

Your Health



Health Partners **Newsletter** September 2021



In this issue

Do you know
Your Numbers?

Focus on
Dementia



Do you know your numbers?

Do you know what your BMI or blood pressure should be?
What is healthy and what is not?
Is it a bunch of fives or back to square one?

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.

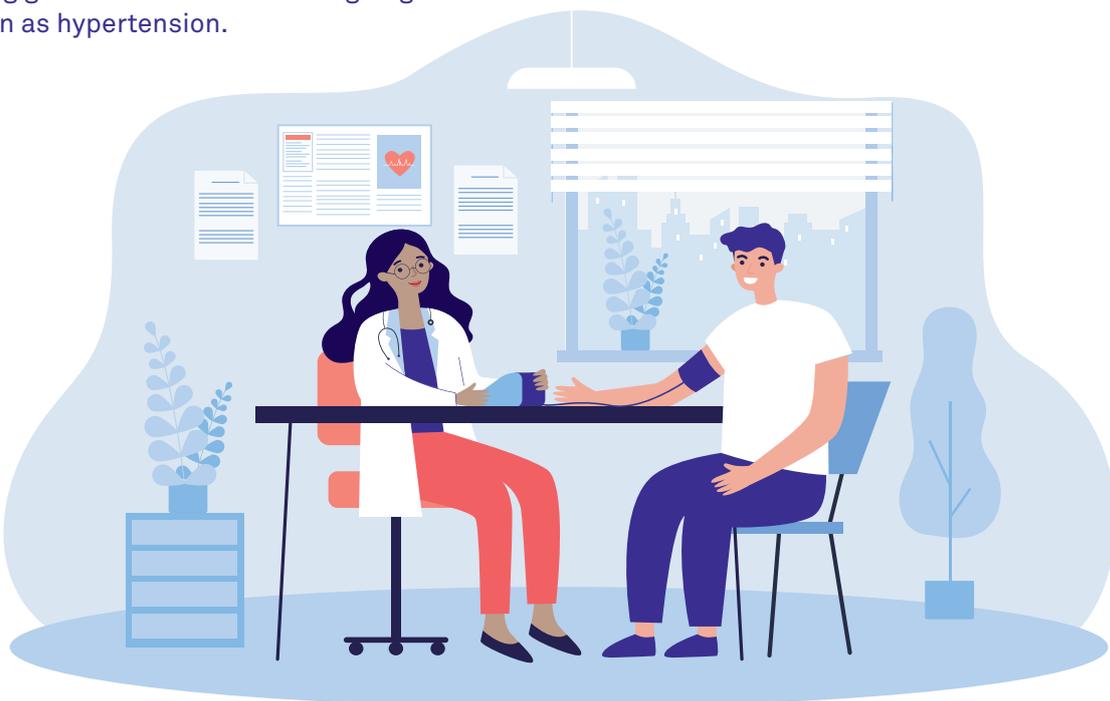
There are two numbers, because BP varies as the heart beats. The high number is the peak pressure created as the heart beats.

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. a well-trained athlete might have a normal resting heart rate closer to 40 beats a minute.

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. Check out <https://www.nhs.uk/live-well/healthy-weight/bmi-calculator/>

Commonly accepted BMI ranges are:

- Underweight = less than 18.5 kg/m²
- Normal weight = 18.5 to 25 kg/m²
- Overweight = 25 to 30 kg/m²
- Obese = more than 30 kg/m².

People of Asian descent have different associations between BMI, percentage body fat and health risks than those of European descent.

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.

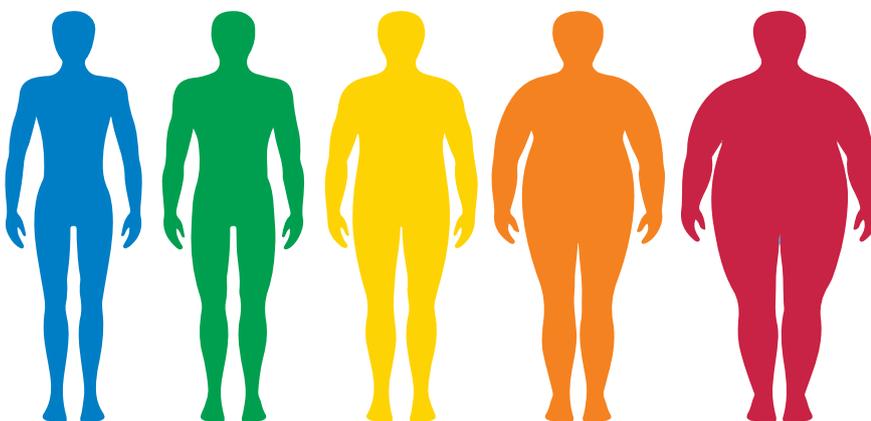
Hyperglycaemia is the medical term for a high blood sugar level. (Greater than 11.1 mmol/L (200mg/dL)). It is a common problem for people with diabetes. It happens when the body has too little insulin or when it can't use insulin properly. Hypoglycaemia is when a person's blood sugar drops too low. (Less 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 pre-diabetes or diabetes as follows:**

