



Diabetes
New Zealand

Blood pressure and diabetes

What is high blood pressure? How does high blood pressure affect diabetes? We look at how keeping your blood pressure under control can help diabetes problems.

Diabetes management requires equal attention to control of blood glucose, cholesterol, blood pressure and other cardiovascular risk factors.

An important part of taking care of yourself is keeping your blood pressure under control. High blood pressure - also called hypertension - raises your risk for heart attack, stroke, eye problems, and kidney disease.

As many as two out of three adults with diabetes have high blood pressure. Having your blood pressure checked regularly and taking action to reach your blood pressure target can prevent or delay diabetes problems.

What is high blood pressure?

Blood pressure is the force of blood flow inside your blood vessels. Normal blood pressure delivers an effective blood supply to all parts of the body without damaging organs. Up to one in five New Zealanders are thought to have high blood pressure.

When your blood moves through your vessels with too much force, you have high blood pressure. Your heart has to work harder when blood pressure is high, and your risk for diabetes problems goes up.

If the arteries are delivering blood at high pressure to delicate organs such as the eyes and kidneys they can cause damage; this damage can be permanent.

High blood pressure is a problem that won't go away without treatment. If you imagine a garden hose with the nozzle at a narrow setting, water will leave the hose with great force and could damage plants, not to mention the hole it will leave in the ground.

The body behaves in a similar way when there is increased pressure (i.e. high blood pressure) in the arteries.

Have your
blood
pressure
measured on
a regular
basis



How is blood pressure measured?

When your doctor checks your blood pressure, he or she records two numbers, such as 130/80 mmHg. You'll hear them say this as 'one-thirty over eighty.' Both numbers are important:

- The first number is the **systolic** pressure. This measures the force the heart has to pump to push blood through the blood vessels and around the body.
- The second number recorded is the **diastolic** pressure. This measures the resting pressure when the heart relaxes between heartbeats.

Blood pressure is usually measured from the arm with a device called a sphygmomanometer. A stethoscope is placed on the inside of the elbow where a pulse can be felt.

The person with the stethoscope is listening to the sounds made as the blood flows through the artery. Pressure is created as the cuff is inflated, causing the blood flow to stop briefly in the arm. As the air is released from the cuff, blood starts to flow again through the artery.

High blood pressure indicates that the force required for blood to flow is greater than normal.

Blood pressure is elevated when repeated measurements show the top number (systolic) to be greater than 130mmHg or the bottom number (diastolic) to be greater than 80mmhg.

Either systolic, diastolic or both may be abnormal.

Blood pressure is sometimes referred to as the 'silent killer'

For many people hypertension remains undiagnosed, as frequently no symptoms are experienced. It is estimated one third of people don't know they have high blood pressure.

The only way of knowing if you have hypertension is to have your blood pressure measured on a regular basis. High blood pressure is associated with an increased risk of stroke and coronary heart disease.

Your doctor will discuss the course of treatment you require, based on the severity of your hypertension, its causes and any other co-existing medical conditions.

Simple lifestyle modifications are important both in the treatment and prevention of high blood pressure.

Tips for controlling your blood pressure

- Have your blood pressure checked regularly
- Follow a healthy eating plan
- If your doctor has prescribed medications to help lower your blood pressure, take as directed
- Lose weight if you are overweight
- Do regular physical activity for around 30 minutes a day
- If you smoke, stop smoking
- Cut down on salt and salty foods such as chips, processed meats, takeaways, smoked foods and many commercially prepared foods
- Look for canned food with 'no added salt'
- When reading food labels, be aware of the following ingredients which are other terms for salt: sodium, sodium chloride, MSG, Na
- Remember that soy and teriyaki sauces have very high sodium content
- Restrict your alcohol intake.

A healthy eating plan helps to control your blood pressure



Medications

Several types of medication are available for high blood pressure. Not everyone takes the same blood pressure medication, and many people take more than one kind.

Your doctor will decide on the best medication for your needs.

ACE inhibitors These medications lower blood pressure by keeping your blood vessels relaxed. ACE inhibitors prevent a hormone called angiotensin from forming in your body and narrowing your blood vessels.

These medications also help protect your kidneys and reduce your risk of heart attack and stroke.

ARBs These medications keep the blood vessels open and relaxed to help lower blood pressure. Like ACE inhibitors, ARBs protect your kidneys.

Beta blockers These medications help lower blood pressure and relax your heart by allowing it to beat slower and less forcefully.

Beta blockers help prevent heart attack and stroke.

Calcium channel blockers These medications help the blood vessels relax by keeping calcium out of your blood vessels and heart.

Diuretics These medications, sometimes called 'water pills', help rid your body of extra water and sodium through urine.