

# HEALTH AWARENESS: BLOOD PRESSURE AND CARDIOVASCULAR HEALTH



## Blood Pressure and Cardiovascular Health

Your heart is a remarkable muscle. It pumps 5-6 liters of blood through thousands of kilometers of blood vessels every minute, and can increase to 5 times this rate during exercise! Each time the heart beats, blood is pushed out into large elastic blood vessels called arteries, which expand to absorb the extra volume (systolic blood pressure). In between heart beats, these elastic vessels continue to move the blood along (diastolic blood pressure) carrying oxygen and nutrients to, and removing wastes from all parts of the body. Thus, the pressure in this system depends on the ability of the heart to pump effectively, as well as the health of the blood vessels.

Like any other muscle in your body, the health of your heart depends on it getting some regular exercise. That might sound odd, given that it contracts some 100,000 times each day. But the increased demand on your heart during dynamic exercise like running, swimming, or cycling, keeps the muscle strong and increases the amount of oxygen and nutrients delivered to the heart itself.

As we age, blood vessels lose some of their elasticity, causing blood pressures to increase slightly. The deposition of fatty plaque on the inside walls can make this much worse. The technical name for this process is atherosclerosis, but you will often hear it called cardiovascular disease (CVD). When it happens in the blood vessels leading to your heart it's called coronary artery disease (CAD). These two conditions can lead to a stroke or heart attack.

### Facts:

- Approximately 25% of Canadians over the age of 20 have CVD but the frequency is almost twice that in truck drivers (over 45%).
- Thirty percent of high blood pressure cases are due to excessive sodium intake. This is especially true in people with high insulin levels as in the early stages of type II diabetes.
- The average Canadian consumes 2760 mg of sodium. The maximum recommended intake for healthy blood pressure is 2300 mg (1 tsp salt).
- High levels of low density cholesterol (LDL) in the blood are associated with a higher risk of CVD.
- In some people, mental stress can contribute to high blood pressure.

### What to expect:

- Research from the United States shows the incident rate for serious accidents in truck drivers is much higher in workers with the highest risk for CVD.
- Your blood pressure will increase a bit as you age, but pressures higher than 140/90 (hypertension) are dangerous to your health.
- While some of your risk of having CVD is genetic, smoking, alcohol intake, diet, obesity, diabetes, a lack of physical activity and high blood pressure are contributing factors.
- Inflammation and a diet rich in animal fats can accelerate CVD (the evidence for this effect is very clear).

**What you can do:**

- There are no obvious symptoms of high blood pressure, so get tested regularly and if your physician has prescribed medication make sure to take it.
- Get a blood test for cholesterol levels if you have risk factors for CVD.
- Commit to get at least 150 minutes of moderately vigorous exercise in total per week, done at least 10 minutes at a time. Activities like fast or uphill walking, jogging, cycling or cross-country skiing or snowshoeing are ideal. Swimming, dancing, or vigorous chores that raise your heart rate and deepen your breathing are also good choices.
- Limit your sodium intake to between 1500 and 2300 mg daily.
- Processed foods contain a lot of hidden salt; especially baked goods, processed meats, mixed prepared dishes, cheese, soups, sauces and condiments. Read the packaging and figure out how many servings you are eating.
- Limit your alcohol intake to no more than two servings of alcohol per day, stop tobacco use if you have the habit, and eat a diet rich in fiber from whole grains, fruit and vegetables.
- Replace the majority of your saturated fat intake (meat and whole fat dairy) with omega-3-fatty acids (cold water fish, walnuts and ground flax seed), and mono and polyunsaturated fats (olive and canola oils).
- Get a friend or family member to help you build these new habits. Make a chart and record your activity and servings of vegetables.

**What Employers and Supervisors can do:**

- Provide access to healthy food on site as well as opportunities to increase physical activity levels safely.
- Provide educational resources for employees about smoking cessation, addiction counseling, stress management, healthy eating and increasing physical activity.
- Set up a blood pressure testing station in a quiet, private area.
- Run a health fair or a health challenge. Get a group together to link increased health behaviors to a fundraising event or other incentive.

**More information:**

Information on Managing Blood Pressure: <https://www.heartandstroke.ca/-/media/pdf-files/canada/health-information-catalogue/en-managing-your-blood-pressure.ashx?rev=c38fbd38c8294ea1a9758bd7b92e0116&hash=D24A8248198D80718DF4CE90C7D899D2&hash=D24A8248198D80718DF4CE90C7D899D2>

How High Blood Pressure Can Lead to a Heart Attack: <https://www.heart.org/en/health-topics/high-blood-pressure/health-threats-from-high-blood-pressure/how-high-blood-pressure-can-lead-to-a-heart-attack>

Lifestyle Steps to Lower Your High Blood Pressure:

<https://www.healthlinkbc.ca/hlbc/files/documents/healthfiles/hfile68b.pdf>