should be able to make the manikin click with each compression. Please tell me later how many of your trainees could not ever get it to click. Make sure that you get it to click and that it is working correctly. If it is broken, let me know.

4. When the person is trained, please have them immediately complete the online survey. The first page of the survey includes a verbal consent. There are only 10 questions that are easy and quick to answer. One of the questions asks what they wrote down before they were trained. (See #2 above). The survey can be found at the following URL.

https://xavier.co1.qualtrics.com/jfe/form/SV_eX6wnrdI5fpYjml

or use the QR code



Exams

There will be three exams this semester. Each one will cover the material up to that point from the last exam. The final exam is cumulative.

All exams are short answer and essay format.

Participation:

Participation will count for 5% of your final grade. Active participation includes:

- Being in class
- Being on time to class
- Being awake and alert in class, not focused on other things (i.e. other homework or activities)
- Asking questions
- Offering your perspectives
- Sharing information
- Being active in small group activities
- Showing respect to your classmates, guests, faculty, etc.

If you are engaged in class, this should be an easy 5% to achieve.

Canvas:

Canvas will be used in a variety of ways for this class. The syllabus, assignment descriptions, and articles/chapters outside of the class will all be available via Canvas. In the spirit of sustainability, such materials will not be printed off and handed out in class.

Students with Disabilities

Any student who feels he/she may need an accommodation based on the impact of a documented disability should notify the course instructor and contact Cassandra Jones in the [Office of Disability Services](#) at 745-3280 or e-mail jonesc20@xavier.edu to coordinate reasonable accommodations.

Academic Honesty:

“The pursuit of truth demands high standards of personal honesty. Academic and professional life requires a trust based upon integrity of the written and spoken word. Accordingly, violations of certain standards of ethical behavior will not be tolerated at Xavier University. These include theft, cheating, plagiarism, unauthorized assistance in assignments and tests, unauthorized copying of computer software, the falsification of results and material submitted in reports or admission documents, and the falsification of any academic record including letters of recommendation. All work submitted for academic evaluation must be the student’s own. Certainly, the activities of other scholars will influence all students. However, the direct and unattributed use of another’s efforts is prohibited as is the use of any work untruthfully submitted as one’s own. Penalties for violations of this policy may include one or more of the following: a zero for that assignment or test, an “F” in the course, and expulsion from the University. The dean of the college in which the student is enrolled is to be informed in writing of all such incidents, though the teacher has full authority to assign the grade for the assignment, test, or course. If disputes of interpretation arise, the student, faculty member, and

chair should attempt to resolve the difficulty. If this is unsatisfactory, the dean will rule in the matter. As a final appeal, the academic vice president will call a committee of tenured faculty for the purpose of making a final determination.”

Faculty Note:

In addition to the above (taken directly from the University Catalog), please be aware that cutting and pasting from the Internet is plagiarism, and will be treated in the same manner as any other type of plagiarism. If you use more than three words written by someone else, I expect it to be in quotes. When you are writing you should use your own words and thoughts, not those of anyone else. You **may not** take a sentence and change one to two words and call it your own.

Technology Policy

The use of laptops, tablets, phones, or other electronic devices is not permitted during class. Students will need to take notes using paper and pencil/pen. If there is an extenuating reason that requires you to be able to use some form of technology, please talk with your instructor directly about this.

Late Assignment Policy:

Late assignments will accrue a penalty of 10% per day the assignment is late. An assignment is considered one day late if it is submitted past the identified due date/time. It is considered two days late if it is submitted any more than 24 hours past the identified due date/time, and so forth. This includes weekends! Once an assignment is more than 10 days late, it will become a zero and will not be accepted for credit.

If a student wants an extension for an assignment, this must be received no less than 48 hours before the assigned due date/time. Extensions are not guaranteed, and are at the discretion of the instructor. Extensions may include a late penalty.

Evaluation

Grading Weights

Terminology quizzes	15%
Exam 1	25%
Exam 2	25%
Exam 3	30%
Class Participation	5%

Grading Scale

A	94-100	C	74-76
A-	90-93	C-	70-73
B+	87-89	D+	67-69
B	84-86	D	60-66
B-	80-83	F	0-59
C+	77-79		

This syllabus and course outline are subject to change at the discretion of the faculty.

For additional information, review the **BSHSA Student Handbook** at:

<https://www.xavier.edu/health-services-administration-program/documents/bshsa-student-handbook-2019-2020-v09.05.2019.pdf>.

Class Schedule

Session (Dates)	Topic	Readings	Assignment
January 14	Syllabus Review HIPAA/HITECH Healthcare Associated Infections	Articles on Canvas http://www.health.gov/hai/prevent_hai.asp http://www.cdc.gov/HAI/infectionTypes.html	None
January 16	NO CLASS		
January 21	Medical Training Evaluating Physicians Medical Terminology	Articles on Canvas Study Guide	Quiz
January 23	NO CLASS		
January 28	Healthcare Associated Infections	Articles on Canvas	Quiz
January 30	Cardiology I	Links at end of syllabus	Quiz
February 4	Cardiology II	Links at end of syllabus	Quiz
February 6	Cardiology III	Links at end of syllabus	Quiz
February 11	Pulmonary I	Links at end of syllabus	Quiz
February 13	Pulmonary II	Links at end of syllabus	Quiz
February 18	Exam 1		
February 20	Endocrine	Links at end of syllabus	Quiz
February 25	Orthopedics	Links at end of syllabus	Quiz
February 27	Dermatology	Links at end of syllabus	Quiz CPR training is due
March 3	Central Nervous System	Links at end of syllabus Other readings for the week: http://en.wikipedia.org/wiki/Stroke	Quiz
March 5	Special Senses	Links at end of syllabus	Quiz
March 10	Spring Break		
March 12	Spring Break		
March 17	Woman's Health	Links at end of syllabus	Quiz
March 19	Men's Health	Links at end of syllabus	Quiz
March 24	NO Class		
March 26	Exam 2		

March 31	Digestive	Links at end of syllabus	Quiz
April 2	Radiology	Links at end of syllabus	Quiz
April 7	Surgery & Trauma	Links at end of syllabus	Quiz
April 9	NO CLASS		EASTER BREAK
April 14	Pediatrics	Links at end of syllabus http://kidshealth.org/parent/system/medical/newborn_screeening_tests.html	Quiz
April 16	Pharmacology	Links at end of syllabus	Quiz
April 21	Cancer	Links at end of syllabus	Quiz
April 23	Mental Health	Links at end of syllabus	
April 28	Review Session		
April 30	EXAM 3		

STUDY GUIDE

This study guide is intended to help you focus your readings, not eliminate reading the book. You will find that many of my questions for quizzes and exams come directly from this study guide. However, some questions on the quizzes will be from the readings or from my lectures and not on the list. Many of the essay questions come from the readings and class discussion.

January 14 Introduction Class

- HIPAA Health Insurance Portability and Accountability Act- Intended to keep personal health information confidential
- Business associate Defined in HIPAA as an entity that does business for or on behalf of a HIPAA Covered Entity
- Covered entity Defined in HIPAA as provider, clearinghouse, or health plan
- Guidance A document such as a book, pamphlet, and so on, giving information, instructions, or advice
- HIE Health Information Exchange supports the sharing of health-related information to facilitate continuing care through the utilization of EHRs
- PHI Protected Health Information is any information about health status, provision of health care, or payment for health care that can be linked to a specific individual.
- HITECH "Health Information Technology for Economic and Clinical Health," contains many new laws relating to the *use and disclosure of PHI*. This Act also includes the privacy and security provisions.

Potential Essay Questions

1. What is HIPAA and what are the main provisions of the law?
2. What is HITECH and how did it modify HIPAA?
3. When does HIPAA allow for sharing health information with family and friends?

January 21 Medical Training and Medical Terminology

- a absence of
- ante before
- anter(i) front, forward
- anti against
- aut self
- bi, bis twice, double, two
- contra against, counter
- dent tooth
- dipl(o) double
- dys bad, faulty, abnormal
- emia blood
- end(o) inside
- hem(ato) blood
- hemi half
- hyper high
- Allopathic medicine Allopathic medicine refers to the practice of traditional or conventional Western medicine by physicians who possess an Doctorate of Medicine (MD). The term allopathic medicine is most often used to contrast conventional medicine with alternative medicine or homeopathy.
- Osteopathic medicine Is a branch of medicine practice by physicians with an Osteopathic medical degree (DO). Osteopathic medicine provides all of the benefits of modern medicine including prescription drugs, surgery, and the use of technology to diagnose disease and evaluate injury. It also offers the added benefit of hands-on diagnosis and treatment through a system of treatment known as osteopathic manipulative medicine.
- Chiropractor A non-physician who treat patients with health problems of the neuromusculoskeletal system, which includes nerves, bones, muscles, ligaments, and tendons. They use spinal adjustments and manipulation, and other techniques to manage patients' health concerns, such as back and neck pain. They have a doctor of chiropractic (DC)
- Podiatrist Podiatry, or podiatric medicine, is a branch of

- medicine devoted to the study of diagnosis and medical and surgical treatment of disorders of the foot, ankle, and lower extremity. They do not go to medical school. They have a doctorate in Podiatry (DP).
- Advanced Practice Providers health care providers who have received different training and have a more restricted scope of practice than physicians and other health professionals in some states, but who do have a formal certificate and accreditation through the licensing bodies in their jurisdictions. Advanced Practice Provider (APP) is a term which Nurse Practitioners, and Physician Assistants,
- Occupational Therapist Occupational Therapist (OTs) promote health by enabling people to perform meaningful and purposeful activities. They deal with anything that “occupies” your time (ranging from using a computer to caring for daily needs such as dressing, cooking, eating, and driving). Requires a master’s degree, but there is a move toward requiring doctorates.
- Concierge Medicine Patient pays a fee for increased access to a primary care physician. Physician agrees to limit the number of patients to ensure that the patient can get same day appointments and provide the patient with their personal cell phone. However, these physicians still bill for office visits.
- Direct Primary Care Direct Primary Care (DPC) is an innovative alternative payment model improving access to high functioning healthcare with a simple, flat, affordable membership fee. No fee-for-service payments. No third-party billing. Patients have extraordinary access to a physician of their choice, often for as little as \$70 per month, and physicians are accountable first and foremost their patients.
- Physical Therapist Physical Therapists (PTs) provide services that help restore function, improve mobility, relieve pain, and prevent or limit permanent physical disabilities of patients with injuries or disease. Requires a master’s degree, but there is a move toward requiring doctorates.

