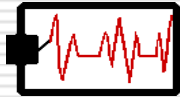


HTEC 91

Medical Office Diagnostic Tests



Introduction to course

- About the Instructor
- Course Objectives
- What to Expect / Review of Greensheet
- Flow of the Class



About the instructor

- BSN, Montana State University
- MSN, UCSF
- Board Certified CCRN
- Instructor in Nursing, HTEC Programs
- Nurse, Teacher, Author...
- <http://faculty.deanza.fhda.edu/oneillpatricia/> for course info



Course Objectives

- Define common terms used in electrocardiography, physical therapy, radiology, and procedures.
- Differentiate the structure and electrical conduction of the heart.
- Measure and assess heart rhythms using an electrocardiograph.
- Analyze normal and abnormal electrocardiograms.

Course Objectives

- Compare the major modalities used in the office's physical therapy department.
- Examine the role of the health technology provider during X-ray examinations.
- Compare the purposes and describe the patient preparation required for a barium meal, barium enema, cholecystogram, intravenous pyelogram.
- Differentiate the routine diagnostic procedures involved in the patient's diagnosis.

What to expect

- Review of greensheet, available at: [http://faculty.deanza.fhda.edu/oneillpatricia/stories/storyReader\\$13](http://faculty.deanza.fhda.edu/oneillpatricia/stories/storyReader$13)
- Code of Conduct



What to Expect (continued)

- You must be enrolled in HTEC 101F (the lab portion). If you're not enrolled, I have add stickers.
- HTEC 101F: hours TBA (explained in class) plus the mandatory ECG demo Week #1 of the quarter and practice sessions Week #2 of the quarter.
- All other HTEC hours are earned performing your assigned ECGs.

Identification Required...

- Please bring to class photo ID, which must match your registration name
 - Next week
 - At midterm
 - At final

Flow of each class period

- Students submit assignments
- Theory presentation / discussion
- Small group activities
- Selected videos (ECG)



Mandatory ECG Demonstration

- ECG Demonstration sessions week #1: usually Tuesday, Wednesday, Thursday (check your email)
- ECG Practice sessions next week: usually Wednesday, Thursday
 - You will be assigned in pairs
 - Please submit your first 3 choices in class
- Do not enter through classroom
 - Be SILENT when entering and leaving ECG rooms if classes are in session

Submitting ECGs

- See "EKG Instruction" Sheet
 - Correction: due to OSHA regulations, we are unable to allow children in the classroom/lab areas; therefore **NO ECGs on children** are required OR **allowed**.
- In addition, the following rules must be followed *or points WILL be lost*:
 - ECGs submitted must be sequential; i.e., when you submit ECGs for October, they must be placed in order of date: 10/15 followed by 10/16, 10/17, etc.

Submitting ECGs (rules, con't)

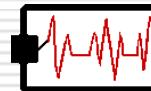
- ECGs must be labeled with all of the following info: date, time, age, gender, patient's name, and operator initials. Learn how to enter all of this information at Micky's demonstration sessions.
- The name on the ECG submitted must match the name on the EKG record sheet.
- The date on the ECG submitted must match the date on the EKG record sheet.

Regarding ECGs...

- Conserve supplies! Use only what you need. We have a limited amount.
- Everyone needs to volunteer to help each other: men and women. It's not fair to ask someone to be the patient and not to reciprocate!

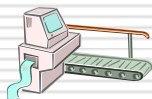
Basic ECG Interpretation

- ECG = electrocardiogram
- a graphic representation of the electrical activity of the heart



Electrocardiograph vs. Electrocardiogram

- **Electrocardiograph:** the machine that records the heart's electrical activity.
- **Electrocardiogram:** the record of electrical activity.

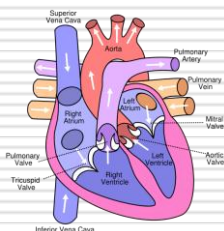


With the ECG, We Can...

- Monitor the amount of electrical activity.
- Monitor the time it takes for the electrical activity to travel through the heart.
- Detect abnormal conduction (dysrhythmias)
- Determine extent and damage from a myocardial infarction (MI).
- Assess the effect of certain medications.

*ECG usually used in conjunction with other cardiac tests

Structure of the Heart



- http://en.wikipedia.org/wiki/Image:Diagram_of_the_human_heart_%28cropped%29.svg

Conduction System of the Heart

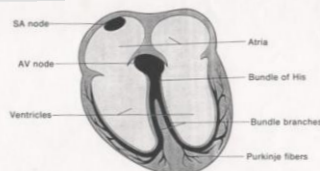
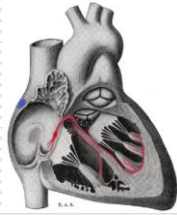


FIGURE 15-2. Diagram of the heart, identifying the structures involved with the conduction of an electrical impulse through the heart.

...another view



- SA Node: blue; AV Node: red
 - http://en.wikipedia.org/wiki/Cardiac_pacemaker
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