



# 8 HEALTHY BODIES MINDS

including knowing your numbers, eating for health and migraines



ood health is a holistic concept, encompassing your physical, mental, emotional and social wellbeing. In this issue of Your Health, we delve into how and what to eat to boost your body's health and the different health metrics you should be aware of. We also look at migraines — the different types, the various symptoms and how to treat (and hopefully prevent) them.

### STRENGTH IN NUMBERS

Do you know what your body mass index (BMI) or blood pressure (BP) is or should be? What about your blood sugar or cholesterol levels?

If you don't know what your health metrics are, how can you know if you are healthy or not? And on that note, what IS healthy? Let's take a look...

### **BLOOD PRESSURE (BP)**

Your heart is a muscular pump – it pumps blood around your body using a system of blood vessels. BP is created by the force of your heart pumping blood out and the resistance of the vessel walls through which the blood passes.

BP is measured in millimetres of mercury (mmHg) and is usually written down like this: 120/70 mmHg. There are two numbers, because BP varies as the heart beats. The high number is the peak pressure created as the heart beats. The lower number is the residual pressure within the vessels as the heart rests between each beat.

High BP is a reading greater than 140/90 mmHg. High BP is also known as hypertension.



Ideally, we should all have a BP below 120/80. This is the ideal BP for people wishing to have good health. At this level, we have a much lower risk of heart disease or stroke.

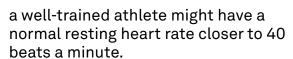
Most adults in the UK have BP readings between 120/80 to 140/90. If your BP is within this range, you should be taking steps to bring it down or to stop it rising any further.

If you have diabetes, your doctor will want to make sure that your BP is very well controlled. This means they will probably want it to be below 130/80 mmHg.

### **HEART RATE (OR PULSE)**

A normal resting heart rate for adults is between 60 to 100 beats a minute. Generally, a lower heart rate at rest implies more efficient heart function and better cardiovascular fitness, e.g.

"Your temperature changes by as much as 0.6°C (1°F) during the day, depending on how active you are and the time of day."



You may have heard of the term 'sinus rhythm'. This is the name given to the normal rhythm of the heart, where the electrical impulses that pace the heartbeat are in a regular and rhythmical manner.

### **BODY MASS INDEX (BMI)**

BMI is a value derived from the weight and height of an individual. It is an attempt to quantify the amount of tissue mass (muscle, fat and bone) in that individual and then categorise that person as underweight, normal weight, overweight or obese based on that value. Commonly accepted BMI ranges are:

Underweight = less than 18.5 kg/m2

Normal weight = 18.5 to 25 kg/m<sup>2</sup>

Overweight = 25 to 30 kg/m2

Obese = more than 30 kg/m2

It is worth noting that people of Asian descent have different associations between BMI, percentage body fat and health risks than those of European descent.

Check out the NHS BMI calculator: www.nhs.uk/live-well/healthy-weight/bmi-calculator/

### **BLOOD GLUCOSE/BLOOD SUGAR**

The average normal blood glucose level in humans without diabetes fluctuates, but it should be between 4.0 and 7.8 mmol/L. Both numbers are important.

### **HYPERGLYCAEMIA**

This is the medical term for a high blood sugar level (greater than 11.1 mmol/L (200mg/dL)) and is a common problem for people with diabetes. It happens when the body has too little insulin or when it can't use insulin properly.

Hypoglycaemia is when a person's blood sugar drops too low (less than 4 mmol/L (70mg/dL)). Blood sugar levels are usually at their lowest in the morning, before the first meal of the day (termed the fasting level), and rise after meals for an hour or two by a few mmol/L.

Blood sugar levels outside of the normal range may be an indicator of a medical condition.

If you are diabetic, your medical team will test your blood regularly for a substance called HbA1c.

HbA1c differs from blood glucose levels. It is a blood protein made from a combination of haemoglobin and glucose (or sugar).

The measurement allows clinicians to get an overall picture of what your average blood sugar levels have been over a period of weeks/months. HbA1c can indicate people with prediabetes or diabetes as follows:

Normal	Below 42 mmol/mol (<6.0%)
Prediabetes	42 to 47 mmol/mol (6.0%-6.4%)
Diabetes	>=48 mmol/mol (>=6.5%)



### **CHOLESTEROL**

Cholesterol is a waxy, fat-like substance found in all cells of the body. Your body needs some cholesterol to make hormones, vitamin D and substances that help you to digest foods. Your body makes all the cholesterol it needs; however, it is also found in some of the foods you eat.

High blood cholesterol is a condition in which you have too much cholesterol in your blood. By itself, the condition usually has no signs or symptoms, thus, many people don't know that their cholesterol levels are too high. People who have a high blood cholesterol have a greater chance of getting coronary heart disease.