Potential Essay Questions

1. What are the similarities and differences between MDs and DOs?
2. What is a hospitalist, and how have they changed the way people are cared for in the hospital?

3. What are concierge physicians and what are the positive and negative issues surrounding the increased number of physicians who are setting up these types of practices?
4. What is direct primary care?
5. What are the different types of APPs?

January 28 Healthcare Associated Infections

Terminology to be learned

1. hypo	low
2. iatr(o)	doctor
3. infra	beneath
4. inter	between
5. mal	bad
6. megal(o)	large
7. necr(o)	death
8. opsy	examination
9. osis	condition
10. phleb	vein
11. poly	many
12. post	after
13. poster(i)	back, behind
14. pseud(o)	false
15. supra	above
16. therm	heat
17. HAI	Healthcare Associated Infections (also called hospital-acquired infections) Infections acquired during the course of receiving healthcare treatment for other conditions
18. CLABSI	Central line-associated bloodstream infections result in thousands of deaths each year and billions of dollars in added costs to the U.S. healthcare system, yet these infections are preventable.
19. CAUTI	Catheter associated urinary tract infection is an infection involving any part of the urinary system, including urethra, bladder, ureters, and kidney.
20. SSI	A surgical site infection is an infection that occurs after surgery in the part of the body where the surgery took place.
21. VAP	Ventilator-associated pneumonia is a lung infection that develops in a person who is on a ventilator.
22. <i>Clostridium difficile</i> Infection	<i>C. difficile</i> causes diarrhea linked to 14,000 American deaths each year. Those most at risk are people, especially older adults, who take antibiotics and also get medical care.

Potential Essay Questions

1. Why are healthcare acquired infections important to healthcare administrators?

January 30**CARDIOLOGY I**

Objectives for the week

1. Understand commonly used medical terminology in cardiology
 - angio vessel
 - arteri(o) artery
 - ather(o) fatty
 - brady slow
 - cardi(o) heart
 - cyan(o) blue
 - gram, graph record
 - intra inside
 - itis inflammation
 - lys(is) dissolve
 - logy study of
 - logist physician
 - Sign Something that a healthcare provider measures
 - Vital signs Pulse, Blood Pressure, Respiratory Rate, Temperature and Pulse oximetry.
 - Symptom Something that the patient tells the provider that they have experienced
 - Cardiac stress test exercise stress testing, the person walks on a treadmill or rides a stationary bicycle while being monitored by ECG. This procedure can help doctors determine whether the patient has heart problems and is coronary angiography or coronary artery bypass surgery is needed. If people cannot exercise, testing is performed after a drug that makes the heart work harder is injected.
 - Coronary Angiogram This procedure provides information about The coronary arteries, which supply the heart with oxygen-rich blood. Coronary angiography is similar to catheterization of the left side of the heart, and the two procedures are almost always done at the same time. The catheter is threaded toward the heart, then into the coronary arteries. During insertion, the doctor uses fluoroscopy (a continuous x-ray procedure) to observe the progress of the catheter as it is threaded into place. After the catheter tip is in place, a radiopaque dye, which can be seen on x-rays, is injected through the catheter into the coronary arteries, and the outline of the arteries appears on a video screen and is recorded on a tape or disk.

- Electrocardiogram (EKG, ECG) quick, simple, painless procedure in which the heart's electrical impulses are amplified and recorded on a piece of paper.
- Echocardiogram an image of structures in the heart produced by ultrasound waves

Potential Essay Questions

1. Describe how the heart receives its blood supply
2. What is the benefit and risk of adding radionuclide imaging to a cardiac stress test?
3. What is the major risk of using CT angiography for diagnosing coronary artery disease?

February 4

Cardiology II

- plasty repair
- sten(o) narrow
- steth(o) chest
- tachy fast
- therap treatment
- thorac(o) chest
- thromb(o) clot
- ven(o) vein
- Hypertension High blood pressure (hypertension) is abnormally high pressure in the arteries.
- Congestive Heart Failure Heart failure is a disorder in which the heart pumps blood inadequately, leading to reduced blood flow, back-up (congestion) of blood in the veins and lungs, and other changes that may further weaken the heart. Heart failure can be due to ischemic heart disease or myocardial damage from a viral infection of the heart muscle.
- B-type natriuretic peptide (BNP) BNP is a hormone secreted by cardiomyocytes in the heart ventricles in response to stretching caused by increased ventricular blood volume. Elevated in patients with congestive heart failure.
- Pericarditis Pericarditis refers to inflammation of the pericardium, two thin layers of a sac-like tissue that surround the heart.
- Atrial Fibrillation and flutter Atrial fibrillation and atrial flutter are very fast electrical discharge patterns that make the atria contract very rapidly, with some of the electrical impulses reaching the ventricles and causing them to contract faster and less efficiently than normal.
- Ventricular fibrillation Ventricular fibrillation is uncoordinated

- Atherosclerosis

series of very rapid, ineffective contractions of the ventricles caused by many chaotic electrical impulses. Patient is dead unless CPR started.

Atherosclerosis is a condition in which patchy deposits of fatty material (atheromas or atherosclerotic plaques) develop in the walls of medium-sized and large arteries, leading to reduced or blocked blood flow.
- AED

Automated External Defibrillator.

Potential Essay Questions

1. What is congestive heart failure and why is it important to healthcare administrators?
2. What is Congestive Heart Failure and what symptoms do patients have? Make sure that you discuss both right and left heart failure.
3. What is hypertension? Make sure that you talk about primary and secondary hypertension and why it is important to treat hypertension.
4. What is atrial fibrillation and why is it important?
5. What is ventricular fibrillation and why is it important?
6. What is a normal blood pressure for an adult?
7. Why is CPR important?
8. What is Hands-only CPR?

February 6

Cardiology III

- Angina

Angina, also called angina pectoris, is temporary chest pain or a sensation of pressure that occurs while the heart muscle is not receiving enough oxygen. Does not cause death of heart muscle.
- Acute Coronary Syndromes (ACS)

Acute coronary syndromes result from a sudden blockage in a coronary artery. This blockage causes unstable angina or heart attack (myocardial infarction) depending on the location and amount of blockage.
- Coronary artery disease (CAD)

a condition in which the blood supply to the heart muscle is partially or completely blocked
- Cardiac Catheterization

In cardiac catheterization, a thin catheter (a tubular, flexible surgical instrument) is inserted into an artery or vein through a puncture made with a needle or a tiny incision. A local anesthetic is given to numb the insertion site. The catheter is then threaded through the major blood vessels and into the heart chambers and the coronary arteries.

- Angiogram
- Angioplasty
 - pictures of the arteries
 - a balloon-tipped catheter into a large artery (usually the femoral artery), and threads the catheter through the connecting arteries and the aorta to the narrowed or blocked coronary artery. Then the doctor inflates the balloon to force the atheroma against the arterial wall and thus open the artery.
- PCI
 - Percutaneous Coronary Intervention (also called percutaneous transluminal coronary angioplasty—PTCA) refers to angioplasty with or without stenting of the coronary artery.
- Coronary artery stenting
 - A tube made of wire mesh (a stent) is placed over the deflated balloon at the catheter's tip and inserted with the catheter. When the catheter reaches the atheroma, the balloon is inflated, opening up the stent. Then the balloon-tipped catheter is removed, and the stent is left in place to help keep the artery open.
- Coronary Artery Bypass Graft
 - Coronary artery bypass grafting (CABG) is also called bypass surgery or coronary artery bypass surgery. In the procedure, doctors take an artery (from the chest wall) or vein from the legs to connect the aorta (the major artery that takes blood from the heart to the rest of the body) to a coronary artery past the point of its blockage.
- CT Angiography
 - This procedure uses CT and a radiopaque dye to produce 2- and 3-dimensional images of blood vessels, including the arteries that supply the heart (coronary arteries). The dye is injected into a vein (not an artery as in conventional angiography), usually in the arm. Images are taken rapidly and are timed so that they show the dye flowing through the blood vessels being evaluated. The computer digitally removes all tissues except blood vessels from the images.
- STEMI
 - ST-elevation myocardial infarction. This type of heart attack is diagnosed using an EKG. These are the heart attacks that must either immediately to the cardiac cath lab or must receive thrombolytics.
- NSTEMI
 - Non-ST-elevation myocardial infarction. This type of heart attack is not readily apparent on the EKG. It requires blood tests to diagnose. Some of these patients may go to the cath lab

- immediately, but not all. They never are treated with thrombolytics.

 - ICD
Implantable Cardiac Defibrillator is a small device that's placed in the chest or abdomen. Doctors use the device to help treat irregular heartbeats called arrhythmias (ah-RITH-me-ahs). An ICD uses electrical pulses or shocks to help control life-threatening arrhythmias, especially those that can cause sudden cardiac arrest
 - LVAD
Left Ventricular Assist Device is a mechanical pump that's used to support heart function and blood flow in people who have weakened hearts. The device takes blood from a lower chamber of the heart and helps pump it to the body and vital organs
 - Thrombolytic
These are clot-dissolving drugs that are given to a person having an STEMI when PCI is not available within 90 minutes.
 - HDL
High density lipoprotein is the good cholesterol
 - LDL
Low density lipoprotein is the bad cholesterol
 - Myocardial Infarction
Heart attack (myocardial infarction) is a medical emergency in which some of the heart's blood supply is suddenly and severely reduced or cut off, causing the heart muscle (myocardium) to die because it is deprived of its oxygen supply. Please note that this is **NOT** called a cardiac infarction.

