



# Home health

Do you want to take control of your health between visits to the doctor? We've checked out ranges of blood pressure and blood glucose monitors that you can use at home



**Faced with a vast array of kits, how do you choose the right one for you?**

your level is very high, the way you feel isn't an accurate guide to what's happening.'

If you have not been diagnosed, but suspect you may have diabetes, speak to a health professional before buying a monitor.

## Choosing a monitor

Take advice from your diabetes care team and, when looking for a monitor, consider where and how often you'll use it. A screen light could be useful for taking readings at night, for example, or a small monitor if you're out and about a lot. Look at the instructions, button size and display. Extra functions can be handy but they're not for everyone, so decide which you'll really use.

Those with diabetes who take glucose-lowering medicine can get test strips free on prescription. Those managing it with diet alone pay for the prescription.

See 'Health kit caution', p6.

## OUR RESEARCH

We selected a range of widely available blood pressure monitors, all approved for clinical use by the British Hypertension Society, and five widely available blood glucose monitors. Prices listed are what we paid. For both groups we asked three specialist nurses in those fields to assess each kit for comfort, features, ease of use and who they would

suit. We also asked three people with high blood pressure and three with diabetes, all of whom regularly check their levels, to give their verdicts. We'll publish a full comparative test on blood pressure monitors, including accuracy ratings, in 2008.

In March 2007, 2,677 Which? panel members took part in an online survey about DIY health-testing kits.

cuff sizes and it's important that the size is right for your arm. If a cuff is too small, a reading may be too high. Size markers can help – ask the pharmacist if you're unsure.

If you want to carry a kit around, a small monitor is good. Check the instructions are clear if you plan to use complex functions, the display size if your eyesight isn't great, and the buttons and method of inflation if you have limited dexterity.

## Diabetes Who's at risk?

Diabetes, of which there are two types, occurs because of problems with insulin, the hormone that helps glucose enter our cells where it's used as fuel for the body.

With type 1, the insulin-producing cells in the pancreas are destroyed, but nobody knows for sure why. This type tends to develop before the age of 40.

With type 2, the body can't make enough insulin or its insulin doesn't work properly. It accounts for between 85 and 95 per cent of diabetes' cases and is often linked with being overweight. Diabetes UK says there are more than 2 million people with diabetes in the UK and up to 750,000 people with undiagnosed type 2 diabetes.

You're at a higher risk of type 2 diabetes if: you have a close family history of it; you're overweight; you have high blood pressure; you have impaired glucose tolerance; or if you're black or south Asian. The risk of diabetes also increases with age.

## Checking your blood glucose

Diabetes UK told us: 'People with diabetes need to monitor their blood glucose levels carefully to manage their condition. Unless

**T**he desire to check our own health is increasing, with more products to do this becoming available. A survey of Which? members shows nearly a third of you have used a kit to monitor your health, mostly for blood pressure or blood glucose levels.

But faced with a vast array of kits at your pharmacy, with various buttons and features, some more complex than others, how do you choose the right one for you?

With specialist nurses and regular users, we've scrutinised blood pressure and blood glucose monitors. Looking at comfort, ranges of features and how easy they are to use, we've found different types suit different lifestyles.

## Blood pressure Who's at risk?

According to the Blood Pressure Association, high blood pressure, also known as hypertension, affects around 16 million people in the UK. It can increase your risk of stroke and heart disease.

You're more likely to have high blood pressure if you: have a family history of it or of stroke or heart disease; are black; are overweight; eat too much salt and not enough fruit and vegetables; drink too much alcohol; are physically inactive; or if you're over 50. And if you have conditions like diabetes, kidney disease and heart disease, or are of south Asian descent, pay extra attention to your blood pressure.

## Checking your blood pressure

Monitoring is important and, if you've been diagnosed with high blood pressure, a home monitor can supplement regular checks by a health professional.

