



What is blood pressure ?

Your heart pumps blood around your body. Blood pressure is the force of blood against your blood vessels as it circulates through your body. This force is necessary to make the blood flow, delivering nutrients and oxygen throughout your body. However, high blood pressure, also called hypertension, means there is too much pressure in your blood vessels. This can damage your blood vessels and cause health problems.



What is high blood pressure ?

Hypertension is defined as blood pressure that is consistently above the normal range. Anyone can develop high blood pressure, but it becomes more common as you get older and requires even more aggressive management if you also have been diagnosed with diabetes. Once high blood pressure develops, it usually lasts for life.

High blood pressure is one of the leading health problems in Canada. It causes strokes, heart attacks, heart failure and kidney failure. It is also related to dementia and sexual problems. Finding and treating high blood pressure early helps prevent these problems.

Both lifestyle changes and medication taken as prescribed will control high blood pressure.

What do blood pressure measurements mean ?

We describe blood pressure with two numbers (e.g. 124/84 millimetres of mercury). Millimetres of mercury is a standardized measurement of pressure. The first number is called the systolic pressure and the second is called the diastolic pressure.

Systolic pressure occurs when your heart contracts and is the higher of the two numbers.

Diastolic pressure is the lower number and it occurs when your heart relaxes and fills with blood. The higher your systolic or diastolic pressure, and the longer it stays high, the more damage there is to your blood vessels.



How often should my blood pressure be monitored ?

Whether or not you have high blood pressure, it is important to have your blood pressure checked regularly. Nine out of 10 Canadians will develop high blood pressure during their lifetime. High blood pressure has no warning signs or symptoms – which is why it is often called a ‘silent killer.’ Have your blood pressure checked at least once every year by a health care provider or more often if your blood pressure is high. You can also check your blood pressure at home. If home blood pressure readings are done properly they may reflect your usual pressure more than those done in the doctor’s office. Regular blood pressure checks help make sure that high blood pressure is diagnosed and controlled before it leads to serious health problems.

Know what your blood pressure is and remember that both numbers are important. If either the systolic or diastolic number is consistently high, you need to make changes in your lifestyle. You may need further blood pressure checks and drug treatment. Blood pressure of 135/85 mmHg or more measured at home or 140/90 mmHg or higher measured in a doctor's office is considered high. Regular blood pressure monitoring is especially important if your blood pressure is high normal (130 to 139/85 to 89 mmHg when measured in a doctor's office). More than half of people with high normal blood pressure develop hypertension within 4 years unless they make lifestyle changes. Have a health care provider check your blood pressure at least every year if it is high normal.

Checking your blood pressure regularly at home, and keeping a record, can be very useful. The record helps your health care provider know whether you are at risk of developing high blood pressure, and how well your blood pressure is controlled. If you have been diagnosed with high blood pressure, keeping track helps you see the benefits of treatments and lifestyle changes.

It also reminds you to stick to your treatment plan.

Home monitoring can help:

- find out if you have hypertension all the time or only have high readings when you visit your doctor
- detect blood pressure that is elevated at home but not in the doctor's office
- find out if your medications are controlling your blood pressure at home
- remember to take your medication and to stick to lifestyle changes

What should your blood pressure be ?

Most people, including those with kidney disease	Less than 140/90 mmHg at the doctor's office (Less than 135/85 mmHg at home)
People age 80 years or more	Less than 150/90 mmHg at the doctor's office
Most People with diabetes	Less than 130/80 mmHg



Advice for home blood pressure monitoring



- DO** download and view the video and written material on how to measure blood pressure at home www.hypertension.ca.
- DO** rest quietly for 5 minutes before taking a measurement.
- DO** sit with your feet flat on the floor, back and arm supported, and arm at heart level.
- DO** put the cuff on a bare arm.
- DO** measure your blood pressure twice in the morning and twice in the evening for 7 days before your appointment, or after a change in blood pressure medication and keep the readings in a log.



- DO NOT** smoke or drink caffeine for 30 minutes beforehand.
- DO NOT** speak or talk during monitoring.



Buying a blood pressure device

Blood pressure devices can be purchased in most pharmacies. Be sure to buy a blood pressure device that has this logo. The presence of the logo indicates

that the device meets an established standard for accuracy, that test results have been published in a peer reviewed journal, and that the validation data has been assessed by a committee of Hypertension Canada.

A list of approved devices is available under device endorsements at: www.hypertension.ca

It is very important to buy a device with the right size of cuff for your arm. Larger arms need a large cuff. Ask for help.