Potential Essay Questions

- What is the difference between myocardial ischemia (angina) and myocardial infarction?
- Discuss the three different types of Acute Coronary Syndrome. How is each diagnosed and treated?
- What are the treatment options for STEMI
- What is the major risk of using thrombolytic agents? What is a better option if it is available?

February 11 PULMONARY I

- aden(o) gland
- glyc(o) glucose
- pnea breathing
- pneum(ato) air
- pneumon(o) lung
- pulmon(o) lung

- Larynx
voice box
- Bronchi
two branches off the trachea
- Bronchiole
branches off the bronchi
- Pulse Oximetry
Noninvasive measurement of oxygen concentration in the blood using a sensor clipped on a finger or an earlobe.

- Capnography
Noninvasive measurement of CO₂ concentration in expired air.
- Alveoli
air sacs where oxygen exchange occurs
- Trachea
windpipe
- Cough
a sudden, explosive exhalation of air; the function of a cough is to clear material from the airways.

- Dyspnea
shortness of breath or hard time breathing
- Wheezing
Wheezing is a whistling, musical sound during breathing resulting from partially obstructed airways.

- Cyanosis
bluish discoloration of the skin resulting from an inadequate amount of oxygen in the blood.

- Pulmonary function tests (PFTs)
test that measure the lungs' capacity to hold air, to move air in and out, and to exchange oxygen and carbon dioxide.

- Bronchoscopy
a direct visual examination of the voice box (larynx) and airways through a flexible viewing tube (a bronchoscope). A bronchoscope has a light at the end that allows a doctor to look down through the larger airways (bronchi) into the lungs.

February 13

PULMONARY II

- Bronchitis
inflammation of the large airways that branch off the trachea (bronchi), usually caused by infection but sometimes caused by irritation from inhaling gases, smoke, dust particles, or some types of pollution.
- Acute Bronchitis
Bronchitis (see definition above) that last less than 90 days.
- Pneumonia
Pneumonia is an infection of the small air sacs of the lungs (alveoli) and the tissues around them.
- Community Acquired Pneumonia
pneumonia that develops in people with limited or no contact with medical institutions or settings.

- Hospital Acquired Pneumonia pneumonia develops in people who have been hospitalized, typically after about 2 days or more of hospitalization.
- Ventilator Associated Pneumonia pneumonia that develops in hospitalized patients who are on a ventilator.
- COPD Chronic obstructive pulmonary disease is persistent obstruction of the airways occurring with emphysema, chronic bronchitis, or both disorders.
- Pulmonary Embolism Pulmonary embolism is the sudden blocking of an artery of the lung (pulmonary artery) by an embolus—usually a blood clot (thrombus).
- Pneumothorax A pneumothorax is a pocket of air between the two layers of pleura, resulting in collapse of the lung.
- Emphysema Emphysema is irreversible enlargement of many of the 300 million air sacs (alveoli) that make up the lungs and destruction of the air sac walls.
- Chronic Bronchitis Chronic bronchitis is characterized by a cough that produces sputum for 3 months or more during 2 successive years; the cough is not due to another lung disease
- Asthma Asthma is a condition in which the airways narrow—usually reversibly—in response to certain stimuli
- Tuberculosis Tuberculosis is a contagious infection caused by an airborne bacterium, *Mycobacterium tuberculosis*.
- Influenza Influenza (flu) is infection of the lungs and airways with one of the influenza viruses. It causes a fever, runny nose, sore throat, cough, headache, muscle aches (myalgias), and a general feeling of illness (malaise).
- Stethoscope An instrument for listening to sounds within the body
- Hypoxia low oxygen level in the blood
- CPAP Continuous Positive Airway Pressure is a form of [positive airway pressure](#) ventilator, which applies mild air pressure on a continuous basis to keep the airways

- BPAP continuously open in people who are not able to breathe spontaneously on their own. Bilevel Positive Airway Pressure provides two levels of pressure: inspiratory positive airway pressure (IPAP) and a lower expiratory positive airway pressure (EPAP) for easier exhalation.
- Nebulizer is a drug delivery device used to administer medication in the form of a mist inhaled into the lungs.
- CTPA CT pulmonary angiography uses CT and a radiopaque contrast agent to produce 2- and 3-dimensional images of pulmonary arteries. The contrast agent is injected into a vein (not an artery as in conventional angiography), usually in the arm.
- Metered dose inhaler is a medical device used for delivering medication into the body via the lungs. It is mainly used in the treatment of asthma and chronic obstructive pulmonary disease.
- Albuterol a medication that opens up the medium and large airways in the lungs. It is used to treat asthma including asthma attacks, exercise-induced bronchoconstriction, and COPD. It causes dilation of the bronchial smooth muscle.
- Ipratropium a medication which opens up the medium and large airways in the lungs. It is used to treat the symptoms of chronic obstructive pulmonary disease and asthma.[1] It is used by inhaler or nebulizer. Ipratropium exhibits broncholytic action by reducing cholinergic influence on the bronchial musculature.
- Prednisone is a glucocorticoid medication mostly used to suppress the immune system and decrease inflammation in conditions such as asthma, COPD, and rheumatologic disease.

Potential Essay Questions

- What is a MDI and a spacer?
- What is pneumonia and what causes it?
- What is pneumococcal vaccine and who should receive it?
- What is influenza and how can it be prevented?
- What is meant by community-acquired pneumonia and hospital-acquired pneumonia?
- What is Tuberculosis and how is it diagnosed?
- What is the difference between primary TB, latent infection, and active TB?
- What is a PPD?
- Why should patients not receive antibiotics for most cases of bronchitis?
- What is CTPA and when do we order it?

February 18 EXAM 1**February 20 Endocrine**

- Diabetes

Diabetes mellitus is a disorder in which blood sugar (glucose) levels are abnormally high because the body does not produce enough insulin or because of insulin resistance.
- Endocrine system

The endocrine system consists of a group of glands and organs that regulate and control various body functions by producing and secreting hormones.
- Pituitary Gland

The pituitary is a pea-sized gland that is housed within a bony structure (sella turcica) at the base of the brain. The pituitary controls the function of most other endocrine glands and is therefore sometimes called the master gland.
- Adrenal Gland

The body has two adrenal glands, one near the top of each kidney. The inner part (medulla) of the adrenal glands secretes hormones, such as adrenaline (epinephrine), that help control blood pressure, heart rate, sweating, and other activities also regulated by the sympathetic nervous system. The outer part (cortex) secretes different hormones, including corticosteroids (cortisone-like hormones, such as cortisol) and mineralocorticoids (particularly aldosterone, which controls blood pressure and the levels of salt and potassium in the body).
- Thyroid gland

small endocrine gland that lies in the neck just below the adam's apple.
- Hyperthyroidism

hyperthyroidism is overactivity of the thyroid gland that leads to high levels of thyroid hormones and speeding up of vital body functions. Graves disease is the most common cause of hyperthyroidism. Heart rate and blood pressure may increase, heart rhythms may be abnormal, and people may sweat excessively, feel nervous and anxious, have difficulty sleeping, and lose weight without trying.
- Hypothyroidism

hypothyroidism is underactivity of the

thyroid gland that leads to inadequate production of thyroid hormones and a slowing of vital body functions. Facial expressions become dull, the voice is hoarse, speech is slow, eyelids droop, and the eyes and face become puffy. Primary hypothyroidism results from a disorder of the thyroid gland itself. The most common cause is Hashimoto thyroiditis where the hypothyroidism develops as the thyroid is gradually destroyed.

- Type 1 diabetes
more than 90% of the insulin-producing cells of the pancreas are permanently destroyed. The pancreas, therefore, produces little or no insulin.
- Type 2 diabetes
the pancreas continues to produce insulin, sometimes even at higher-than-normal levels. However, the body develops resistance to the effects of insulin, so there is not enough insulin to meet the body's needs.
- Gestational Diabetes
High blood sugar found during pregnancy
- Insulin Pump
An insulin pump is a medical device used for the administration of insulin in the treatment of diabetes mellitus, also known as continuous subcutaneous insulin therapy. The device configuration may vary depending on design.
- Glucometer
An instrument to measure the blood sugar
- Continuous Glucose Monitoring
Continuous Glucose Monitoring (CGM) is a method to track glucose levels throughout the day and night
- Hemoglobin A1c
The hemoglobin A1c test tells you your average level of blood sugar over the past 2 to 3 months.
- Hypoglycemia
Low blood sugar

Potential Essay Questions

- Describe the different types of DM. How common is each and what is the cause of each?
- How is DM diagnosed and treated?

February 25 ORTHOPEDICS

- arthr(o) joint
- articul joint
- cervic neck
- chondr(o) cartilage
- cost(o) rib
- latero side
- my(o) muscle

- osse(o) bone
- oste(o) bone
- penia deficient
- pod(o) foot
- scope instrument
- scopy examination
- somat(o) body
- spondyl(o) vertebra
- stom mouth
- Fracture A fracture is a break in a bone, usually accompanied by injury to the surrounding tissues.

- Open Fracture A fracture that breaks through the skin.
- Closed Fracture A fracture that does not break through the Skin.

- ORIF Open reduction and internal fixation. An operation where hardware devices, such as pins, screws, rods, and plates, are often used during open reduction of a fracture.

