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Manual Blood Pressure (Auscultation Technique)

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Protocol status: In development

We are still developing and optimizing this protocol

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Abstract

The following SOPs outline how to take a blood pressure measurement both manually and using an automated device.

Blood-pressure measurement is warranted in any situation that requires assessment of cardiovascular health, including screening for hypertension and monitoring the effectiveness of treatment in patients with hypertension.

Attachments



[WelchAlllyn](#)

[Sphymoma...](#)

200KB

Guidelines

- Blood pressure should be taken in a quiet room
- Blood pressure should not be taken if the individual has recently engaged within physical activity, used tobacco, ingested caffeine or eating within the last 30 minutes

Equipment Required

1

- Stethoscope
- Sphygmomanometer (cuff, bulb and a manometer)

Equipment

Sphygmomanometer

NAME

Sphygmomanometer

TYPE

Welch Allyn

BRAND

-

SKU

Equipment

Stethoscope

NAME

Stehoscope

TYPE

Littman

BRAND

-

SKU

Preparing for the Measurement

- 2 Follow the Steps below to help prepare your PPC for measurement:
- The patient's back and legs should be supported with legs uncrossed and feet resting on a firm surface
 - The patient's arms should be bare to the shoulder the arm should be supported at heart level.
 - The appropriate cuff should be selected by measuring the arm circumference at the midpoint of the upper arm which is the half way point between the acromion and the olecranon processes.
 - After choosing the correct cuff based upon the sizing, it should be wrapped around the arm approximately 2cm above the crease of the elbow, with the mid line of the cuff placed directly over the brachial artery.
 - The cuff should be tight, but you should still be able to fit two fingers underneath the bottom of the cuff.

Pulse-obliteration Pressure

- 3
1. Determining the pulse-obliteration pressure reduces the risk of overinflating the cuff and causing discomfort to the patient.
 2. Palpate the radial pulse whilst inflating the cuff to 80 mm Hg and then continue to inflate the cuff by 10 mm Hg increments and then take note of when the pulse disappears.
 3. To confirm the pulse-obliteration pressure, deflate the cuff at a rate of 2 mm Hg per second and note when the pulse reappears as this is the pulse-obliteration pressure

Blood pressure Measurement

- 4
1. Place the stethoscope over the brachial artery, using enough pressure to provide good sound transmission.
 2. Inflate the cuff to 20 to 30 mm Hg above the pulse obliteration pressure then deflate the cuff at a rate of 2 mm Hg per second by opening the valve attached the bell slowly, whilst listening for the appearance of the Korotkoff sounds.

3. The appearance of a repetitive tapping sound (reappearance of the pulse) is equal to the systolic blood pressure and then the disappearance of any sounds equals the diastolic blood pressure.

4. The cuff should still be deflated for another 10 mm HG to ensure diastole has been measured correctly.

5. Blood pressure should be taken twice, with at least one-minute in-between measurements.

Considerations

- 5
 - Blood pressure should be taken in a quiet room
 - Blood pressure should not be taken if the individual has recently engaged within physical activity, used tobacco, ingested caffeine or eating within the last 30 minutes

Interpretation

6

Blood pressure readings can be categorised by the following criteria (ACSM):

Category	Systolic.mmHg.	Diastolic.mmHg.
Normal	<120	<80
Prehypertension	120-139	80-89
Stage 1 Hypertension	140-159	90-99
Stage 2 Hypertension	>160	>100

Table 1: Normative blood pressure data provided by ACSM