

Physical Measures: Blood Pressure & Resting Pulse

Clinical S.O.P. No.: 8
Version 1.0

Compiled by:	<i>Shona Brearley</i>
Approved by:	<i>[Signature]</i>
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DOCUMENT HISTORY

Version number	Detail of purpose / change	Author / edited by	Date edited
1.0	New SOP	Shona Brearley	

1. Introduction

The measurement of blood pressure (BP) and resting pulse gives an overall general assessment of the state of the cardiovascular system. It is important to obtain as accurate a reading as possible.

2. Objectives

To describe the procedure for obtaining BP and pulse recordings and promote uniformity throughout the SDRN, in accordance with ICH GCP guidelines.

3. Responsibilities

Research nurses trained in the measurement of BP and pulse using the standardised equipment supplied in accordance with ICH GCP guidelines.

4. Equipment

- Omron digital BP monitor or equivalent, as recommended by British Hypertension Society
- BP cuff x 3: 1 small, 1 medium and 1 large
- Batteries x 4: AA size, rechargeable or non rechargeable

5. Method

Preparation of patient

- Ask if he/she has participated in any of the following in the previous hour
 - i) Smoked either a cigarette or pipe
 - ii) Drank any coffee, tea or cola
 - iii) Participated in any arduous activityIf the answer to any of these is "yes", delay measurement for at least one hour, and record this on the CRF.
- Ask the patient to sit in a chair. Legs should not be crossed.
- Ask him/her to remove or loosen any clothing covering the non-dominant upper arm (or the dominant arm if the other is not available).
- Explain briefly what is involved i.e. that they will feel the cuff tighten and relax on their arm but should not be too uncomfortable.

Procedure

- Omron should be placed at the level of the participant's heart. (If machine placed higher a false low reading is obtained and if placed lower a false high reading will be obtained).
- Put the appropriate cuff size on the participant's upper arm (see fig 1). It is important that the cuff covers 80% of the circumference of the midpoint of the upper arm.
- Rotate the cuff round so that the green marker is over the brachial artery. Rest the arm on a pillow/ side of bed ensuring the arm is at heart level.

Fig 1.

Circumference of Upper arm	Size of Cuff	Size of Cuff Bladder
17-22 cm	Small	<12cm x <22cm
22-32 cm	Regular	12x22cm
32-42	Large	15x29cm

- REST THE SUBJECT FOR FIVE MINUTES AT THIS STAGE.
- Ask him/her not to move or speak for a minute while the recording is being taken.
- A reading of both blood pressure and pulse will then be obtained.
- Record readings of BP and pulse in the CRF. Usually 2 or 3 readings in order to get accurate mean.
- REST THE SUBJECT FOR A FURTHER THREE MINUTES MINIMUM BEFORE REPEATING THE RECORDING.
- Record the second BP and pulse in the CRF.