- Osteoarthritis Chronic disorder associated with damage to the cartilage and surrounding tissues and characterized by pain, stiffness, and loss of function. Usually from chronic use and aging
- Arthritis Inflammation of the joint. Two major forms are rheumatoid arthritis and osteoarthritis
- Rheumatoid Arthritis Rheumatoid arthritis is an inflammatory arthritis in which joints, usually including those of the hands and feet, are inflamed, resulting in swelling, pain, and often destruction of joints. The immune system damages the joints and connective tissues.

- Osteoporosis Osteoporosis is a condition in which a progressive decrease in the density of bones weakens the bones, making fractures likely.

- Femoral Neck Fracture Fracture of the femur bone just below the ball of the hip joint
- Intertrochanteric Hip Fracture A fracture of the femur between the trochanters, which are bony protrusions on the femur.

- Hip Hemiarthroplasty Replacing only the head of the femur
- DEXA scan scan used to measure bone density.
- Carpal Tunnel Syndrome Carpal tunnel syndrome is a painful compression of the median nerve as it passes through the wrist.

- Contusion an injury appearing as an area of discolored

- Sprain
skin on the body, caused by a blow or impact rupturing underlying blood vessels
A sprain is a tear in one of your ligaments. Ligaments are short, tough bands of tissue that hold your bones together at a joint.
- Strain
A strain is a tear in one of the muscles
- Sciatica
It is back pain that goes down the back of the leg, which comes from compression of the sciatic nerve. It occurs in only about 5% of patients with back pain.
- Arthroscopy
a procedure in which a small (diameter of a pencil) fiber optic scope is inserted into a joint space, allowing the doctor to look inside the joint and to project the image onto a television screen

Potential Essay Questions

- What are the two different types of hip fractures and the two different ways that “hip” fractures can be repaired?
- What are the laboratory tests that are commonly used in orthopedics?
- What is arthritis and what are its major forms?
- What are the major functions of the skeletal system?
- What is the most common cause of low back pain?

February 27 DERMATOLOGY

- cry(o) cold
- derm(ato) skin
- epi outer
- erythro red
- steat(o) fat
- stom mouth
- Eczema
Atopic dermatitis, also called eczema, is a long-term type of dermatitis that usually runs in families. It causes a patchy rash that makes your skin itchy, red, scaly, and dry.
- Psoriasis
Psoriasis is a chronic (long-lasting) skin disease that causes raised, red patches on your skin. The raised patches may have silvery scales.
- Melanoma
Melanoma is a cancer that originates in the pigment-producing cells of the skin (melanocytes).
- Basal Cell Carcinoma
Basal cell carcinoma is a cancer that originates in cells of the epidermis.
- Cellulitis
Cellulitis is a bacterial infection in your skin. It is a common skin infection that can spread quickly and be very serious. The infected area hurts and is red, warm, and swollen.

- Squamous Cell Carcinoma Squamous cell carcinoma is cancer that originates in the squamous cells (keratinocytes)
- Shingles Shingles (herpes zoster) is infection that results from reactivation of the varicella-zoster virus, the virus that causes chickenpox. Shingles causes a painful skin eruption of fluid-filled blisters and sometimes results in chronic pain in the affected area.
- Herpes Simplex Herpes simplex is a viral infection (HSV infection) that causes a rash of small, painful blisters that turn into open sores. The sores go away, but the virus stays in your body for the rest of your life. The virus can become active again and cause more sores. HSV infection usually causes sores on your mouth or genitals but sometimes infects other areas of the body, such as the eyes, fingertips, and rarely brain.
- Dermatitis General term for inflammation of the skin, causing itching, blisters, redness, swelling, and often oozing, scabbing, and scaling.
- Pressure sores (aka bedsores, decubitus ulcers, pressure ulcers) are areas of skin damage resulting from a lack of blood flow due to pressure.
- Tinea Fungal infection of the skin or nails
- Cryosurgery surgery using the local application of intense cold to destroy unwanted tissue.
- Burns Burns are injuries to tissue that result from heat, electricity, radiation, or chemicals.

Potential Essay Questions

- What is the importance of the skin to our overall health?
- What are bedsores (aka pressure sores or decubitus ulcers) and why are they a really big issue to healthcare managers?
- What are the major forms of skin cancer and what is the major risk factor for getting them?
- What are the different ways that a laceration can be repaired?

March 3 CENTRAL NERVOUS SYSTEM

- cephal(o) head
- crani(o) skull
- encephal(o) brain
- neur(o) nerve
- pleg(ia) paralysis
- Stroke A stroke is a disorder in which the arteries to the brain become blocked or rupture, resulting in death of brain tissue.

- CNS
The central nervous system consists of the brain and spinal cord.
- PNS
The peripheral nervous system is all nerves outside of the brain and spinal cord. This includes all other neural elements, such as eyes, ears, skin, and other "sensory receptors"
- Neurologist
Physicians who specialize in the diagnosis and non-surgical treatment of diseases of the brain, spinal cord, peripheral nerves, and muscle. They do not operate. Neurology programs are 4 years total, with a general medical intern year preceding 3 years of neurology-related rotations.
- Neurosurgeon
Physician who specializes in the diagnosis and surgical treatment of disorders of the central and peripheral nervous system including congenital anomalies, trauma, tumors, vascular disorders, infections of the brain or spine, stroke, or degenerative diseases of the spine. 6-8 years of training beyond medical school.
- TIA
Transient Ischemic Attack. An ischemic stroke that last only a brief time (often less than 1 hour, but always less than 24 hours). Mini-stroke
- Dementia
Dementia is a slow, progressive decline in mental function in which memory, thinking, judgment, and the ability to learn are impaired.
- Delirium
a sudden, fluctuating, and usually reversible disturbance of mental function. It is characterized by an inability to pay attention, disorientation, an inability to think clearly, and fluctuations in the level of alertness (consciousness)
- Alzheimer's
Alzheimer's disease is a progressive loss of mental function, characterized by degeneration of brain tissue, including loss of nerve cells and the development of senile plaques and neurofibrillary tangles. Most common form of dementia.
- Seizure
periodic disturbances of the brain's electrical activity, resulting in some degree of temporary brain dysfunction.
- Carotid Endarterectomy
The surgeon makes an incision in the neck over the area of the artery that contains the blockage and an incision in the artery. The blockage is removed, and the incisions are closed.

- Carotid Duplex
Carotid duplex is an ultrasound test that shows how well blood is flowing through the carotid arteries. The carotid arteries are located in the neck. They supply blood directly to the brain.
- Primary Brain tumor
tumors originate in the cells within or next to the brain. They may be cancerous or noncancerous.
- Secondary Brain tumor
These tumors are metastases. That is, they originate in another part of the body and spread to the brain. Thus, they are always cancerous.
- Epilepsy
seizures that occur repeatedly and have no apparent cause.
- ALS
Amyotrophic lateral sclerosis (ALS) is the most common type of motor neuron disease. It's often called Lou Gehrig disease. Motor neurons reach from the brain to the spinal cord and from the spinal cord to the muscles throughout the body. The progressive degeneration of the motor neurons in ALS eventually leads to their demise. When the motor neurons die, the ability of the brain to initiate and control muscle movement is lost. With voluntary muscle action progressively affected, people may lose the ability to speak, eat, move and breathe.
- Myasthenia Gravis
Myasthenia gravis is an autoimmune disorder that impairs communication between nerves and muscles, resulting in episodes of muscle weakness. People usually have drooping eyelids and double vision, and muscles become unusually tired and weak after exercise.
- Parkinson's disease
a slowly progressive degenerative disorder of the central nervous system. It is characterized by tremor when muscles are at rest (resting tremor), increased muscle tone (rigidity), slowness of voluntary movements, and difficulty maintaining balance (postural instability)
- Multiple Sclerosis
Multiple sclerosis is a disorder in which patches of myelin and underlying nerve fibers in the eyes, brain, and spinal cord are damaged or destroyed.

Potential Essay Questions

- What is a TIA and how is it different from a Stroke?
- How do we treat TIAs and Strokes?

- What are the different types of strokes?
- What is Dementia and what is the most common type?
- What is delirium and how common is it in hospitalized patients?
- What are some common symptoms of stroke?
- What is the Cincinnati Stroke Scale?
- What are the treatable risk factors for stroke?

March 5 **Special Senses**

- acou, acu hear
- aur(i) ear
- nas(o) nose
- ocul(o) eye
- Ophthalm(o) eye
- opia vision
- ot(o) ear
- pharyng(o) throat
- rhin(o) nose
- Pharyngitis Infection of the throat. Most are viral and do not need antibiotics. Only need to treat strep throat with antibiotics.
- Cornea The cornea is the clear layer in front of the iris and pupil. It protects the iris and lens and helps focus light on the retina. It is composed of cells, protein, and fluid. The cornea looks fragile but is almost as stiff as a fingernail.
- Iris The circular, colored area of the eye that surrounds the pupil and controls the amount of light that enters the eye.
- Retina The retina contains the cells that sense light (photoreceptors) and the blood vessels that nourish them
- Hordeolum A sty is a staph infection at the base of an eyelash
- Hyphema A hyphema is bleeding into the front chamber (the fluid-filled space between the clear cornea and the colored iris) of the eye.
- Conjunctivitis Infectious conjunctivitis is inflammation of the conjunctiva usually caused by viruses or bacteria.
- Sinusitis Inflammation of the sinuses.
- Myopia Near-sightedness
- Hyperopia Far-sightedness
- Astigmatism type of refractive error in which the eye does not focus light evenly on the retina
- LASIK Laser in situ Keratomileusis (corneal