A cholesterol test is a blood sample that provides a full "lipid profile",



measuring the levels of all the different blood fats: total cholesterol, LDLcholesterol, HDL- cholesterol and triglyceride concentration.

Cholesterol travels through your bloodstream in small packages called lipoproteins. There are two kinds: low-density lipoproteins (LDL) and high-density lipoproteins (HDL).

- LDL is sometimes called the "bad" cholesterol. A high level leads to a build-up of cholesterol in your arteries.
- HDL is sometimes called the "good" cholesterol. This is because it carries cholesterol from other parts of your body back to the liver where it is removed.



### **TRIGLYCERIDES**

A form of dietary fat found in meats, dairy produce and cooking oils. After eating a meal, the blood is rich in triglycerides. It usually takes a few hours for triglyceride levels to return to normal. The higher the level of LDL cholesterol in your blood, the greater your chance is of getting heart disease. The higher the level of HDL cholesterol in your blood, the lower your chance is of getting heart disease.

Having a test is the only way you will know if you have high cholesterol. The following are considered healthy for most people:

Total cholesterol of 5mmol/L or less;
Non-HDL-cholesterol of 4mmol/L or less;
LDL-cholesterol of 3mmol/L or less;
Fasting triglyceride of 2mmol/L or less;
Non-fasting triglyceride of less than 4mmol/L





### **TEMPERATURE**

Most people think a normal body temperature is an oral temperature (by mouth) of 37°C (98.6°F), but this is an average of normal body temperatures. Your normal temperature may actually be 0.6°C (1°F) or more above or below this. Also, your normal temperature changes by as much as 0.6°C (1°F) during the day, depending on how active you are and the time of day and is affected by hormones.

A fever (pyrexia), in most adults, is an oral temperature above 38°C (100.4°F). A child has a fever when his or her armpit (axillary) temperature is 37.6°C (99.7°F) or higher.

Low body temperature (hypothermia) occurs when the core body temperature drops below 35.0 °C (95.0 °F). Low body temperature usually happens from being out in cold weather, but it may also be caused by alcohol or drug use, going into shock or certain disorders such as diabetes or underactive thyroid. A very low body temperature can be serious or even deadly.

If you have any concerns about any of your health metrics, we advise you check with your GP. THE

### **EATING FOR HEALTH**

On average, the diet of UK adults provides more than enough of most nutrients, but intakes of some vitamins and minerals have been shown to be low in some people.

General nutrition advice is to try to eat a wide variety of foods from the five main food groups, in the right proportions. You should aim for a healthy balance of nutritous food and drink to achieve and maintain a healthy body weight (people with special dietary needs or a medical condition should ask their doctor or a registered dietitian for

The EATWELL Guide advises that to have a healthy, balanced diet, people should try to:

- Eat at least five portions of a variety of fruit and vegetables every day;
- Base meals on 50% protein and carbohydrates and 50% salad and vegetables;
- Have some dairy or dairy alternatives (such as soya drinks);



- Eat less meat/processed meat and replace with beans, pulses, fish, eggs and other protein;
- Choose unsaturated oils and spreads and eat them in small amounts;
- Drink plenty of water, e.g. at least six to eight glasses a day.

If you're consuming food and drink that is high in fat, salt and sugar, have these less often and in small amounts.

Eating five portions of fruit and veg is not as hard as it sounds. A single portion is one apple, banana, pear or similarsized fresh fruit or one tablespoon of dried fruit, such as raisins.

Try the following to increase your fruit and vegetables intake:



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- Swapping your mid-morning biscuit for a banana;
- Adding a side salad to your lunch;
- Including a portion of vegetables with dinner and fresh fruit with plain, lower-fat voghurt for dessert.

### REHYDRATED OR DEHYDRATED? HOW CAN YOU TELL?

If you are dehydrated, i.e. not drinking enough fluid, you may have some or all of the following symptoms:

- Feeling thirsty;
- Feeling dizzy or lightheaded;
- Feeling tired;
- A dry mouth, lips and eyes;
- Dark yellow and strong-smelling urine;
- Peeing little and fewer than four times a day.

### **TIPS TO HELP**

- Try to maintain a healthy fluid intake, and do not wait until you feel thirsty to drink.
- If you find it hard to drink because you feel sick or have been sick, start with small sips and then gradually drink more.
- You can use a spoon to make it easier for your child to swallow the fluids.
- You should drink enough during the day so your pee is a pale, clear colour.
- Drink more when there's a higher risk of dehydrating, e.g. if you're vomiting, sweating or you have diarrhoea. WH



### WHEN IS A HEADACHE A MIGRAINE?

Migraine is a common disabling primary headache disorder and is the second most prevalent neurologic disorder after tension-type headache.

