

24 hour blood pressure monitoring



This information sheet from Great Ormond Street Hospital (GOSH) explains about 24 hour blood pressure monitoring, why you might need it and what it involves.

Information for children and young people

What is blood pressure?

Your blood pressure (or BP) is a measurement of the force your heart uses to pump blood around your body. Each time your heart beats, it squeezes to pump blood around the body and relaxes to fill up with blood before the next beat. Your BP measurement is in two parts – the first part is the pressure when the heart is squeezing and the second is the pressure when the heart is relaxing.

There are lots of things that can affect your BP including your height and weight, certain medical conditions or lifestyle choices such as eating too much salt in your diet or drinking fizzy drinks containing caffeine. We also know that your BP can rise if you are stressed or anxious.

What is home BP monitoring?

Taking regular BP measurements while you are at home can give us a better idea about your true BP. This can be done in two ways.

- You can buy a BP monitor and check your BP regularly at home.
- You could come to hospital to be fitted with a monitor which is programmed to take BP measurements every 30 minutes during the day and hourly during the night over a 24 hour period. This sort of regular BP measurement is called 24 hour ambulatory blood pressure monitoring – ambulatory just means that you are walking about doing normal day to day things.

Why do I need it?

You may have had your BP measured while you are in hospital or seeing your family doctor (GP). If the result was higher than expected for your height and age, we need to measure your BP over a 24 hour period to see if your BP is always high or not. Measuring your ambulatory blood pressure is an important part of monitoring your BP so that we can be sure you are getting the best treatment possible.

What happens when the equipment is fitted?

At GOSH, the appointment is part of an assessment of your BP. Fitting the monitor usually takes about 30 minutes and involves meeting the nurse and having a general check-up before fitting the monitoring equipment. They may also take some blood samples for testing and send you to have an echocardiogram (ECHO) and an ultrasound scan of your kidneys.

The blood pressure monitor is a small computer connected by a flexible tube to a soft arm cuff. The nurse will fit the cuff around the top part of your arm – usually on the arm you do not use for writing – and make sure it is in the right place. You can clip the monitor onto your belt, wear it on a strap or for younger children a specially made bag is provided. As the cuff goes around the top of your arm, it can help to wear a vest or short sleeved t-shirt to the appointment.

Each time the monitor measures your BP, the cuff is blown up with air so that it is tight around the top of your arm. After a few seconds, the air is gently released and the machine may

make a beeping noise when it has recorded your BP. The machine will only beep during the day and we can turn off the beep if you prefer. The monitor will measure your BP every 30 minutes during the day and every hour during the night. We will ask you to keep a diary telling us what you did for the monitoring period. We can then match up your diary with your BP measurements to see what is happening.

Once you are wearing the monitor you must keep your arm still when the BP is being measured, do not fiddle with the cuff, take it off or press any of the buttons on the monitor. This could make the recording stop or be false so we would have to do the test again. The monitoring equipment should not get wet so you will have to do without a bath or shower for the 24 hour period. After 24 hours is up, you can take off the cuff and your parents can turn off the monitor.

Will it hurt?

Taking your BP does not hurt but some people find it uncomfortable when the cuff is blown up with air. It can feel very tight around your arm but it goes down within a few seconds.

If you have any questions, please call 020 7405 9200 ext 5102.

You can also email

Eileen Brennan at

eileen.brennan@gosh.nhs.uk

What happens next?

Your parents can return the equipment to us or if you live far away, we can arrange a courier to collect it and deliver it to us.

When we get the monitor back, we will download the data into a computer, add information from your diary and compare the results with those expected for someone your height and age. Once we have done this, we will write to you, your parents and your family doctor to explain the results and give you instructions or recommendations for further treatment.

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