- reshaping) (LASIK). Type of refractive surgery for correcting myopia, hyperopia, and astigmatism
- Keratoconus disorder of the eye which results in progressive thinning of the cornea.
 - Cataract A cataract is a clouding (opacity) of the lens of the eye that causes a progressive, painless loss of vision
- Retinal Detachment Retachment of the retina is separation of the retina (the transparent, light-sensitive structure at the back of the eye) from the underlying layer to which it is attached.
- Glaucoma Glaucoma is optic nerve damage, often associated with increased eye pressure, that leads to progressive, irreversible loss of vision.
- Otitis Media Acute otitis media (AOM) is a painful type of ear infection. It occurs when the area behind the eardrum called the middle ear becomes inflamed and infected. Mostly caused by viruses and do not require antibiotics.
- Otitis Externa Swimmer's ear. An acute infection of the ear canal skin typically caused by bacteria.
- Otoscope a medical device which is used to look into the ears
- Myringotomy surgical procedure where the surgeon makes a tiny slit in the eardrum, remove the fluid, and insert a small ventilating tube called a tympanostomy tube in the slit to provide drainage from the middle ear to the outer ear.
- Vertigo a type of dizziness felt as a false sensation of movement
- Sinusitis Sinusitis is inflammation of the sinuses, most commonly caused by a viral infection or by an allergy. Very rarely bacterial. Most do not need antibiotics.
- Nurses Aids Also known as Certified Nursing Assistants (CNAs) and State Tested Nurses Aids (STNAs). They have 75 hours in a classroom and 25-50 hours in clinical learning. They perform activities of daily living (ADLs) with patients. ADLs include dressing, bathing and feeding. Commonly utilized in nursing homes
- Associate Degree Nurses (ADN) A type of registered nurse (RN). Also known as an Associate of Science in Nursing (ASN). Typically take 2-3 years to complete. In the United States, this type of degree is usually

- Diploma Nurses awarded by community colleges or similar nursing schools.
 - BSN A type of registered nurse (RN). Nursing degree obtained through a hospital-based nursing program. Typically takes 2-3 years.
 - APP A type of registered nurse (RN). A Bachelor's of Science in Nursing. Typically takes 3-4 years. Used to only be taught at universities, but now being taught online and at some hospitals.
 - Physician's Assistant (PA) Advanced Practice Providers. These are nurse practitioners and physician assistants. They used to be called mid-level providers and physician extenders.
 - Otolaryngologist Professional who practices medicine in collaboration or under indirect supervision of a physician, depending on state laws. Their scope of practice varies by jurisdiction and healthcare setting. Three years of training with lots of patient interactio
 - Ophthalmologist A surgeon who specializes in diseases of the head and neck. Also called ENT doctors.
 - Optician Physician trained in treating conditions of the eye. Can operate on the eye
 - Optometrist a person qualified to make and supply eyeglasses and contact lenses for correction of vision.
- Optometrists, also known as *doctors of optometry*, or *ODs*, provide most primary vision care. They examine people's eyes to diagnose vision problems and eye diseases, and they test patients' visual acuity, depth and color perception, and ability to focus and coordinate the eyes.

At the end of the readings you should be able to answer the following questions:

- What is the most common cause of otitis media?
- What is the difference between ophthalmologist and optometrist?
- Glaucoma and cataracts both cause loss of vision, compare and contrast the two diseases.
- What are the different types of nurses? Describe each, including their training.

March 10 and 12 NO CLASS SPRING BREAK

March 17 WOMEN'S HEALTH ISSUES

- cyst(o) bladder
- gyn woman
- hyster(o) uterus
- lact(o) milk

- mamm(o) breast
- mast(o) breast
- nephr(o) kidney
- oophor(o) ovaries
- pyel(o) kidneys
- ren(o) kidneys
- uria urine
- Hysterectomy Surgical removal of the uterus
- Sterilization Sterilization involves making a person incapable of reproduction.

- Fibroids A noncancerous tumor of the uterus composed of muscle and fibrous tissue.
- Lumpectomy the tumor and a small amount of surrounding tissue is removed. It is a form of breast conserving surgery for breast cancer
- Partial Mastectomy The tumor and a larger amount of breast tissue is removed
- Simple Mastectomy Surgical removal of all the breast tissue, but no lymph nodes or muscle.
- Modified Radical Mastectomy Removed all breast tissue and lymph nodes
- Radical Mastectomy Remove all breast, lymph nodes, and muscle under the breast
- Epidural Block is almost always used when pain relief is needed. An anesthetic is injected in the lower back—into the space between the spine and the outer layer of tissue covering the spinal cord (epidural space). Alternatively, a catheter is placed in the epidural space, and a local anesthetic (such as bupivacaine) is continuously and slowly given through the catheter. An opioid (such as fentanyl or sufentanil) is often also injected. An epidural injection for labor and delivery does not prevent the woman from pushing. An epidural injection can also be used in cesarean deliveries.
- Menopause permanent end of menstrual periods and fertility.
- Pelvic Inflammatory Disease Infection of the upper female reproductive system.
- Miscarriage A miscarriage (spontaneous abortion) is the loss of a fetus due to natural causes before 24 weeks of pregnancy.
- Cesarean Section surgical delivery of a baby by incision through a woman's abdomen and uterus.
- Obstetrician/Gynecologist Physicians that take care of on pregnancy, childbirth, and the postpartum period (obstetrics). They also take care of any issues

- with the female reproductive system (gynecology). These are surgeons. They have 4-year residency.
- Nurse Midwife
 - An advanced practice registered nurse having completed registered nursing and midwifery education (a master's of nursing (MSN)). Certified Nurse Midwives provide care of women across their lifespan, including pregnancy and the postpartum period, and well woman care and birth control.
- In-vitro Fertilization
 - Test tube babies or IVF. This technique is used when infertility is due to certain problems with sperm, problems with the fallopian tubes, or abnormal mucus in the cervix and when women have endometriosis, as well as when the cause is unidentified. The technique involves the following:
 - Stimulating the ovaries
 - Retrieving released eggs
 - Fertilizing the eggs
 - Growing the resulting embryos in a laboratory
 - Implanting the embryos in the woman's uterus
- Epidural Anesthesia
 - Spinal and epidural anesthesia are medicines that numb parts of your body to block pain. They are given through shots in or around the spine.
- PAP Smear
 - Papanicolaou smear. Used to screen for cervical cancer. Requires a pelvic exam
- Fibrocystic Breast Disease
 - Fibrocystic breast disease is characterized by breast pain, cysts, and noncancerous lumpiness.
- Pelvic exam
 - Consists of 4 steps. External examination, Speculum examination, bimanual Examination, and possibly rectovaginal exam
- HPV
 - Human Papilloma Virus is the cause of cervical cancer
- HPV Vaccine
 - A combination of between 3 and 9 types of killed HPV viruses that helps prevent genital warts, cervical, anal, oropharyngeal, penile, vulvar, and vaginal cancers.
- Possible Essay Questions
 - What are the components of a female pelvic exam?
 - What is HPV? How is it treated/prevented? Why is it important?
 - What is female sterilization? What are the problems with its use?
 - What are the different types of breast surgery? Explain what each type does?

March 19 MEN'S HEALTH ISSUES

- cyst(o) bladder
- nephr(o) kidney
- pyel(o) kidneys
- ren(o) kidneys
- uria urine
- vas(o) vessel
- vesic(o) bladder
- HIV Human immunodeficiency virus (HIV)
Infection is a viral infection that progressively destroys certain white blood cells and causes acquired immunodeficiency syndrome (AIDS)
- CD4+ Count A count of your *CD4 cells* gives a general measure of the health of your immune system. A normal CD4 cell count is more than 500 cells per cubic millimeter (mm³) of blood. If you have a CD4 count of fewer than 200/mm³, you will be diagnosed as having *AIDS*.
- Viral Load This test measures the amount of HIV in your blood. The goals of HIV treatment are to keep your viral load at undetectable levels and to keep your CD4 count high. A viral load test offers a good indicator of how well your treatment is working to achieve those goals.
- AIDS Acquired immunodeficiency syndrome (AIDS) is the most severe form of HIV infection. HIV infection is considered to be AIDS when at least one serious complicating illness develops or the number (count) of CD4+ lymphocytes decreases substantially.
- Gonorrhea Gonorrhea is a sexually transmitted disease caused by the bacteria *Neisseria gonorrhoeae*, which infect the lining of the urethra, cervix, rectum. People usually have a discharge from the penis or vagina and may need to urinate more frequently and urgently.
- Chlamydia Chlamydial infections include sexually transmitted diseases of the urethra, cervix, and rectum that are caused by the bacteria *Chlamydia trachomatis*. Symptoms include a discharge from the penis or vagina and painful or more frequent urination.
- Trichomonas Trichomoniasis is a sexually transmitted disease of the vagina or urethra that is caused by the protozoa *Trichomonas vaginalis* and that causes vaginal irritation and discharge and sometimes urinary symptoms.

