



# How to Measure and Record Vital Signs During First Aid

Five Methods: [Temperature](#) [Pulse](#) [Respiration Rate](#) [Blood Pressure](#) [Other Signs](#)

Patient vital signs -- body temperature, blood pressure, heart rate and respiration rate -- tell medical personnel a great deal about a patient. If you have to administer first aid, you can take vital signs and report them to medical personnel over the phone or when they arrive on the scene. This information can be very important in helping a medic, nurse or doctor diagnose and care for the patient.

Method  
1

## Temperature

**1** Ask if the patient ate or drank something hot or cold, smoked, chewed gum or did any strenuous activity within the last 10 minutes. If the patient has done any of these things, wait to take the temperature for 10 minutes.

**2** Take the patient's temperature.

- Place the thermometer under the tongue to take an oral temperature only if the patient is at least 5 years old, conscious, lucid, able to breathe through the nose, and doesn't have a facial injury that would make it difficult to hold the thermometer under the tongue.
- Use a digital thermometer, not a glass thermometer. If the glass breaks, you or the patient may be cut, and if the thermometer contains mercury you or the patient may come in contact with it. Mercury is toxic.
- Use a thermometer strip on the forehead or put the thermometer under the patient's arm (axillary temperature) if you can't take an oral temperature. Thermometer strips and axillary temperatures are less accurate than other methods of taking a temperature.

**3** Wait until the digital thermometer beeps to read the display. If you use a temperature strip, wait for the time specified in the instructions.

**4** Write down the patient's temperature, where on the body it was taken, and the time. Normal temperature is somewhere around 98 degrees Fahrenheit (37 Celsius).

Method  
2

## Pulse

**1** Find the patient's pulse with your fingers. Don't use your thumb when finding a pulse, because you will feel your own pulse instead of the patient's pulse.

- Press your fingers against the bony part of patient's wrist. You will be pressing an artery between your fingers and the wrist bone, which helps you feel the pulse. Take care not to press too hard.
- If you can't find the pulse in the wrist, try finding it on the side of the patient's neck or on the inside of the upper arm or upper leg.

**2** Count the number of beats that occur in 15 seconds. Multiply by 4 to get the heart rate. If the pulse is irregular, count for a full minute.

- A normal heart rate is between 60 and 100 beats per minute. In addition to the heart rate, note any irregularities.
- A regularly irregular heart is one that seems to have an extra beat or a skipped beat at regular intervals.
- An irregularly irregular heart rate has no real pattern of irregularity. It may be difficult to determine a heart rate.
- Athletes may have heart rates lower than 60 and a person in pain or other distress may have heart rates higher than 100

### 3 Write down the heart rate, any irregularities and the time the pulse was taken.

#### Method 3

### Respiration Rate

- 1 Measure respiration without informing the patient, because knowing that you are measuring respiration may make the patient change his or her respiration rate.**
- 2 Count the number of inhalations that occur in 15 seconds.** Multiply by 4 to get the respiration rate.
- 3 Note whether the respiration is abnormal in any way, such as labored or raspy.** Normal respiration is between 14 and 20 per minute.
- 4 Write down the respiration rate, whether it seems abnormal, and the time.**

#### Method 4

### Blood Pressure

- 1 Position the patient's arm so the elbow is about even with the heart and slightly bent.**
- 2 Wrap a blood pressure cuff, or sphygmomanometer, around the patient's upper arm.** It should be snug but not tight, and high enough so the cuff doesn't sit in the crook of the elbow. Make sure you can see the gauge.
  - Use the right size cuff for the patient. Children and obese adults require different sizes of cuffs.
- 3 Use the stethoscope on the arm to listen for a pulse.** You may have to hunt around between the cuff and the elbow, or even place the diaphragm of the stethoscope slightly under the cuff.
  - You may need to inflate the cuff slightly to put enough pressure on the artery to detect the pulse.
- 4 Close the valve and use the bulb to inflate the cuff.** Listen for the pulse to disappear.
- 5 Continue inflating until the gauge reads 30 millimeters of mercury (mmHg) higher than it did when the pulse disappeared.**
- 6 Open the valve just enough to let the air out slowly, no faster than 5 mmHg per second.** Listen for the pulse to return.
- 7 Note the reading when you can hear the pulse again.** This is the systolic pressure, which is the pressure exerted on the arteries when the heart is pumping the blood.
- 8 Continue deflating the cuff while listening to the pulse.**
- 9 Note the reading when the pulse disappears again.** This is the diastolic pressure, which is the pressure on the arteries between heartbeats.

**10 Write down the blood pressure.** First list systolic pressure, then forward slash, then diastolic pressure. An example of a blood pressure reading is 120/70, which you would read as "120 over 70."

**11 Take the blood pressure in the other arm and compare the readings.** For subsequent blood pressure readings, use the arm that gives the highest reading.

- Normal blood pressure for adults is a systolic reading of less than 140 mmHg and a diastolic reading of less than 90 mmHg. However, patients in distress may have higher pressures, and patients who are going into shock may have diastolic readings of less than 80 mmHg. Normal blood pressure readings for children vary by age.
- Be aware that you may experience an auscultatory gap, when the pulse temporarily disappears, between the systolic and diastolic readings. If the reading you get isn't what you expect, try again.

**12 Record each blood pressure reading, the arm you used to take the reading, and the time at which you took it.**

Method  
5

## Other Signs

**1 Note other vital signs in your report if the situation warrants it.**

- If the patient lost consciousness or suffered a head injury, check the pupils of the eye to see if they are the same size and react to light.
- Check the blood glucose level of diabetic patients if you have the equipment to do so.
- Ask patients in pain to rate their pain level from 1 to 10.

## Community Q&A

### Why are vital signs important?

Jonas DeMuro,  
M.D.

Vital signs are important to determine if the patient is stable or unstable from a hemodynamic standpoint. For example, a determination can be made about whether or not the patient is going into shock from the vital signs.

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## Warnings

- Don't attempt to take an oral temperature on a patient with an injured mouth, and don't use an injured arm to measure pulse or blood pressure.

## Things You'll Need

- Thermometer
- Watch with a second hand
- Blood pressure cuff
- Stethoscope
- Pen or pencil and paper

## Sources and Citations

- [http://en.wikipedia.org/wiki/Vital\\_signs](http://en.wikipedia.org/wiki/Vital_signs)