Take Control

There are several things you can do to keep your blood pressure controlled.

1. **Be physically active** for 30 to 60 minutes on 5 to 7 days a week. Try walking, biking, swimming, cross country skiing or any other physical activity that you enjoy. Remember that even a little bit of physical activity is better than no activity. Keep active.
2. **Choose** the following more often: vegetables, fruits, low-fat dairy products, whole grains and lean meat, fish and poultry. Limit fast foods, canned foods or foods that are bought prepared or those that are high in salt and sugar, saturated or trans fat, such as shortening, palm or coconut oil and lard.
3. **Eat less salt.** In general the more processed a food is, the higher the salt content. Try not to add salt to your cooking and remove the salt shaker from the table.
4. **Limit alcohol.** If you drink alcohol, limit yourself to one or two standard drinks a day, to a weekly maximum of 9 for women and 14 for men.
5. **Manage your weight.** If you are overweight, losing 10 pounds (5kg) will lower your blood pressure.
6. **Do not smoke.** Smoking increases the risk of developing heart problems and other diseases. Living and working in places that are smoke-free are also important. If you smoke, a variety of treatments can help you stop. Stopping smoking reduces your risk of dying.
7. **Reduce stress.** Taking steps to reduce your stress can help improve your general health, including your blood pressure.

What YOU can do.

Eating less sodium can reduce your blood pressure and prevent high blood pressure. Aim for 1500 mg sodium per day if you are aged 18 to 50 years, 1300 mg if aged 51 to 70 years, and to 1200 mg per day if older than 70 years. Children are advised to eat even less sodium.

Ways to reduce sodium in your diet

- Buy and eat more fresh fruit and vegetables.
- Eat less food at restaurants and fast food outlets and ask for less salt to be added.
- Avoid processed foods whenever possible.
- When using, choose processed food brands with the lowest % of sodium on the food label.
- Eat foods with less than 120 mg of sodium and/or less than 5% of the daily value per serving.
- Avoid foods with more than 360 mg of sodium or more than 15% of the daily value per serving.
- Avoid buying or eating heavily salted foods. (e.g. pickled foods, salted crackers or chips, processed meats, etc)
- Don't add salt in cooking or at the table.
- Wash canned foods or other salty foods in water before eating or cooking.
- If desired, use unsalted or sodium free spices to make foods taste better.
- Use less sauces on your food. e.g. ketchup, seafood sauce.



« White Coat » Hypertension

- Some people have higher blood pressure when they visit the doctor's office. However, as they go about their usual daily activities they have normal blood pressure. This condition is called 'white coat' hypertension (referring to the white coat worn by the health care provider).
- People with white coat hypertension may still have some increased risk of health problems. However, the risk is lower than in those with raised blood pressure at the doctor's office and at home. Regular monitoring is still required, as many people with white coat hypertension will develop high blood pressure over time.

« Masked » Hypertension

- 'Masked' hypertension is a term used to describe how some people have normal blood pressure when measured in the doctor's office, but have high blood pressure in other situations.
- The doctor may not suspect masked hypertension unless blood pressure is measured at home or other places between visits. If your doctor suspects masked hypertension, you may be asked to monitor your blood pressure at home.
- It is important to 'unmask' high blood pressure, since those with masked hypertension are at higher risk for heart disease and stroke.

Medications for High Blood Pressure

Many medications that lower blood pressure also prevent heart attacks and strokes. The drugs known to lower blood pressure and therefore prevent heart attacks and strokes include diuretics (water pills), beta blockers (in those younger than 60), angiotensin converting enzyme inhibitors (ACE inhibitors), angiotensin receptor blockers (ARBs) and calcium channel blockers. All of these medications reduce blood pressure by the same amount on average, but some people have better results with one medication over another.

The drugs have different costs and different possible side effects. If you have diabetes or kidney disease, an ACE inhibitor or ARB is usually recommended first. Often people with diabetes or kidney disease also need to take diuretics. If you have heart disease a beta blocker and ACE inhibitor are commonly used. It is best to ask your health care provider what type of medication you are on if you are unsure.

Most people with high blood pressure need 2 or more medications, together with lifestyle changes, to lower their blood pressure. Many types of blood pressure drugs work best when taken together and often they come combined in a single tablet at no extra cost. Keep in mind that many drugs can take up to 6 weeks before showing full effects. Your doctor or nurse practitioner may change your medication to find a combination that is best for you.

Medications should be taken regularly and renewed as prescribed. Never stop medications without speaking to your health care provider first. Continue with lifestyle changes.

Based on 2013 CHEP Recommendations