- Syphilis
Syphilis is a sexually transmitted disease caused by the bacteria *Treponema pallidum*. Three stages of symptoms: Primary- painless sore at infection site, Secondary- rash, fever, fatigue, headache, and loss of appetite, Tertiary- CNS and aorta
- Urinary catheterization
latex, polyurethane or silicone tube known as a urinary catheter is inserted into a patient's bladder via his or her urethra.
- urinary tract infection
An infection of the urinary tract
- Kidney stone
Stones (calculi) that form anywhere in the urinary tract and may cause pain, bleeding, obstruction of the flow of urine, or an infection
- Testicular Cancer
The testicles are the pair of organs where sperm is made. They are inside the scrotum, the sac of skin that hangs down behind a man's penis. Testicular cancer is the out-of-control growth of cells of the testicle.
- Testicular torsion
Testes becomes twisted and loses its blood supply
- BPH
Benign prostatic hyperplasia is a noncancerous (benign) enlargement of the prostate gland that can make urination difficult.
- PSA
Prostate Specific Antigen, a blood test used to help diagnose prostate cancer
- Vasectomy
The vas deferens (tubes that carry sperm from the testes) are cut and tied off so that sperm cannot be ejaculated. Ejaculation still occurs normally. However, sperm are not a product of the ejaculate. Therefore, fertilization will not occur.
- Circumcision
surgical removal of the foreskin
- TURP
transurethral resection of the prostate is a surgical procedure in which a doctor passes an endoscope (a flexible viewing tube) up the urethra. Attached to the endoscope is a surgical instrument that is used to remove part of the prostate.
- Renal Failure
Kidney (renal) failure is the inability of the kidneys to adequately filter metabolic waste products from the blood
- Dialysis
An artificial process of removing waste products and excess fluid from the body.
- Hemodialysis
In hemodialysis, a dialysis machine and a special filter called an artificial kidney, or a dialyzer, are used to clean your blood. To get your blood into the dialyzer, the doctor needs

- Peritoneal dialysis
to make an access, or entrance, into your blood vessels
is a way to remove waste products from your blood when your kidneys can no longer do the job adequately. A cleansing fluid flows through a tube (catheter) into part of your abdomen and filters waste products from your blood.
- Nephrologist
Internal medical physicians who specialize in patients who are in renal failure
- Urologist
A surgeon who has specialized expertise regarding problems of the male and female urinary tract and the male reproductive organs.
- PrEP
pre-exposure prophylaxis is the taking of an antiretroviral drug *before* being exposed to HIV can reduce the risk of HIV infection. Recommended for individuals at high risk of contracting the infection.
- PEP
Post-exposure prophylaxis is taking of antiretroviral drugs for 4 weeks in individuals who have been exposed to HIV from a blood splash, needlestick, or sexual contact.
- AV Fistula
an arteriovenous fistula is an artificial connection between an artery and a vein that is usually surgically created to make long-term access easier for dialysis. In this procedure, typically the radial artery in the forearm is joined with the cephalic vein in the forearm

Potential Essay Questions

- What is circumcision and is it medically necessary? What are the potential benefits?
- What are STDs?
- What is HIV?
- What is AIDS?
- What is Male sterilization? What are its advantages and concerns?
- What is a Kidney Stone and how is it treated?
- What is renal failure?
- How do we treat renal failure?
- What is Testicular cancer?
- How do we screen for Testicular Cancer?

March 24 NO CLASS ACHE

March 26 EXAM 2

March 31

DIGESTIVE

- chol(e)
 - enter(o)
 - ectomy
 - gastr(o)
 - hepat(o)
 - lapar(o)
 - lip(o)
 - melan(o)
 - pept
 - proct(o)
 - tomy
 - Gastritis
 - Stomach
- gallbladder
intestine
remove by cutting
stomach
liver
abdomen
fat
black
digest
anus
operation by cutting
Inflammation of the stomach lining.
large organ in upper abdomen. Receives food from the esophagus and then grinds food into small pieces. It secretes acid and enzymes to help break food down.
- Small Bowel
- Receives food from stomach and then mixes it with pancreatic enzymes. Three section: Duodenum, Jejunum, ileum. Serves as the area to absorb nutrients, fat, and vitamins
- Large Bowel
- Cecum, Ascending Colon, Transverse Colon, Descending Colon, Sigmoid Colon. Basic function is to dehydrate waste products and make formed stool
- Hernia
- An abdominal wall hernia is an opening or area of weakness in the abdominal wall through which abdominal contents can protrude.
- Inguinal Hernia
- Inguinal hernias appear in the crease of the groin or in the scrotum. They are more common among men. There are two types, direct and indirect, depending on exactly where the hernia occurs.
- cirrhosis
- Cirrhosis is the destruction of normal liver tissue that leaves nonfunctioning scar tissue surrounding areas of functioning liver tissue.
- Hepatitis
 - Acute Hepatitis A
- Inflammation of the liver from any cause.
Hepatitis A is inflammation of the liver that is caused by the hepatitis A virus and that lasts less than 6 months. Hepatitis A is usually spread when people ingest something that has been contaminated by the stool of an infected person. There is a vaccine. Most people recover completely.
- Hepatitis B
- Hepatitis B is inflammation of the liver that is caused by the hepatitis B virus and that lasts from a few weeks up to 6 months (acute) or can be chronic. Hepatitis B is spread through contact with blood or other bodily fluids of

- infected people, as when people share unsterilized needles to inject illicit drugs. There is a vaccine. Can result in liver failure.
- Hepatitis C is inflammation of the liver that is caused by the hepatitis C virus and that lasts from a few weeks up to 6 months (acute) or it can be chronic. Hepatitis C is spread through contact with blood or other bodily fluids of infected people, as occurs when people share unsterilized needles to inject illicit drugs. There is no vaccine. There are medications to treat chronic hepatitis C.
- Hepatitis C
- Appendicitis is inflammation and infection of the appendix of the colon
- Appendicitis
- A colonoscopy is an internal examination of the colon (large intestine), using an instrument called a colonoscope. The colonoscope is a small camera attached to a flexible tube.
- Colonoscopy
- Esophagogastroduodenoscopy (EGD) is an examination of the lining of the esophagus, stomach, and upper duodenum with a small camera (flexible endoscope) which is inserted down the throat
- EGD
- Colonoscopy is a form of endoscopy used to view the large intestine.
- Colonoscopy
- Crohn's disease (regional enteritis, granulomatous ileitis, ileocolitis) is a chronic inflammation of the intestinal wall that may affect any part of the digestive tract.
- Crohn's disease
- Use of a medical instrument to view internal organs.
- Endoscopy
- Endoscopic Retrograde Cholangiopancreatography. Involves passing an endoscope through the mouth, esophagus, and stomach into the duodenum. A thin tube is then inserted through the endoscope into the biliary tract.
- ERCP
- For this test, a chemical called guaiac is used to detect blood in the stool. A doctor may obtain a stool sample for this test during a rectal examination by using a gloved finger. This sample is placed on a piece of filter paper infused with guaiac. A second liquid chemical (peroxidase) is added and the sample changes color if blood is present.
- Guaiac-based fecal occult blood test
- The fecal immunochemical test (FIT) uses antibodies directed against human hemoglobin (a protein in red blood cells that
- Fecal immunochemical test (FIT)

- gives blood its red color) to detect blood in the stool. For this test, people collect samples by using a kit at home similar to the guaiac-based stool test.
- Stool DNA test
This approach uses a combination of a test for genetic material (DNA) associated with colorectal cancer and the fecal immunological test (FIT—antibodies directed against human hemoglobin are used to detect blood in the stool). People collect samples for this test by using a kit at home and mailing the samples to the laboratory.
- Laparoscopy
Examination of the abdominal cavity using an endoscope
- Inflammatory Bowel Disease
inflammatory bowel diseases. The intestine (bowel) becomes inflamed, often causing recurring abdominal pain and diarrhea.
- Ulcerative Colitis
Ulcerative colitis is a long-term disease that causes your large intestine (colon) to become inflamed. Ulcerative colitis is one of two inflammatory bowel diseases.
- IBS
Irritable Bowel Syndrome. It is a functional disorder of the bowel that causes pain, constipation, or diarrhea.
- Diverticulitis
Diverticulitis is inflammation or infection of one or more diverticula of the colon.
- GERD
Gastroesophageal Reflux Disease. GERD (acid reflux) is a disease caused by your stomach contents and stomach acid flowing back up your esophagus. Your esophagus is the tube that connects your throat to your stomach. Reflux means flowing backwards. Acid reflux is a problem because stomach acid can damage your esophagus.
- Cholecystectomy
Surgical removal of the gallbladder.
- Cholecystitis
Cholecystitis is inflammation of the gallbladder wall, usually resulting from a gallstone obstructing the cystic duct.

Potential Essay Questions

- What are the major components of the digestive system, and what is the function of each?
- What is gastritis and how is it treated?
- What is a peptic ulcer, and how is it diagnosed and treated?
- What is GE reflux and how is it treated?
- What is inflammatory bowel disease, and what are the major types?
- What is antibiotic associated diarrhea and why is it important?
- Describe what are diverticulosis and diverticulitis?
- What is an ileus and how is that different from a mechanical bowel obstruction?
- What is appendicitis and how is it treated?

- What is gallbladder disease and how is it treated (gallstones and cholecystitis)?
- What is hepatitis and what are the major forms?
- Which forms of hepatitis have vaccines?
- Why do we screen for colon cancer, and why don't we start until age 50 with colonoscopy?

April 2 RADIOLOGY

- Computed Tomography
an x-ray source and x-ray detector rotate around a person. In modern scanners, the x-ray detector usually has 4 to 64 or more rows of sensors that record the x-rays that pass through the body.
- Magnetic Resonance Imaging
a strong magnetic field and very high frequency radio waves are used to produce highly detailed images. MRI does not use x-rays and is usually very safe.
- Plain X-rays
An x-ray beam is passed through the part body to be evaluated. Different tissues block different amounts of the x-rays, depending on the tissue's density. The x-rays that pass through are recorded on a film or radiation detector plate, producing an image that shows the different levels of tissue density.
- Radionuclide scanning
radionuclides are used to produce images. A radionuclide is an unstable atom that becomes more stable by releasing energy as radiation.
- Ultrasonography
Ultrasonography uses high-frequency sound (ultrasound) waves to produce images of internal organs and other tissues. A device called a transducer converts electrical current into sound waves, which are sent into the body's tissues
- PACS
Picture Archiving and Communication System. These are computers or networks dedicated to the storage, retrieval, distribution and presentation of diagnostic medical images.

Potential Essay Questions

- What are the different ways we can image inside of the human body?
- What is a PACS system and how is it used?

April 7 Surgery and Trauma

- Obesity
The accumulation of excessive body fat. Usually defined as a BMI of greater than or equal to 30.