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



Cholesterol

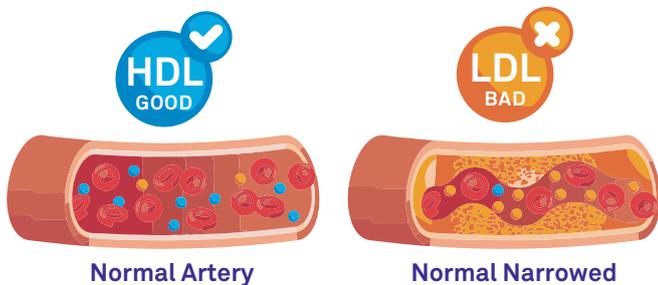
This is a waxy, fat-like substance found in all cells of the body. Your body needs some cholesterol to make hormones, vitamin D and substances that help you to digest foods. Your body makes all the cholesterol it needs; however, it is also found in some of the foods you eat.

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 which will provide a full "lipid profile". In other words, it will measure the levels of all the different blood fats: total cholesterol, LDL- cholesterol, HDL- cholesterol, and triglyceride concentration.

Cholesterol travels through your blood stream 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 are 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). 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). A very low body temperature can be serious or even deadly. 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 low thyroid.



Focus on Dementia

Dementia is an umbrella term used to describe a range of progressive neurological disorders, that is, conditions affecting the brain.

Dementia may be defined as a progressive and largely irreversible clinical syndrome that is characterised by global deterioration in intellectual function, behaviour, and personality in the presence of normal consciousness and perception.

The most common types of dementia are Alzheimer's disease, vascular dementia, mixed dementia, dementia with Lewy bodies and frontotemporal dementia.

Dementia is a progressive condition, which means that the symptoms will gradually get worse. This progression will vary from person to person; each will experience dementia in a different way. People may often have some of the same general symptoms but the degree to which these affect each person will vary.



Many patients retain personality traits and personal characteristics but the following may become evident as the disease progresses:

- Memory loss, language impairment, disorientation, changes in personality, difficulty in carrying out daily activities, self-neglect
- Psychiatric symptoms - apathy, depression, or psychosis
- Unusual behaviour - aggression, sleep disturbance or disinhibited sexual behaviour.

Dementia can be divided into:

- Young-onset dementia: formerly known as “pre-senile dementia”, refers to patients who develop dementia before the age of 65 years
- Late-onset dementia: previously known as “senile dementia”, refers to patients who develop dementia after the age of 65 years.

Several **risk factors** responsible for the development of dementia have been recognised:

A. Non modifiable risk factors:

- **Age** – advancing age is the most important risk factor in developing dementia
- **Learning disabilities** - in people with Down’s syndrome, dementia develops 30-40 years earlier than in a normal person
- **Gender** - rate of dementia is higher in women than in men (especially for Alzheimer’s disease)
- **Genetic factors.**

B. Modifiable risk factors:

- Alcohol consumption
- Smoking - particularly for Alzheimer’s
- Obesity
- Hypertension (high blood pressure)
- Hypercholesterolaemia (high cholesterol)
- Head injury
- Education and mental stimulation.

The most common causes of dementia are age-related neurodegenerative processes. Dementia is becoming an increasing problem as the population ages.

What causes dementia?

Many causes of dementia are irreversible, so the diagnostic emphasis is placed on detecting the treatable subgroup of patients. There are three common causes of dementia:

- **Alzheimer’s disease (AD):** the cause of most cases of dementia, accounting for about 60% of all cases. It is a degenerative cerebral disease, with insidious onset, which is characterised by a slow progressive decline in cognition and ability to function
 - **Vascular dementia (VaD) and dementia with Lewy bodies (DLB)** are responsible for most other cases of dementia (15 to 20% of cases in each). Vascular dementia usually arises from multiple infarcts/blood clots or generalised small vessel disease - has a more sudden onset than Alzheimer’s disease. DLB is slowly progressive and shares many of the features of Alzheimer’s disease and Parkinson’s disease
 - **Mixed cases**, e.g. Alzheimer’s disease and vascular dementia or Alzheimer’s disease and dementia with Lewy bodies, are recognised increasingly, especially in older people
 - **In young-onset dementia**, frontotemporal dementia (FTD) is an important cause (after Alzheimer’s disease)
 - **Other causes** of dementia include (accounts for less than 5%):
 - Other degenerative diseases: Huntington’s disease
 - Prion diseases: Creutzfeldt-Jakob Disease
 - **Reversible causes:**
 - Psychiatric disorders: ‘pseudodementia’ of depression
 - Space-occupying lesions
 - Toxic and metabolic disorders: alcohol-related dementia, vitamin B12 or folate deficiency
 - Endocrine abnormalities: hypothyroidism.
- Some additional facts on the causes of dementia:**
- Smoking is a risk factor for dementia
 - Elderly smokers have increased risks of dementia and cognitive decline
 - Type 2 diabetes (T2D) has been associated with a modest increased risk in cognitive dysfunction across all cognitive domains
 - Effect appears to be consistent across all age groups and mimics an accelerated ageing of brain function. However, there is also an increased risk of more severe impairment of cognition and developing dementia in older age groups that would appear to be a different phenomenon.



How common is dementia?

- The disease affects around 10.5 million people in Europe
- An Alzheimer's Society report found that there were approximately 815,000 people living with dementia in the UK. If current trends continue, this number is expected to increase to 1,143,000 by 2025
- An Alzheimer's Society report found the total cost of dementia in the UK was estimated to be £26.3 billion
- People from all ethnic groups are affected
- Prevalence is higher in women than in men partly due to their greater longevity
- The subtype Alzheimer's disease is commonly seen in women while in men vascular dementia and mixed dementias are more frequent
- Around 63.5% of late onset dementia patients live in private households and the rest live in care homes
- Dementia can affect a person at any age. The prevalence increases with age (both young onset and late onset dementia). However, young onset dementia is relatively rare.

Symptoms

Dementia may generally be described as referring to a widespread deterioration in mental function, without impairment of consciousness.

Widespread deterioration in mental function refers to the loss of a variety of abilities in the spheres of:

- Decline in memory: mostly impairment of learning new material or retaining new information
- Repetitive questioning, difficulty recalling time or date
- Failure of other areas of higher cognitive functioning which will affect normal daytime activities and executive functions
 - Difficulty in performing complex tasks
 - Difficulties in judgement and planning, analytic thought
 - Problems in finding one's way around familiar places (spatial awareness)
 - Impairment in language: problems with expressing themselves or getting "lost" in conversations
- Challenging behaviour (behavioural and psychological symptoms of dementia (BPSD))
 - Depression
 - Apathy
 - Agitation
 - Disinhibition

- Psychosis (delusions or hallucinations)
- Wandering
- Aggression
- Incontinence
- Challenging behaviour is frequently associated with high levels of strain and distress for the family carers and has been a common cause of admissions to institutional care
- The basic tasks of self-care.

Mild cognitive impairment (MCI)

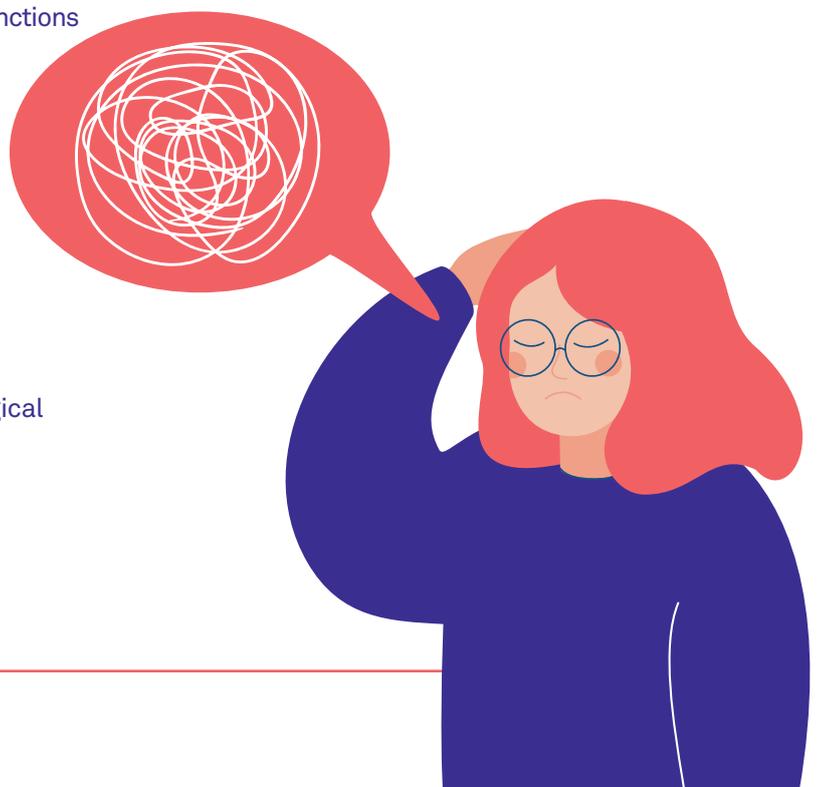
Mild cognitive impairment (MCI) is defined as a syndrome of cognitive impairment (a reduction in the ability to think, concentrate, formulate ideas, reason and remember), which is greater than that expected for an individual's age and education level and without experiencing considerable changes in usual activities of everyday life.

