

Diploma in Pharmacy 1st Year

Human Anatomy & Physiology Practical

To perform and report blood pressure of your subject.

Aim:

To perform and report blood pressure of your subject.

Reference :

Dr. Gupta G.D , Dr. Sharma Shailesh , Dr. Sharma Rahul Kumar ,“Practical Manual of Human Anatomy and Physiology” Published by Nirali Prakashan , Pg.No 81 - 84

Apparatus Required

Appropriate Cuff, sphygmomanometer, stethoscope and documentation file.

Theory :

- Blood pressure is the pressure of circulating blood against the walls of blood vessels
- A normal blood pressure level than 120/180 mmHg.
- A blood pressure test measures the pressure in your arteries as your heart.

Different posture

Supine Position

When compared to sitting, supine, and supine with crossed legs, blood pressure drops in the standing position. When compared to the other postures, the highest systolic and diastolic blood pressure has been observed in the supine position.

Fowler's Position

Blood pressure in this position is intermediate between seated and supine postures, according to a cross-sectional study of hypertension patients found the similar tendency.

Sitting Position

Blood Pressure (BP) should be taken in a sitting or supine position, then in a standing position, with the patient's arm placed at the level of the right atrium in each position.

Different Arms Blood Pressure

Blood pressure measurements differ in the right and left arms by a few points is not the cause for concern. It is quite natural. A difference of more than ten points, on the other hand, may indicate problems. Person needs to mention this at the next appointment with the doctor if the different blood pressure readings in his/her arms are off by more than 10 or 15 points, and ask the doctor or nurse to check both arms.

Before and After Exertion of Blood Pressure

After a workout, the blood pressure should return to normal within a few hours. At times the person finds that his/her blood pressure does not recover to its pre-exercise level. This is because blood pressure naturally drops after a few hours of exercise.

When the person exercises, his/her blood pressure normally rises "Blood pressure is typical to be higher than baseline during and soon after exercise," says Dr. McKnight. Exercise can raise systolic blood pressure by 50 to 70 mmHg in adults with normal or high blood pressure.

Procedure

- 1) Hands should be decontaminated and local protocols on personal protective equipment should be followed.
- 2) Hands should be decontaminated of the person whose B.P. is to be checked.
- 3) The cuff should be placed on to the patient arm, 2cm above the brachial artery, aligning the artery index marker on cuff with the brachial artery.
- 4) The sphygmomanometer should be positioned close to patient. It should stand vertical and at the eye level.
- 5) The systolic pressure should be estimated and the brachial artery should be palpated.
- 6) Then the cuff should be inflated and the reading should be noted when brachial pulse disappears.

- 7) The cuff should be inflated to 30mmHg above the estimated systolic level sufficient to occlude the brachial pulse.
- 8) The diaphragm of the stethoscope should be placed gently over the brachial artery.
- 9) Excessive pressure should not be applied on the diaphragm or the diaphragm should not be tucked under the edge of the cuff.
- 10) The cuff should be deflated at a rate of 2-3mm/sec, when Korotkoff sound appears (systolic) and disappear to the (diastolic)nearest 20mmHg.
- 11)The cuff should be deflated completely and decontaminated after the taking the measurement It should be kept at appropriate place.

Result:

In a sitting position with the arm at the right atrial level, both systolic and diastolic blood pressures were significantly lower than in a supine position. When the arm was put on the arm support of the chair or upright, parallel to the body, systolic and diastolic blood pressures were higher than when the arm was supported at the level of the right atrium in sitting and standing positions. The length of time spent standing had no effect on the assessment of orthostatic hypotension

- 1) The blood pressure of 110/75 mmHg.
- 2) Diastolic pressure-75mmHg
- 3) Systolic pressure-110mmHg