

We are going to demonstrate how to measure blood pressure and pulse rate.

For this demonstration we need:

A digital blood pressure monitor.

And a pulse oximeter.

A blood pressure cuff should be placed around the bare upper arm.

The cuff should be positioned slightly above the arm bend.

Fasten the cuff firmly but not too tightly.

The person should remain seated and quiet for the duration of the test.

To find a person's blood pressure, the cuff inflates to a point where it temporarily cuts off the blood flow through the brachial artery in your arm.

The pressure in the cuff is then slowly released.

Within the cuff is a sensor that can detect blood flow.

As the pressure decreases blood begins to intermittently flow through the brachial artery.

The point at which this happens is called the systolic blood pressure.

The point when the flow goes from intermittent to continuous is the diastolic blood pressure.

These readings are displayed with the systolic number above the diastolic number.

This person has a blood pressure reading of 115 over 70.

The blood pressure monitor also records pulse rate, which we can see is 67 heart beats per minute.

Another method of measuring pulse rate is to use a pulse oximeter.

This is attached to a fingertip.

For a physically healthy adult, a blood pressure of around 120 over 80 is typical.

A blood pressure reading of less than 130 over 80 is classed as normal.

The NHS defines a resting heart rate between 60 and 100 beats per minute as normal.

However age is a significant factor on normal resting heart rate.

Generally speaking, children have a high resting heart rate that falls as they get older.

And as adults reach old age rate, it rises again.