It can be described as an intermediate zone, which is seen between a cognitively normal elderly person and person with clear dementia. It does not fall under any type of dementia.

Cognitive performance between 'normal' ageing and mild cognitive impairment overlap considerably.

MCI may be caused by other conditions such as anxiety, depression, physical illness and the side effects of medication.

While MCI is not a type of dementia, the possibility of developing dementia (mostly Alzheimer disease) in an individual with MCI is five to ten times greater when compared to cognitively healthy individuals.



Diagnosis

If you or someone close to you is experiencing changes such as significant memory loss, confusion or language difficulties, it's a good idea to visit your GP for an assessment.

The Mini Mental State Examination (MMSE) is the most commonly used test for complaints of problems with memory or other mental abilities. At the end of a consultation the doctor will explain if they can make any tentative diagnosis based on the information they have so far.

When all the test results are known, a separate appointment will usually be made for the consultant, and often other professionals in the team, to give the final diagnosis. However, how a person is advised they have dementia will vary depending on their condition.

The final diagnosis meeting will usually cover how the dementia is likely to progress and any treatments (drug or non-drug) as part of a care plan. Once a diagnosis of

dementia is confirmed, any medication has been started and any post-diagnostic sessions have been completed, the person will generally be discharged from the memory service back to their GP, except where there is a need for ongoing specialist support for specific symptoms or behaviours.

As the dementia progresses, the GP may refer the person with dementia back to a specialist for help in assessing changes, and for advice on ways to deal with certain difficulties such as changes in behaviour.

Treatment: there is currently no cure for dementia but it is possible to relieve some of the symptoms.

Prescription of drugs for Alzheimer's disease will be started by the specialist and then routine prescribing will usually transfer to the GP. A review of these drugs is generally carried out every six months by the specialist or GP.

Someone diagnosed with dementia can seek support from their GP, or local support groups, if they feel they need it.

Sources of information and support:

Dementia UK

<https://www.dementiauk.org/get-support/diagnosis-and-next-steps/what-is-dementia/>



Alzheimer's Society

<https://www.alzheimers.org.uk/>



NHS

<https://www.nhs.uk/conditions/dementia/about/>



References: above and (1) National Collaborating center for mental health 2007: Dementia: A NICE-SCIE guideline on supporting people with dementia and their carers in health and social care (2) NICE (June 2018). Dementia: assessment, management and support for people living with dementia and their carers (3) MeReC Bulletin 2007;18 (1) (4) Anstey KJ et al. Smoking as a risk factor for dementia and cognitive decline: a meta-analysis of prospective studies. *Am J Epidemiol.* 2007 Aug 15;166(4):367-78 (5) Pal K et al. Mild cognitive impairment and progression to dementia in people with diabetes, prediabetes and metabolic syndrome: a systematic review and meta-analysis. *Social Psychiatry and Psychiatric Epidemiology* 2018;53:1149–1160. (6) Prince M et al. World Alzheimer Report 2015 (7) Department of health 2009. The use of antipsychotic medication for people with dementia: Time for action (8) National Collaborating center for mental health 2007: Dementia: A NICE-SCIE guideline on supporting people with dementia and their carers in health and social care (9) The Alzheimer's Society 2007. Dementia UK: A report in to the prevalence and cost of dementia prepared by the Personal Social Services Research Unit (PSSRU) at the London school of economics and the institute of psychiatry at King's college London, for the Alzheimer's society (10) Drug and Therapeutics Bulletin (2003), 41 (1), 1-4 (11) Adelman AM, Daly MP. Initial evaluation of the patient with suspected dementia. *Am Fam Physician.* 2005;71(9):1745-50 (12) Royal Australian College of General Practitioners 2003. Care of patients with dementia in general practice (13) Royal College of Psychiatrists 2009. Dementia and people with learning disabilities: Guidance on the assessment, diagnosis, treatment and support of people with learning disabilities who develop dementia (14) Knopman DS, Boeve BF, Petersen RC. Essentials of the proper diagnoses of mild cognitive impairment, dementia, and major subtypes of dementia. *Mayo Clin Proc.* 2003;78(10):1290-308

