



High Blood Pressure(Hypertension)

What is blood pressure?

Blood pressure is the pressure of blood in your blood vessels (arteries). Your blood pressure is recorded as two figures. For example, 150/95 mm Hg. This is said as 150 over 95.

What is high blood pressure (hypertension)?

Blood pressure of 140/90 mm Hg or above (or home/ambulatory readings 135/85 mm Hg or above)

If your blood pressure is always in this range you will normally be offered treatment to bring the pressure down, particularly if you have:

- A high risk of developing cardiovascular diseases (see below).
- Or an existing cardiovascular disease (see below).
- Or diabetes.
- Or damage to the heart or kidney (organ damage) due to high blood pressure.

What causes high blood pressure(hypertension)?

The cause is not known in most cases

This is called essential hypertension.

In some cases, high blood pressure is caused by other conditions

It is then called secondary hypertension. For example, certain kidney or hormone problems can cause high blood pressure.

How common is high blood pressure (hypertension)?

In Ireland, about half of people aged over 65, and about 1 in 4 middle-aged adults, have high blood pressure. It is less common in younger adults.

High blood pressure is more common in people:

- With diabetes. About 3 in 10 people with type 1 diabetes and more than half of people with type 2 diabetes eventually develop high blood pressure.
- With a family history of high blood pressure.
- With certain lifestyle factors. That is, those who:
 - Are overweight.
 - Eat a lot of salt.
 - Don't eat sufficient fruit and vegetables.
 - Don't take enough exercise.
 - Drink a lot of coffee (or other caffeine-rich drinks).
 - Drink a lot of alcohol.

What are cardiovascular diseases?

When doctors use the term cardiovascular disease they usually mean diseases of the heart or blood vessels that are caused by [atheroma](#). Patches of atheroma are like small fatty lumps that develop within the inside lining of blood vessels (arteries).

Cardiovascular diseases that can be caused by atheroma include:

- [Angina](#).
- [Heart attack](#).
- [Stroke](#).
- [Transient ischaemic attack \(TIA\)](#).
- [Peripheral arterial disease](#).

Risk factors for cardiovascular diseases

Everybody has some risk of developing atheroma which may cause one or more cardiovascular diseases. However, certain risk factors increase the risk. These include:

- Lifestyle risk factors that can be prevented or changed:
 - Smoking.
 - Lack of physical activity (a sedentary lifestyle).
 - Obesity.
 - An unhealthy diet.
 - Excess alcohol.

Treatable or partly treatable risk factors:

- **High blood pressure (hypertension).**
- High cholesterol blood level.
- High fat (triglyceride) blood level.
- Diabetes.
- Kidney diseases that affect kidney function.
- Fixed risk factors - ones that you cannot alter:
 - A strong family history. This means if you have a father or brother who developed heart disease or a stroke before they were aged 55. Or, you have a mother or sister who developed either before they were aged 65.
 - Being male.
 - An early menopause in women.
 - Age. The older you become, the more likely you are to develop atheroma.

However, if you have a fixed risk factor, you may want to make extra effort to tackle any lifestyle risk factors that can be changed.

Do I need any further tests?

If you are diagnosed as having high blood pressure (hypertension) then you are likely to be examined by your doctor and have some routine tests which include:

- A [urine test](#) to check if you have protein or blood in your urine.
- A [blood test to check that your kidneys are working fine](#), and to check your [cholesterol level](#) and [sugar \(glucose\) level](#).
- A heart tracing, called an [electrocardiogram \(ECG\)](#).

The purpose of the examination and tests is to:

- Rule out (or diagnose) a secondary cause of high blood pressure, such as kidney disease.
- To check to see if the high blood pressure has affected the heart.
- To check for other risk factors such as a high cholesterol level or diabetes.

How can blood pressure be lowered?

There are two ways in which blood pressure can be lowered:

- Modifications to lifestyle (weight, exercise, diet, salt, caffeine and alcohol), if any of these can be improved upon (details below).
- Medication (details below).

Lifestyle treatments to lower high blood pressure (hypertension)

Lose weight if you are overweight

Losing some excess weight can make a big difference.

Regular physical activity

If possible, aim to do some physical activity on five or more days of the week, for at least 30 minutes. For example, brisk walking, swimming, cycling, dancing, etc.

Eat a healthy diet

- AT LEAST five portions, or ideally 7-9 portions, of *a variety of* fruit and vegetables per day.
- A THIRD OF MOST MEALS should be starch-based foods (such as cereals, wholegrain bread, potatoes, rice, pasta), plus fruit and vegetables.
- NOT MUCH fatty food such as fatty meats, cheeses, full-cream milk, fried food, butter, etc. Use low-fat, mono-unsaturated or polyunsaturated spreads.
- INCLUDE 2-3 portions of fish per week. At least one of which should be 'oily' such as herring, mackerel, sardines, kippers, pilchards, salmon, or *fresh* (not tinned) tuna.
- If you eat meat it is best to EAT LEAN MEAT, or eat poultry such as chicken.
- If you do fry, choose a VEGETABLE OIL such as sunflower, rapeseed or olive.
- LIMIT SALT in your diet .

Restrict your number of caffeine drinks

Caffeine is thought to have a modest effect on blood pressure. It is advised that you restrict your coffee consumption (and other caffeine-rich drinks) to fewer than five cups per day.

Drink alcohol in moderation

Too much alcohol can be harmful and can lead to an increase in blood pressure. You should not drink more than the recommended amount. That is, men should drink no more than 21

units of alcohol per week, no more than four units in any one day, and have at least two alcohol-free days a week. Women should drink no more than 14 units of alcohol per week, no more than three units in any one day, and have at least two alcohol-free days a week.

Treatment with medication

When is medication treatment started for high blood pressure (hypertension)?

Medication to lower blood pressure is usually advised for:

- All people who have a blood pressure that remains at 160/100 mm Hg or above after a trial of any relevant lifestyle changes.
- People with a blood pressure that remains at 140/90 mm Hg or above after a trial of any relevant lifestyle changes AND who have:
 - Diabetes; or
 - An existing cardiovascular disease; or
 - A 2 in 10 risk or more of developing a cardiovascular disease within the next 10 years (as described above).
- People with a blood pressure of 130/80 mm Hg or more who have certain diseases. For example, people who have certain complications from diabetes, people who have had a recent heart attack, stroke or transient ischaemic attack (TIA) - sometimes called a mini-stroke. Also, some people with certain ongoing (chronic) kidney diseases.

What medicines are used to lower blood pressure?

There are several medicines that can lower blood pressure.

One medicine reduces high blood pressure to the target level in less than half of cases. It is common to need two or more different medicines to reduce high blood pressure to a target level. In about a third of cases, three medicines or more are needed to get blood pressure to the target level. In some cases, despite treatment, the target level is not reached. However, although to reach a target level is ideal, you will benefit from any reduction in blood pressure.

How long is medication needed for?

In most cases, medication is needed for life. However, in *some* people whose blood pressure has been well controlled for three years or more, medication *may* be able to be stopped. In particular, in people who have made significant changes to lifestyle (such as having lost a lot of weight, or stopped heavy drinking, etc).

Smoking and high blood pressure (hypertension)

Smoking does not directly affect the level of your blood pressure. However, smoking greatly adds to your health risk if you already have high blood pressure. You should make every effort to [stop smoking](#). If you smoke and are having difficulty in stopping, then see your practice nurse for help and advice.