## Choosing a monitor

When shopping around for a monitor consider how you'll use it – they either have cuffs that inflate around your upper arm or cuffs for your wrist with smaller kits attached. Many monitors come in different

## Contacts

**Blood Pressure Association**  
020 8772 4994; [www.bpassoc.org.uk](http://www.bpassoc.org.uk)  
**British Hypertension Society**  
[www.bhsoc.org](http://www.bhsoc.org)  
**Diabetes UK**  
020 7424 1000; [www.diabetes.org.uk](http://www.diabetes.org.uk)

## REGULAR USERS TRY OUT A RANGE OF BLOOD PRESSURE MONITORS

**Carol Webley Brown***50, volunteer nurse*

As a nurse, Carol carries a monitor with her, but while she thinks the A&D Palm Top is very portable; it's not for her. 'I got fed up

trying to get the cuff on correctly – it didn't fit my arm,' she says. Carol, who has checked herself for seven years, adds: 'I loved both the Boots and the Omron MX3 – they were easy, easy, easy, and the most comfortable to use.' She thinks features such as graphs on the Omron R7 wrist monitor are unnecessary.

**Jean Samtula***50s, magistrate*

Jean tests her blood pressure only about once a month. She thinks simplicity is key to monitoring, so she doesn't like the Microlife as 'there were too many instructions, it wasn't easy or comfortable

to use and the PC link function was of no use to me'. She also told us: 'The Boots monitor was my favourite as it was very easy to use – the buttons are a good size and it's obvious what each is for.'

**Edric Aris***60s, retired*

Edric's been testing himself for nine years. He needed two attempts to set up the Omron R7 as he found the print in the booklet small. Also, it was hard to

get the monitor in the right position to get a reading. He liked the Microlife as it took three successive readings, but he couldn't imagine using all it had to offer. He says: 'The A&D got my vote – it's basic but the cuff had a superior feel, was lightweight and easy to use. It would be great to take on holiday.'

## Pick your type of blood pressure kit

Our expert health professionals put a range of monitors through their paces

**A&D UA-704 PALM TOP £39.99**

This small, portable, upper-arm model is uncluttered, with one button, but its lack of memory may annoy, as it turns off quite quickly. Instructions could be clearer and the semi-automatic cuff might not suit those with limited dexterity. Needing one battery only, this may suit occasional checkers.

also basic but it can record the last 14 readings. Its instructions are quite clear and one expert praised its warnings about errors. This has no markings for cuff size, so you may need a tape measure, but it has markings to aid correct placement on your arm. The large display and simple buttons make this a good simple model.

optional software for storing readings, but not for a Mac. One expert found the cuff rigid and all felt the level of scrutiny possible is more for a health professional, but it could suit someone really interested in careful monitoring.

liked the fact that this monitor wouldn't give a reading when it was in the wrong position, but one found the instructions complex. Neat and portable, this could be good for those on the go.

**OMRON MX3 PLUS £49.95**

Our experts found this affordable upper-arm model uncomplicated. Two of them thought its instructions were clear but one struggled with the date and time feature. There's no marker to indicate correct cuff size, but there's a tab to show when it's at the right place on an arm. It holds 14 readings and is a good basic monitor.

**OMRON R-7 £99.99**

The small size of this wrist monitor means small buttons and screen, but the most recent measurement can be shown in large text. Small does not mean few features, however. It can hold 90 readings, which can be viewed as graphs, and it connects to a PC. Our experts

**MICROLIFE BP-3AC1-1PC £89.95**

This modern upper-arm monitor has many features. It can take three measurements in succession and give an average, record the last 99 readings, and has

**BOOTS INTELLISENSE BLOOD PRESSURE ARM MONITOR £79.99**

This robust model is

## Checklist

### Taking your blood pressure

- Take readings at roughly the same time of day.
- Avoid having a full bladder and avoid meals, cigarettes and caffeine 30 minutes before testing. Alcohol, anxiety, pain, illness and exercise can also affect your blood pressure.
- Wear something loose fitting so that you are able to push your sleeve up.
- Rest for five minutes before.
- Always use the same arm.
- Sit down and support your arm on a table or desk.
- Ensure the cuff is at the same level as your heart – a cushion underneath can help.
- Follow the manufacturer's instructions carefully.
- Try not to talk or move as you take a reading.
- Take two or three readings a couple of minutes apart and work out an average.
- Accurately record readings and don't round up or down.
- Normal blood pressure varies from person to person, but generally 130/80mmHg is considered normal, while more than 140/90mmHg is thought to be high.