- Overweight The accumulation of excessive body fat. Usually defined as a BMI of between 25 and 29.9.
- BMI Body Mass Index. Weight (in kg) divided by Height (in meters) squared.
- Bariatric Surgery Surgery to alter the stomach, intestines, or both to produce weight loss.
- Gastric Banding A band (sometimes called a lap band) is placed at the upper end of the stomach to divide the stomach into a small upper part and a larger lower part.
- Gastric Bypass The part of the stomach next to the esophagus is detached from the rest, creating a small pouch. As a result, the amount of food that can be eaten at one time is drastically reduced. A section of small intestine is used to connect the pouch to a lower part of the small intestine.

- What are the surgical treatments for obesity?
- What is BMI and how is it calculated?
- What are the different ways we can image inside of the human body?
- What is a PACS system and how is it used?

April 9 NO CLASS EASTER BREAK

April 14 PEDIATRICS

- circum around
- ped(o) child
- peri around
- pyr fever
- SIDS Sudden infant death syndrome (SIDS) is the sudden, unexpected death of a seemingly healthy infant during sleep, in whom a thorough postmortem examination does not show a cause.
- Autism Spectrum Disorder Autism spectrum disorders (ASDs) are conditions in which people have difficulty developing normal social relationships, use language abnormally or not at all, and behave in compulsive and ritualistic ways.
- Cerebral Palsy Cerebral palsy refers to a group of symptoms including poor muscle control, spasticity, paralysis, and other neurologic

- Chickenpox
problems resulting from brain injury before, during, or shortly after birth.
a highly contagious infection with the varicella-zoster virus that produces a characteristic itchy rash, consisting of small, raised, blistered or crusted spots.
- New Born Screening
Newborn screening is the practice of testing every newborn for certain harmful or potentially fatal disorders that aren't otherwise apparent at birth. Many of these are metabolic disorders, often called "inborn errors of metabolism," which interfere with the body's use of nutrients to maintain healthy tissues and produce energy.
- Immunization
The process of giving a vaccine to induce immunity from a disease.
- Vaccine
Vaccines are preparations that contain either noninfectious fragments of bacteria or viruses or whole forms of these organisms that have been weakened so that they do not cause disease. Giving a vaccine (usually by injection) stimulates the body's immune system to defend against that disease.

Potential Essay Questions

- When are Preventive Health care visits for healthy infants?
- What is the purpose of the preventive health care visits for infants?
- What is the new DTaP vaccine and why was it developed?
- What has changed in polio vaccination and why?
- What is meningitis and how can it be prevented?
- What is chickenpox and why did we develop a vaccine for a disease that is usually has no major problems?

April 16 PHARMACOLOGY

- Pharmaco drug
- FDA Food and Drug Administration.
- DEA Drug Enforcement Agency. Regulates controlled substances.
- antipyretic a medication used to treat fever
- Intravenous administration something that is given to the patient through a catheter inserted into a vein.
- Intramuscular administration something that is given to the patient by being injected into the muscle (common for vaccines).
- Pharmacology Field of medicine that specializes in the study of drugs, their sources, appearance, chemistry, actions, and uses
- Pharmacist Pharmacists is an individual who is licensed to distribute drugs prescribed by physicians and other health practitioners and provide

- Toxicology information to patients about medications and their use.
the science that studies the harmful effects of drugs, environmental contaminants, and naturally occurring substances found in food, water, air and soil
- Hospital formulary Lists all drugs stocked in the hospital pharmacy
- PDR Physicians Desk Reference. Published yearly by Medical Economics Company. Manufacturers pay to list information about their products in the PDR. Same information that appears on Package Inserts
- Sublingual administration A medication is given under the tongue
- Transdermal administration A medication is absorbed through the skin
- Generic name The official name given to a drug when it is first manufactured.
- Trade name The name given to a drug for marketing purposes. It can only be utilized the company that has the patent on the drug.

Possible Essay Questions

- What are the different routes of administration of drugs?
- How are most drugs eliminated from the body?
- What is a generic drug and what is bioequivalence?
- What is naturopathy and homeopathy?
- What is the problem with herbal therapies?

April 21 CANCER

- hist(o) tissue
- myel(o) marrow
- oma tumor
- onc(o) tumor
- path disease
- phag(o) destroy
- Neoplasm A tumor
- Malignant Cancerous
- Benign Noncancerous
- Recurrence Cancerous cells return after treatment, either in the primary location or as metastases (spread).
- Metastasis: Cancerous cells that have spread to a completely new location
- Carcinogen An agent that causes cancer
- Chemotherapy the use of drugs to destroy cancer cells
- Radiation Therapy Radiation is a beam or field of intense

- Gamma Knife
energy focused on a certain area or organ of the body. It can be generated by a radioactive substance (such as cobalt) or with an atomic particle (linear) accelerator.
- Cancer
A type of radiation therapy that limits radiation to a specific area of the brain a group of cells (usually derived from a single cell) that has lost its normal control mechanisms and thus has unregulated growth
- phob(ia)
fear
- psych(o)
mind
- tox(i)
poison
- Anxiety Disorders
A state of distressing chronic but fluctuating nervousness that is inappropriately severe for the person's circumstances.
- PTSD
Posttraumatic stress disorder (PTSD) is characterized by recurrent, intrusive recollections of an overwhelming traumatic event.
- Mood disorders
Mental health disorders involving emotional disturbances consisting of long periods of excessive sadness (depression) or excessive joyousness or elation (mania). Depression and mania represent the two extremes, or poles, of mood disorders.
- Suicidal Behavior
Suicidal behavior includes three types of self-destructive acts: completed suicide, attempted suicide, and suicide gestures. Thoughts and plans about suicide are called suicide ideation.
- Anorexia Nervosa
Disorder characterized by relentless pursuit of thinness, a distorted body image, an extreme fear of obesity, refusal to maintain a minimally normal body weight.
- Schizophrenia
Schizophrenia is a mental disorder characterized by loss of contact with reality (psychosis), hallucinations (usually, hearing voices), firmly held false beliefs (delusions), abnormal thinking, a restricted range of emotions (flattened affect), diminished motivation, and disturbed work and social functioning.
- Bulimia Nervosa
Repeated rapid consumption of large amounts of food (bingeing), followed by attempts to rid the body of the excess food consumed (purging).

- PTSD
for the person's circumstances. Posttraumatic stress disorder (PTSD) is characterized by recurrent, intrusive recollections of an overwhelming traumatic event.
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- Bulimia Nervosa
Repeated rapid consumption of large amounts of food (bingeing), followed by attempts to rid the body of the excess food consumed (purging).
- Psychiatrist
Medical doctor with 4 years of psychiatric training after graduation from medical school. Can prescribe drugs and admit people to the hospital. Some practice psychotherapy, some only prescribe drugs, and many do both.
- Psychologist
Professional who has a doctorate but not a medical degree. Many have postdoctoral training, and most are trained to administer psychological tests that are helpful in diagnosis. May conduct psychotherapy but cannot perform physical examinations, prescribe drugs, or admit people to the hospital.
- Psychiatric social worker
A professional with specialized training in

certain aspects of psychotherapy, such as family/marital therapy or individual psychotherapy. Often trained to interface with the social service systems in the state. May have a master's degree, but some have doctorates as well. Cannot perform physical examinations or prescribe drugs

DSM-V

Diagnostic and Statistical Manual of Mental Disorders (fifth edition) provides a classification system for mental illnesses.

At the end of the readings, you should be able to answer the following questions:

- What is the difference between a psychiatrist, a psychologist, and a psychiatric social worker?
- What is deinstitutionalization and why is it a problem?
- What is electroconvulsive therapy?

April 28

Study Session

April 30

Exam 3

Cardiology I Readings
Biology of the Heart

<https://www.merckmanuals.com/home/heart-and-blood-vessel-disorders/biology-of-the-heart-and-blood-vessels/biology-of-the-heart>

Overview of Heart and Blood Vessel Symptoms

<https://www.merckmanuals.com/home/heart-and-blood-vessel-disorders/symptoms-of-heart-and-blood-vessel-disorders/overview-of-heart-and-blood-vessel-symptoms>

Chest Pain

<https://www.merckmanuals.com/home/heart-and-blood-vessel-disorders/symptoms-of-heart-and-blood-vessel-disorders/chest-pain>

Electrocardiogram

<https://www.merckmanuals.com/home/heart-and-blood-vessel-disorders/diagnosis-of-heart-and-blood-vessel-disorders/electrocardiography>

Echocardiogram

<https://www.merckmanuals.com/home/quick-facts-heart-and-blood-vessel-disorders/diagnosis-of-heart-and-blood-vessel-disorders/echocardiography-and-other-ultrasound-procedures>

Stress Testing

<https://www.merckmanuals.com/home/quick-facts-heart-and-blood-vessel-disorders/diagnosis-of-heart-and-blood-vessel-disorders/stress-testing>

Cardiac Catheterization

<https://www.merckmanuals.com/home/quick-facts-heart-and-blood-vessel-disorders/diagnosis-of-heart-and-blood-vessel-disorders/cardiac-catheterization>

Hypertension

<https://www.merckmanuals.com/home/quick-facts-heart-and-blood-vessel-disorders/high-blood-pressure/high-blood-pressure>

Cardiology II Readings

Heart Failure

<https://www.merckmanuals.com/home/quick-facts-heart-and-blood-vessel-disorders/heart-failure/heart-failure>

Peripheral Vascular Disease

<https://www.merckmanuals.com/home/quick-facts-heart-and-blood-vessel-disorders/peripheral-arterial-disease/peripheral-arterial-disease>

Atrial Fibrillation

<https://www.merckmanuals.com/home/quick-facts-heart-and-blood-vessel-disorders/abnormal-heart-rhythms/atrial-fibrillation-and-atrial-flutter>

Ventricular Fibrillation

<https://www.merckmanuals.com/home/heart-and-blood-vessel-disorders/abnormal-heart-rhythms/ventricular-fibrillation>

Atherosclerosis

<https://www.merckmanuals.com/home/quick-facts-heart-and-blood-vessel-disorders/atherosclerosis/atherosclerosis>

