Standard Operating Procedure SSEHS-EI-100

Equipment: Blood Pressure Monitors

Location: SCHOOL OF SPORT, EXERCISE AND HEALTH SCIENCES

SOP Version History

Version Reviewed	Date Revised/ Reviewed	Revision Summary	New Version Number
001	**13/12/2017**	**Periodic review – no changes required**	**002**
002	**18/02/2020**	**Update the new Blood Pressure Catagories**	**003**
003	**24/03/2022**	**Cuff placement details added**	**004**

Withdrawal Date	

Document Control

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1. PURPOSE

To describe the procedure for the operation of the Blood Pressure Monitors.

2. SCOPE

This procedure is applicable to all persons using the Blood Pressure Monitors.

3. RESPONSIBILITES

3.1. The operator who performs the analysis is responsible for ensuring they are familiar with the procedure and have been appropriately trained.

3.2. All those using the equipment must be have read the appropriate RAs and SOPs.

4. REFERENCES

SSEHS safety manual
Current SOPs for:
Reporting an adverse event (AI-008)
Blood Pressure Monitor instruction manual – hard copy is stored in the technicians' office.

5. GENERAL DESCRIPTION

Arterial blood pressure is not constant. Each heartbeat generates a SYSTOLIC PRESSURE, which is the highest pressure observed in the artery and relates to the contraction of the heart, and a DIASTOLIC PRESSURE, which is the lowest pressure observed in the artery resulting from a drop in pressure during relaxation of the heart. Blood Pressure monitor enables you to measure your systolic and diastolic blood pressure and aids in monitoring your health.

6. OPERATION

Figure 1.0

6.1. Blood Pressure monitors operate with batteries, so there is no need to attach it to a power cable – make sure the batteries are full when you switch it ON.

6.2. Patients should be seated for at least 5 min in a chair with their back supported and their arms bared and supported at heart level. Patients should refrain from smoking cigarettes or ingesting caffeine during the 30 min preceding the measurement.

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Figure 2.0

6.3. A cuff containing an inflatable bag is wrapped around the upper arm – see *Figure 2.0*. The cuff should be placed around 2cm above the crease in the elbow with the arrow pointing down the centre of the forearm. The cuff should be tight enough so that you can only fit one finger between the cuff and the participant's arm. The bag is connected to the monitor, which will indicate the blood pressure readings.

6.4. Ensure the procedure is explained to the participant beforehand, so they know what to expect before start. Some participants may feel uncomfortable when the cuff around their arm gets too tight.

6.5. To turn the monitor on click on the **O/I - START** button. To start the procedure, click on the **START** button again. The cuff will start to inflate to the default cuff pressure that it is set to. When it reaches the default pressure, it'll start to deflate gradually. Make sure participant is stationary during this procedure.

6.6. Once the pressure is released completely, the readings will appear on the monitor screen – *see Figure 1.0.*

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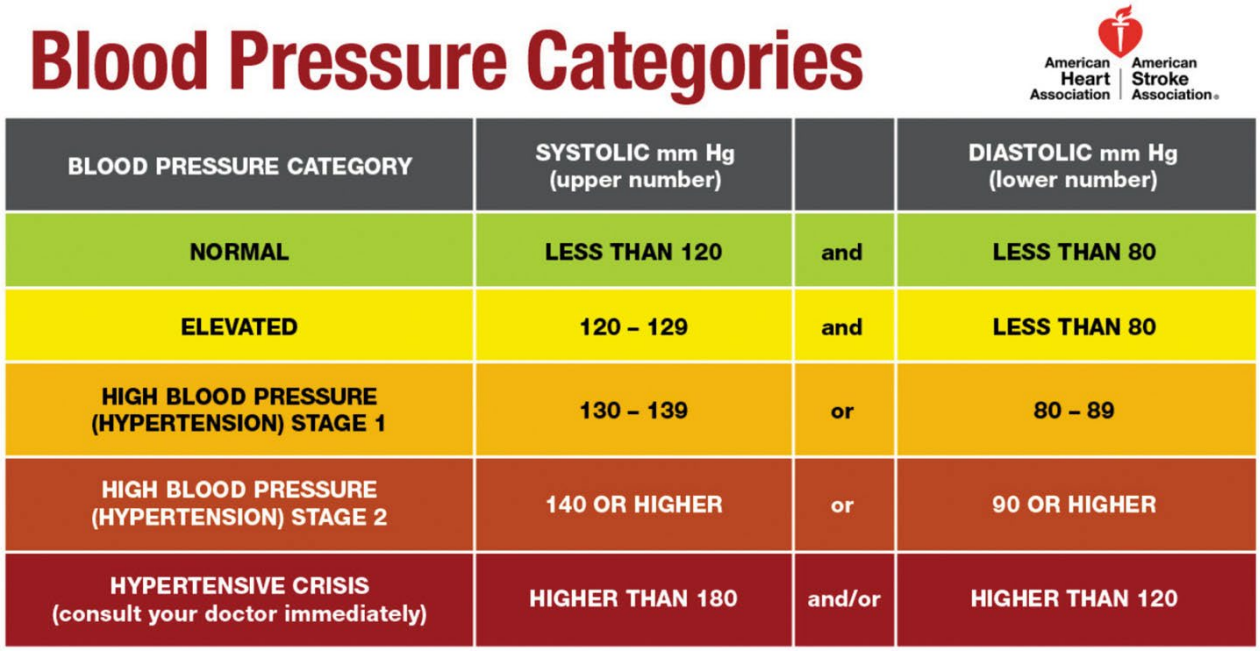

BLOOD PRESSURE CATEGORY	SYSTOLIC mm Hg (upper number)		DIASTOLIC mm Hg (lower number)
NORMAL	LESS THAN 120	and	LESS THAN 80
ELEVATED	120 – 129	and	LESS THAN 80
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1	130 – 139	or	80 – 89
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2	140 OR HIGHER	or	90 OR HIGHER
HYPERTENSIVE CRISIS (consult your doctor immediately)	HIGHER THAN 180	and/or	HIGHER THAN 120

Chart above shows the current blood pressure categories. Once the procedure is over, the monitor should be switched **OFF** by holding the **O/I-START** button for couple of seconds.

7. CLEANING AND MAINTENANCE

7.1. To avoid moisture entering the instrument during external cleaning use only a clinell wipe and dry with a dry tissue. If liquid does go into the main body of the instrument, wait until the instrument is completely dry before use.

7.2 Technical staff are responsible for ensuring that the batteries are changed when necessary.

8. CALIBRATION

Calibration is not needed.

9. PROCEDURE TO BE CARRIED OUT IN THE EVENT OF MALFUNCTION

In the event of malfunction or breakdown, display an “OUT OF ORDER, DO NOT USE” notice clearly on the instrument and contact the nominated person responsible for the equipment who will arrange for repair of the instrument if necessary.

10. SAFETY

10.1. The user must follow and comply with all University and Departmental safety guidelines (see Departmental Safety Manual) when using this equipment.

10.2. Summary of risks for operator/ participant
10.2.1. In light of an unexpected ‘High blood pressure reading’

10.3. Key safety issues (to minimise the above risk)
10.3.1. n/a.

11. DOCUMENTATION