Migraine is a syndrome characterised by periodic headaches with compete resolution between attacks. An attack may be composed of the following stages: prodrome, aura, headache, resolution. A prodrome is a vague change in mood or appetite. An aura is a clear neurological symptom of visual, motor or sensory disturbance.

The frequency of migraine attacks varies from individual to individual, with high frequency classed as several per week and low as several per lifetime. Prevalence peaks between 35 and 39 years.

There are different types of migraine involving different symptoms, so not everyone gets a 'typical' migraine. The most common are 'common' migraines (without aura) and 'classic' migraines (with aura).

Migraine is an inherited tendency to have headaches with sensory disturbance. It's an instability in the way the brain deals with incoming sensory information, and that instability can become influenced by physiological changes like sleep, exercise and hunger.



### **SYMPTOMS**

A typical migraine is one sided and throbbing. In fact, headaches that are one sided, headaches that throb and/or make you feel sick are more likely to be migraines than anything else.

Some people need to go to bed to sleep off their headache. Migraines are often severe enough to be disabling.

Attacks of migraine without aura last between four and 72 hours when untreated or unsuccessfully treated.

The headache is usually on one side of the head with a throbbing or pulsating pain that affects your normal daily life and worsens when you move your body, such as walking or climbing stairs. During this type of migraine, you are likely to feel sick and may vomit or have diarrhoea. You may also become sensitive to light and/or sound.

People who experience migraine with aura will have many or all the symptoms of a migraine without aura, but with additional neurological symptoms which develop over a five to 20-minute period and last less than an hour.

Visual disturbances can include:

- Blind spots in the field of eyesight;
- Coloured spots;
- Sparkles or stars;
- Flashing lights before the eyes;
- Tunnel vision;
- Zig-zag lines;
- Temporary blindness.

#### **HOW IS MIGRAINE DIAGNOSED?**

There's no specific test to diagnose migraines. For an accurate diagnosis to



be made, your GP must identify a pattern of recurring headaches along with the associated symptoms.

Migraines can be unpredictable, sometimes occurring without the other symptoms. Obtaining an accurate diagnosis can sometimes take time.

#### WHAT ARE THE MAIN TRIGGERS?

- Food-related triggers occur in about 10% of people with migraine: missing meals, not hydrating enough with water or consuming too many sugary snacks can all contribute to a migraine attack.
- Some chemicals and food additives may be relevant to migraine attacks, as well as excessive caffeine consumption, and there is evidence that tyramine (found in red wine and some cheeses) is linked to migraine.
- Migraine and stress are strongly linked. Anxiety, excitement and any form of tension and shock may all lead to a migraine attack.



- Migraine is closely associated with female hormones. Some people find migraines start at puberty and are linked to their menstrual cycle. The menopause can also be the most difficult time for people with migraine.
- Environmental triggers such as high altitude, weather, high humidity, loud noises and exposure to glare or flickering lights can contribute.
- Extended periods of time in front of computers can cause problems. Taking regular breaks, sitting properly, using anti-glare screens and good lighting can help prevent this.
- Lack of sleep can be a factor. Shift work, changing routines and jet lag have been found to trigger migraines.
- Like sleep, exercise can both help to

- prevent migraine and be a trigger factor for some people. Regular exercise which is built up gently can help to prevent migraine.
- The use of contraceptives that contain hormones such as the contraceptive pill can trigger migraine.
- Physical conditions such as head injury and muscle tension can trigger migraines.

### TREATMENT AND PREVENTION

The management of migraine can be divided into:

- General measures;
- Management of the acute attack of migraine;
- Prevention of migraine.

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General measures: identifying and avoiding trigger factors can reduce the frequency of migraine attacks by up to 50%. Keeping a trigger diary in addition to a diary detailing attacks can be useful. In approximately 20% of cases the trigger factor may be food or drink related. Regular sleep and good nutrition are important.

Management of an acute attack: overthe-counter (paracetamol, ibuprofen, and aspirin) or prescribed migraine pain relief (oral triptan) are best taken early in the attack before stomach absorption is affected by the migraine. Your GP may also prescribe you sickness medication.

Prevention of migraine: migraine recurring four or more times a month should be treated with preventative medicine. There

are a number of treatment options that your GP can consider and specialist advice can be sought if required.

There is currently no cure for migraine, but there are several treatments that may help, including:

- Sleeping or lying in a darkened room;
- Eating something or drinking water;
- Acupuncture is said to help some people;
- Taking over-the-counter painkillers, such as paracetamol, aspirin and ibuprofen if ordinary painkillers aren't helping, you should make an appointment to see your GP. They may recommend taking painkillers in addition to a type of medication called a triptan and possibly anti-sickness medication. **YH**

Sources: British Nutrition Foundation, NHS, Eatwell Guide, Migraine Trust

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