## PEOPLE WITH DIABETES CHECK OUT A NUMBER OF BLOOD GLUCOSE KITS



### David Hutchison

42, secretarial relief assistant and proofreader

David, who enjoys travel, says: 'I liked the compactness of the Freestyle, but wouldn't recommend it to those with

limited vision or dexterity.' He also thinks the Accu-chek has advantages as 'it's user friendly, without hassles or distractions'. The Lifescan, he says, is 'occasionally a bit messy to use' but has a vast range of features. 'It could make you look closely at your lifestyle and how it affects blood glucose control.'



### Peter Gibson

36, sales executive

Peter has a hectic life and he's often on the road, so the Ascensia, was his favourite as no coding (see 'Checklist', below) is required. He also likes the screen light on the Mini. 'This is really useful, as I can do a late-night test without disturbing my partner.'

He thinks all of the meters have advantages and foibles. 'The Accu-chek was least painful and Boots by far the most.'



### Julie Brickley

36, teacher

Julie prefers the smaller models, as she carries the monitor with her at all times and often does a test while she's at school. She says: 'The

Ascensia was easy to use but neither this nor the Boots one was small enough to fit in my handbag.' She likes the Freestyle as it needs the smallest amount of blood. 'It's quick and easy and I could take it to work or out in the evening.'

## Pick the blood glucose kit to suit you

Our expert health professionals draw out the best features of various models

### ACCU-CHEK AVIVA

£15.26

This meter requires a small amount of blood and delivers results quickly. It has a drum with six lancets, which you rotate to get a new lancet, but loading could be easier. It has a hypo alarm if your blood glucose appears low and a memory that can store 500 readings. This is a simple model with a large display.

individual test strips. You place a disc with ten test strips in the back and pull a handle to release a strip. This model requires the most blood – between 2.5 and 3.5 microlitres – and takes the longest to give results. It stores 100 readings. Handy to carry, though bulky, this could be good for those who don't like coding.

the lancet. And amounts of blood needed aren't specified but shown in a picture. Experts found the lancing device easy to use but removing the lancet was tricky. This is good for those who dislike gadgets.



### LIFESCAN ONETOUCH ULTRASMART

£23.49

The ultra-modern UltraSmart has many features. You can record several things, including insulin and oral medication taken, food intake and details of exercise. You can view data as graphs on the monitor or on a computer. But this makes for dense instructions and many buttons. There's a handy button to help remove the lancet without touching it. Results are quick and this could suit those wanting to closely monitor their condition.



### FREESTYLE MINI

£15.26

This compact portable model required the smallest blood sample of all, 0.3 microlitres. It offers results quickly and it has a night light. It can store 250 results but has few extra features. Small buttons and screen mean this could suit a younger user or those on the go.



### BOOTS BLOOD GLUCOSE MONITORING SYSTEM

£11.74

This simple model has just one big button and a large, clear display. Results are fast and it can store 450 readings. While the instructions have large text, it's hard to find advice on using

### ASCENSIA BREEZE

£9.99

An auto disc system on this monitor means no coding is required (see 'Checklist', right) and you don't load

## Checklist

### Measuring blood glucose

- Follow instructions and health professionals' advice carefully.
- Most meters need coding to match the codes on the meter and the test strips, so you'll need to do this every time you open a new box of strips.
- Let your arm hang so blood flows to your fingertips, then you'll usually need to prick your finger with a lancing device. Using a device can be painful, so experiment to find the shallowest depth where you can get enough blood. If you're taking blood from your finger, take it from the side and not the pad for minimal pain.
- Blood is usually applied to the test strip in the meter.
- Results in this country are shown in mmol/l, but some kits can change their display. If your meter shows mg/dl, contact the manufacturer.
- Don't change treatment based on one reading and never ignore symptoms, even if a reading does not match how you feel. Contact a health professional if unsure.
- Levels should be 4-6mmol/l before meals and up to 10mmol/l two hours after a meal.
- Change the lancet each time.