

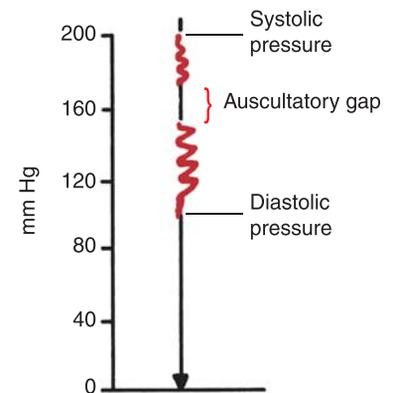
Now you are ready to measure the blood pressure.

- Center the inflatable bladder over the brachial artery. The lower border of the cuff should be about 2.5 cm above the antecubital crease. Secure the cuff snugly. Position the patient's arm so that it is slightly flexed at the elbow.
- To determine how high to raise the cuff pressure, first estimate the systolic pressure by palpation. As you feel the radial artery with the fingers of one hand, rapidly inflate the cuff until the radial pulse disappears. Read this pressure on the manometer and add 30 mm Hg to it. Use of this sum as the target for subsequent inflations prevents discomfort from unnecessarily high cuff pressures. It also avoids the occasional error caused by an *auscultatory gap*—a silent interval that may be present between the systolic and the diastolic pressures.
- Deflate the cuff promptly and completely and wait 15 to 30 seconds.
- Now place the bell of a stethoscope lightly over the brachial artery, taking care to make an air seal with its full rim. Because the sounds to be heard, the *Korotkoff sounds*, are relatively low in pitch, they are generally heard better with the bell.



A loose cuff or a bladder that balloons outside the cuff leads to falsely high readings.

An unrecognized auscultatory gap may lead to serious underestimation of systolic pressure (150/98 in the example below) or overestimation of diastolic pressure.



If you find an auscultatory gap, record your findings completely (e.g., 200/98 with an auscultatory gap from 170–150).

An auscultatory gap is associated with arterial stiffness and atherosclerotic disease.²⁰

- Inflate the cuff rapidly again to the level just determined, and then deflate it slowly at a rate of about 2 to 3 mm Hg per second. Note the level at which you hear the sounds of at least two consecutive beats. This is the systolic pressure.