

# Blood Pressure Measurement

## With Mercury Blood Pressure Monitors

- The patient should be seated for at least 5 minutes, relaxed and not moving or speaking
- The arm must be supported at the level of the heart. Ensure no tight clothing constricts the arm
- Place the cuff on neatly with the centre of the bladder over the brachial artery. The bladder should encircle at least 80% of the arm (but not more than 100%)
- The column of mercury must be vertical, and at the observers eye level
- Estimate the systolic beforehand:
  - a) Palpate the brachial artery
  - b) Inflate cuff until pulsation disappears
  - c) Deflate cuff
  - d) Estimate systolic pressure
- Then inflate to 30mmHg above the estimated systolic level needed to occlude the pulse
- Place the stethoscope diaphragm over the brachial artery and deflate at a rate of 2-3mm/sec until you hear regular tapping sounds
- Measure systolic (first sound) and diastolic (disappearance) to nearest 2mmHg

### Cuff Sizes

Indication	Width (cm)*=	Length (cm)*=	BHS Guidelines Bladder width & length (cms)*	Arm circ. (cm)*
Small Adult/Child	10 - 12	18 - 24	12 x 18	< 23
Standard Adult	12 - 13	23 - 35	12 x 26	< 33
Large Adult	12 - 16	35 - 40	12 x 40	< 50
Adult Thigh Cuff**	20	42		< 53

\* The range for columns 2 and 3 are derived from recommendations from the British Hypertension Society (BHS), European Hypertension Society (ESH) and the American Heart Association. Columns 4 and 5 are derived from only the BHS guidelines.

\*\* Large bladders for arm circumferences over 42cm may be required

= Bladders of varying sizes are available so a range is provided for each indication (applies to columns 2 and 3)

### Points to note:

The date of next servicing should be clearly marked on the sphygmomanometer (6 monthly).

All maintenance necessitating handling of mercury should be conducted by the manufacturer or specialised service units.

Anaeroid manometers tend to deteriorate and need regular checking. In many instances aneroid monitors cannot be corrected accurately therefore they should not be used as a substitute for mercury sphygmomanometers.

