

# BLOOD PRESSURE



## Understanding & Recording Blood Pressure Readings

Under normal circumstances it would be unusual for an Occupational First Aider to have a need to take and record a blood pressure (BP) reading. Nevertheless there are some advantages in having an understanding of this subject for a variety of reasons, such as knowing:

- What the numbers mean?
- What is a normal BP?
- How a high BP is diagnosed?

Blood Pressure is typically recorded and written as two numbers:

125  
75

### Systolic Pressure

The top number measures the pressure in the arteries when the heart muscle contracts, thereby producing a pulse.

### Diastolic Pressure

The bottom number measures the pressure in the arteries when the heart momentarily rests and refills with blood between beats.

### Unit of Measure

The unit of measure is recorded as 'millimetres of mercury', shown simply as 'mm Hg' using a Sphygmomanometer.

### Please Note

Don't worry too much about the term mm Hg, for we measure many things as 'units of something' e.g. Celcius; Boiling point of water (100C) etc. Once we know what 'normal' is in relation to any measurement, then it simply becomes normal for us to comprehend variations.

So what is a normal healthy range for BP in an adult at rest?

Category	Systolic (mm Hg)		Diastolic (mm Hg)
Normal	approx 120 or less	&	less than 80
Hypertension	120-139	or	80-89
High BP (stage 1)	140-159	or	90-99
High BP (stage 2)	160 or higher	or	100 or higher
Hypertensive Crisis*	Higher than 180	or	Higher than 110

\*Emergency care needed

**Note:** Your doctor should also investigate unusually low BP recordings too.

## Which number is more important, top (systolic) or bottom (diastolic)?

More attention is given to the top (systolic BP) number, especially when considering risk factors for cardiovascular disease or stroke, however a high bottom number (diastolic BP) can also be of concern for a variety of reasons.

It should be noted that in most people, the systolic BP rises steadily with age due to issues such as the long term build up of plaques on the inside of arteries, cardio-vascular disease and the increasing level of stiffness of large arteries.

## Taking a basic Systolic Blood Pressure

By Palpation (using BP Cuff & fingers) :

- Rest & Reassure the patient - explain what you are about to do
- Expose the patient's upper arm (uninjured / no recent surgery) - at the level of the heart
- Apply the correct Cuff size (Adult/Obese) around the arm above the elbow – placing the bladder inlet & outlet to the inside of the arm
- Locate the radial pulse at the patient's wrist & maintain feel of the pulse during the procedure
- Inflate Cuff noting on the gauge at what point the pulse disappears - inflate a further 10 - 20 mm Hg
- Slowly deflate the cuff noting the gauge pressure at which the pulse returns - this is the systolic BP - rounded off to nearest 5mm Hg
- Record - eg. 125/palp. or 125/systolic