High Cholesterol

<https://www.merckmanuals.com/home/quick-facts-hormonal-and-metabolic-disorders/cholesterol-disorders/high-cholesterol>

Coronary Artery Disease

<https://www.merckmanuals.com/home/quick-facts-heart-and-blood-vessel-disorders/coronary-artery-disease/overview-of-coronary-artery-disease-cad>

Cardiology III Readings

Abdominal Aortic Aneurysm

<https://www.merckmanuals.com/home/quick-facts-heart-and-blood-vessel-disorders/aneurysms-and-aortic-dissection/abdominal-aortic-aneurysms>

Angina

<https://www.merckmanuals.com/home/quick-facts-heart-and-blood-vessel-disorders/coronary-artery-disease/angina>

Myocardial Infarction

<https://www.merckmanuals.com/home/quick-facts-heart-and-blood-vessel-disorders/coronary-artery-disease/heart-attack>

Left Ventricular Assist Device

<https://www.merckmanuals.com/home/SearchResults?query=implanted+cardiac+devices>

Pulmonary

Overview of the Respiratory System

<https://www.merckmanuals.com/home/lung-and-airway-disorders/biology-of-the-lungs-and-airways/overview-of-the-respiratory-system>

<https://www.merckmanuals.com/home/lung-and-airway-disorders/biology-of-the-lungs-and-airways/chest-cavity>

<https://www.merckmanuals.com/home/lung-and-airway-disorders/biology-of-the-lungs-and-airways/exchanging-oxygen-and-carbon-dioxide>

<https://www.merckmanuals.com/home/lung-and-airway-disorders/biology-of-the-lungs-and-airways/control-of-breathing>

Symptoms of lung Disorders

<https://www.merckmanuals.com/home/lung-and-airway-disorders/symptoms-of-lung-disorders/overview-of-symptoms-of-lung-disorders>

Acute Bronchitis

<https://www.merckmanuals.com/home/quick-facts-lung-and-airway-disorders/acute-bronchitis/acute-bronchitis>

Asthma

<https://www.merckmanuals.com/home/quick-facts-lung-and-airway-disorders/asthma/asthma>

COPD

<https://www.merckmanuals.com/home/quick-facts-lung-and-airway-disorders/chronic-obstructive-pulmonary-disease-copd/chronic-obstructive-pulmonary-disease-copd>

PE

<https://www.merckmanuals.com/home/quick-facts-lung-and-airway-disorders/pulmonary-embolism-pe/pulmonary-embolism-pe>

TB

<https://www.merckmanuals.com/home/infections/tuberculosis-and-related-infections/tuberculosis-tb>

Endocrine System

Overview

<https://www.merckmanuals.com/home/hormonal-and-metabolic-disorders/biology-of-the-endocrine-system/endocrine-glands>

Thyroid

<https://www.merckmanuals.com/home/quick-facts-hormonal-and-metabolic-disorders/thyroid-gland-disorders/overview-of-the-thyroid-gland>

Diabetes Mellitus

<https://www.merckmanuals.com/home/quick-facts-hormonal-and-metabolic-disorders/diabetes-mellitus-dm-and-disorders-of-blood-sugar-metabolism/diabetes>

Orthopedics

Introduction to the biology of the musculoskeletal system

<https://www.merckmanuals.com/home/bone,-joint,-and-muscle-disorders/biology-of-the-musculoskeletal-system/introduction-to-the-biology-of-the-musculoskeletal-system>

Osteoporosis

<https://www.merckmanuals.com/home/quick-facts-bone,-joint,-and-muscle-disorders/osteoporosis/osteoporosis>

Joint Pain

<https://www.merckmanuals.com/home/quick-facts-bone,-joint,-and-muscle-disorders/symptoms-of-musculoskeletal-disorders/joint-pain-single-joint>

Osteoarthritis

<https://www.merckmanuals.com/home/quick-facts-bone,-joint,-and-muscle-disorders/joint-disorders/osteoarthritis-oa>

Rheumatoid arthritis

<https://www.merckmanuals.com/home/quick-facts-bone,-joint,-and-muscle-disorders/joint-disorders/rheumatoid-arthritis-ra>

Low Back Pain

<https://www.merckmanuals.com/home/quick-facts-bone,-joint,-and-muscle-disorders/neck-and-low-back-pain/low-back-pain>

Fractures

<https://www.merckmanuals.com/home/injuries-and-poisoning/fractures/overview-of-fractures>

Hip Fractures

<https://www.merckmanuals.com/home/injuries-and-poisoning/fractures/hip-fractures>

Dermatology

Structure and Function of the skin

<https://www.merckmanuals.com/home/skin-disorders/biology-of-the-skin/structure-and-function-of-the-skin>

Pressure Sores

<https://www.merckmanuals.com/home/quick-facts-skin-disorders/pressure-sores/pressure-sores>

Skin Cancers

<https://www.merckmanuals.com/home/skin-disorders/skin-cancers/overview-of-skin-cancer>

Burns

<https://www.merckmanuals.com/home/quick-facts-injuries-and-poisoning/burns/burns>

CNS

Overview of the nervous system

<https://www.merckmanuals.com/home/brain,-spinal-cord,-and-nerve-disorders/biology-of-the-nervous-system/overview-of-the-nervous-system>

Overview of Delirium and Dementia

<https://www.merckmanuals.com/home/brain,-spinal-cord,-and-nerve-disorders/delirium-and-dementia/overview-of-delirium-and-dementia>

Dementia

<https://www.merckmanuals.com/home/brain,-spinal-cord,-and-nerve-disorders/delirium-and-dementia/dementia>

Seizure

<https://www.merckmanuals.com/home/quick-facts-brain,-spinal-cord,-and-nerve-disorders/seizure-disorders/seizure-disorders>

Stroke

<https://www.merckmanuals.com/home/quick-facts-brain,-spinal-cord,-and-nerve-disorders/stroke-cva/stroke>

Multiple Sclerosis

<https://www.merckmanuals.com/home/quick-facts-brain,-spinal-cord,-and-nerve-disorders/multiple-sclerosis-ms-and-related-disorders/multiple-sclerosis-ms>

Special Senses

Introduction to the biology of the ears nose and throat

<https://www.merckmanuals.com/home/ear,-nose,-and-throat-disorders/biology-of-the-ears,-nose,-and-throat/introduction-to-biology-of-the-ears,-nose,-and-throat>

Ears

<https://www.merckmanuals.com/home/ear,-nose,-and-throat-disorders/biology-of-the-ears,-nose,-and-throat/ears>

Ear Infections (Acute Otitis Media)

<https://www.merckmanuals.com/home/quick-facts-ear,-nose,-and-throat-disorders/middle-ear-disorders/ear-infection-acute-otitis-media>

Otitis Externa

<https://www.merckmanuals.com/home/quick-facts-ear,-nose,-and-throat-disorders/outer-ear-disorders/external-otitis-swimmer-s-ear>

Structure and function of the eyes

<https://www.merckmanuals.com/home/eye-disorders/biology-of-the-eyes/structure-and-function-of-the-eyes>

Refractory disorders

<https://www.merckmanuals.com/home/eye-disorders/refractive-disorders/refractive-disorders>

Glaucoma

<https://www.merckmanuals.com/home/quick-facts-eye-disorders/glaucoma/glaucoma>

Cataracts

<https://www.merckmanuals.com/home/quick-facts-eye-disorders/cataract/cataract>

Women's Health
Female exam

<https://www.merckmanuals.com/home/women-s-health-issues/diagnosis-of-gynecologic-disorders/gynecologic-examination>

Overview of the female reproductive system

<https://www.merckmanuals.com/home/women-s-health-issues/biology-of-the-female-reproductive-system/overview-of-the-female-reproductive-system>

Female External Genital Organs

<https://www.merckmanuals.com/home/women-s-health-issues/biology-of-the-female-reproductive-system/female-external-genital-organs>

Female internal genital organs

<https://www.merckmanuals.com/home/women-s-health-issues/biology-of-the-female-reproductive-system/female-internal-genital-organs>

Cervical Cancer

<https://www.merckmanuals.com/home/quick-facts-women-s-health-issues/cancers-of-the-female-reproductive-system/cervical-cancer>

Uterine Cancer

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Ovarian Cancer

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Breast Cancer

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Labor and Delivery

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Cesarean Section

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Men's Health and Urology

HIV, PEP, PrEP, CD4 count, Viral load

<https://www.merckmanuals.com/home/infections/human-immunodeficiency-virus-hiv-infection/human-immunodeficiency-virus-hiv-infection?query=Pre-exposure%20prophylaxis>

Structure of the male reproductive system

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BPH

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Testicular cancer

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Overview of the urinary tract

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Bladder infection

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Kidney infection

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Acute Kidney Failure

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Chronic Kidney Disease

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Dialysis

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Digestive and Surgery

Overview of the Digestive System

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Gastroesophageal reflux

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Peptic Ulcer Disease

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Gastroenteritis

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Inflammatory Bowel Disease

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Irritable Bowel Disease

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Acute Hepatitis

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Cholecystitis

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Bariatric Surgery

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Radiology

Plain X-rays

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CT scan

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MRI

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Ultrasound

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Pediatrics

Newborn Screening

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Sudden Infant Death Syndrome

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Infectious Disease

Vaccines

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Autism

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Measles

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Polio

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Pharmacology

Complimentary Medicine

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Overview of Generic Drugs

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Drug administration

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Cancer

Overview of Cancer

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Treatment of Cancer

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Radiation Therapy

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Chemotherapy

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Surgery Therapy

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Immunotherapy

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Mental Health

Overview of Mental Health

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Classification of Mental Health

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Treatment of Mental Health

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Geriatrics

Overview of Aging

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Disorders in older people

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Weapons of Mass destruction

Overview of Incidents Involving Mass Casualty Weapons

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