

DYNAMIC LEARNING EXERCISE

INSTRUCTOR KEY

My First Vital Signs

Instructor Notes: One of the things I have always done is integrated some sort of EMS skill on the first session of class. Whether you do this exercise on the first session of class or use it as filler on a day you finish early, students love to do. This vital signs exercise involves minimal teaching and introduction and lets students start with some preliminary, safe and easy vital signs—but also starts the critical thinking and evaluation process necessary for adequate vital signs. Lab instructors are helpful but not necessary depending on your class size.

Time: 45-60 minutes

Equipment Needed: (may be part of required student materials)

- Gloves
- Clock or watches
- Stethoscopes
- Pen lights
- Pulse oximeters
- Student handout (below) and pen

[A student copy of this exercise is included..](#)

There is a wide amount of variation on how you can do this exercise. It depends on the number of students, the number of staff members available, equipment available, etc.

Start by pairing up your students in groups of 3-5. Assure each group has a penlight, at least two stethoscopes, a pulse oximeter, and watches (or clock on the wall with second hand). Provide each student a copy of the student version of this exercise. They will record their findings there.

Alternatively, break students into groups and have one “station” for each of the vital signs. Note that some students will take less time than others.

Your job, and the job of any assistant instructors, is to facilitate. Be sure that the procedures are being done correctly, but don't forget that sometimes students need to figure things out for themselves to provide valuable learning.

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Facilitation Points for Each Vital Sign

If you have assistant instructors, be sure they are familiar with these points and have looked over the questions students must answer on their sheet.

Remember: There is no “about” in vital signs.

Pulse – This exercise should help students locate a radial pulse and take accurate vital signs. It adds the concept of having students compare their pulse rate findings and to compare it against the pulse oximeter. This will promote accuracy. Check student’s finger placement in the proper position and let them know that it takes a few times counting and watching the clock to get it right. That is why we practice.

Respirations – Counting respirations is harder than it looks. From staring at the chest to not letting the patient know you are counting (to make sure it is accurate) to watching subtle rise and fall and your watch at the same time, this may be one of the more challenging—or at least labor-intensive vital signs. Share tips and tricks you may have but make sure students practice. No lecturing!

Lung sounds – This part of the class is to start listening to lung sounds. Most students will have normal sounds although the occasional asthmatic wheeze may sneak in. Students are asked to listen to three areas of the chest (remember bases are auscultated in the back only). If possible, without compromising modesty or dignity, the stethoscope should be placed both over clothes and directly on skin to compare the difference.

Pupils – Consider making the room light and dark (if you can) to show how pupils will differ in different light. Also coach the student to not shine the light in the eye for too long because it will cause discomfort.

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In this exercise you will learn to take vital signs including pulse, respirations, pupils, pulse oximetry, and lung sounds. Use this sheet to record your findings and to make notes.

Pulse

Exercise 1 – With a partner and a “patient,” one student checks the pulse on the left wrist and the other student checks the right wrist. Write findings below:

L Wrist _____ R Wrist _____

Did the readings match? Why or why not?

Exercise 2 – Have a fellow student place a pulse oximeter on the finger of another member of your group and shield the reading so you can’t see it. You take the pulse on the opposite side. Write findings below:

Your pulse rate _____ Pulse oximeter’s displayed pulse rate _____

Did the readings match? Why or why not? Which do you believe is more accurate? Why?

Respirations

Have one group member be the patient. Two group members independently observe the patient’s respirations and note the respiratory rate.

Reading 1 _____ Reading 2 _____

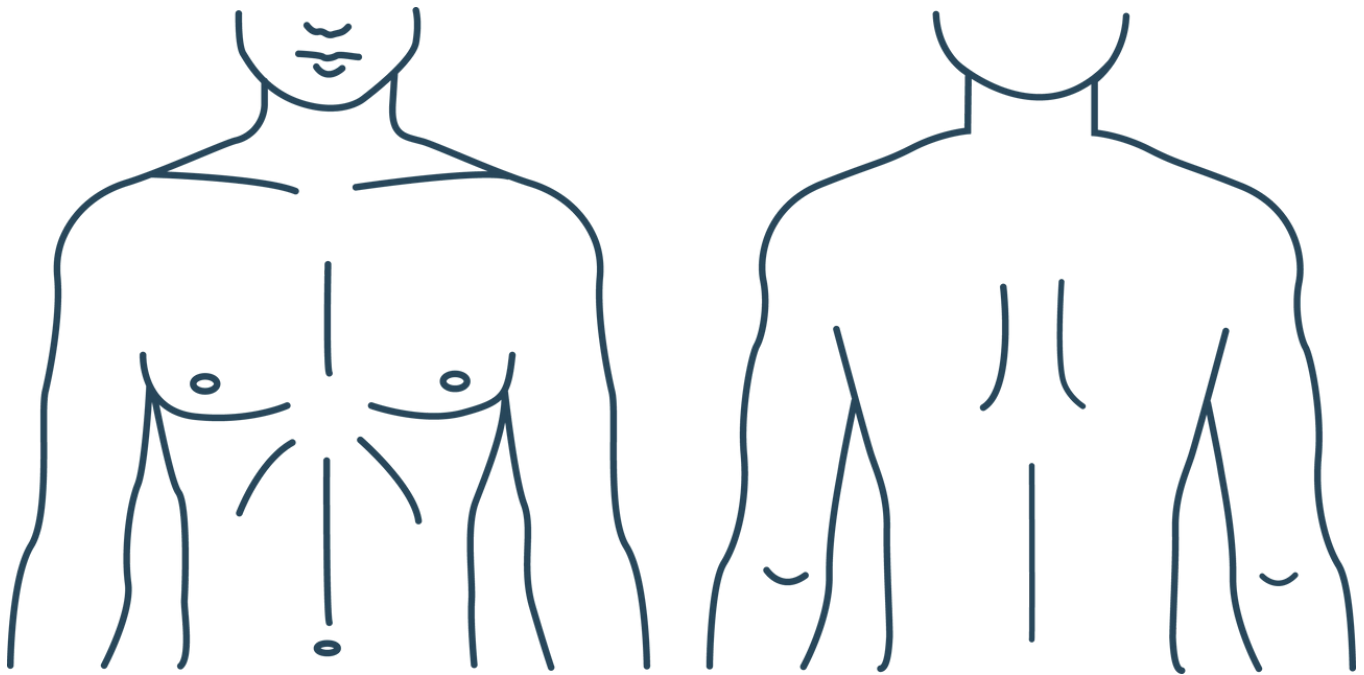
What problems did you have obtaining a respiratory rate? Did the rates match? If not, why? Did you use 15 seconds x 4 or 30 seconds x 2? Which do you think would be more accurate? Why?

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Lung Sounds

Identify the lung lobes and where to auscultate them. (two lobes left lung, three lobes right lung). Listen to the apex, middle, and base of both lungs. Mark on the attached diagram where you auscultated for each area. While preserving student modesty and dignity, if possible compare listening through clothes to listening directly over skin.



Where did you hear the best sounds? Did you hear any abnormal sounds? What made it better or worse to hear? What level of pressure on the stethoscope against the skin provided the best sound?

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Pupils

In healthy patients, pupils react to light. They constrict (become smaller) when in light and dilate (become larger) in a darker environment. Pupils should be equal, round, and react to light.

Shine a light into each eye. Note what the pupils do. If you pen light has a pupil gauge, note the size of the pupil before shining the light into it.

Left eye _____

Right Eye _____

What would happen if the patient was in a very bright environment? What would the pupils do? How could you check reactivity?

NOTES – Include any observations of things you learned in this section.