# Measuring Vital Signs

## Edited Video Transcript

### Femoral, Carotid, and Radial Heart Rate Pulse

So, looking at our vital signs. First, heart rate. There are multiple places we can take heart rate. Femoral—most often you'll see this with babies. Carotid—carotid has problems because that can actually affect the pressure going to your brain just enough to change heart rate, so generally, what we recommend is a radial pulse. Radial pulse is on the arm—the radius going along to the thumb down at the wrist right below the wrist creases under the watch band. You push in with two fingers. You can feel the pulse, and then you count the number of beats for twenty seconds, and then multiply that by three. That's going to give you a good estimate if the pulse is irregular—not nice and steady. [If irregular], you're going to want to count longer to get a better estimate, usually a full minute.

Oxygenation

We have our oxygenation sensors. With this, we just slip [the sensor] on a finger. It will read, [for example], SpO2 is 92 percent; heart rate is 74. Yes, it can be [taken] anywhere, uh, most common places I see it are fingers, toes, earlobes. Forehead is another good [place where] you can get it. It… [the forehead?] is as accurate for a lot of older adults who I work with [who have] poor circulation to the hands. They end up needing to have them on their foot, okay. It's a different sensor. The device is actually the same because all this is doing is it's seeing what percentage of those hemoglobin's are red versus blue. It's actually the same thing in the forehead and the foot. Yes red or purple [nail polish] can. And you may have to go for an alternate site, which again, is just an alternate probe or sensor. No, [the pulse ox sensor] will tell you heart rate, but this… doesn't tell you about an irregular heartbeat, right. So, somebody might have something like atrial fibrillation, and this wouldn't detect it. Whereas you would know even with touch; it's rather, continued—it's probably about a twenty-second average is my guess. Yeah, the problem is [the pulse ox sensor] does that average. You most likely get a bad reading in that case, anyway, all right?

Blood Pressure

Then we have blood pressure. With blood pressure, the way this works is we use this [blood pressure] cuff. You put the cuff around [your client’s upper arm]. It's got the artery line again pointing over your radial artery. You pump this up, right. It squeezes tight and actually cuts off your circulation so blood can't go through that. Then, you slowly release it, and then your pressure meter goes down. You're going to hear the first pulse that escapes through that cuff. That's going to be your systolic. Then, you're going to keep releasing. You're going to hear the last beat. That's going to be your diastolic. That's when the pressure of the cuff gets to be lower than the resting pressure of your cardiovascular system. That's your diastolic. So what it would look like—I’m going to pump this [cuff] up. Use the stethoscope. I would release. I wouldn't hear anything. Then all of a sudden, I’d hear something—some thump, thump, thump, thump. Then, I wouldn't hear anything. So I’d record that. Make sense?

Stethoscope

With our stethoscope—first the stethoscope has two directions—you see how it's a V? The V points towards your eyeballs because your ear canals actually go that way. That way, you can hear. You line up this [flat piece of the stethoscope] along her radial artery. What I suggest [to] do is pump it up to right on 90. And shift this… [flat piece of the stethoscope] around, so you can get a good hearing. Then, I can pump up, all right? Initially, I hear silence. As this…[pressure] lowers, you start to hear thump, thump. You keep hearing that until your diastolic number—[until] you don't hear the thump, bump anymore. Questions about that?