

## **HYPERTENSION**

### ***What is blood pressure?***

As the heart contracts, the pressure within the blood vessels rises to a maximum, which is called the systolic blood pressure. When the heart relaxes the blood pressure falls to a minimum or bottom blood pressure called the diastolic blood pressure. Blood pressure is required to force the blood to circulate throughout the body. The average systolic blood pressure is about 120 mm Hg and the average diastolic blood pressure is about 80 mm Hg (millimeters of mercury). This is reported as 120/80 or 120 over 80 mm Hg. Elevations of blood pressure is present when the systolic blood pressure is above 140 mm Hg or the diastolic blood pressure is above 90 mm Hg. The condition of having elevated blood pressure is called hypertension.

In the majority of patients with hypertension the cause cannot be found. Genetics and heredity may play a role. In 5 to 10 % of patients a reversible cause for hypertension may be identified. Environmental factors such as excess salt intake will raise someone's blood pressure. Other modifiable causes of hypertension include excessive calorie intake, inactivity, excessive alcohol consumption, low potassium intake and smoking. In fact eliminating fast food from the diet will lower your blood pressure significantly.

Hypertension is common and present in about 10% of the adult population or about 2 million people in Canada. For the most part patients with hypertension are under-diagnosed and under treated. The Canadian Heart Health Survey has shown that only 42% of patients are aware that they have hypertension, of these, the majority are inadequately treated and only 16% of hypertensive patients have their blood pressure adequately controlled.

### ***What are the risks of high blood pressure?***

Excessive elevation of blood pressure can have long term effects. High blood pressure will thicken the heart muscle. This condition is called hypertrophy. Elevated blood pressure can lead to stroke, vascular damage, and kidney failure. For the most part high blood pressure has no associated symptoms unless complications develop. If blood pressure is quite high patients may experience headaches, fatigue, shortness of breath or dizziness.

High blood pressure is particularly dangerous in those patients with other cardiac conditions such as coronary artery disease or leaking heart valves. In conditions such as diabetes or hypertension it is especially important to normalize blood pressure to prevent progressive kidney and organ damage. High blood pressure in the elderly population is one of the major risk factors for stroke.

### ***Can high blood pressure be treated?***

Yes. There are many medications that can be used to control blood pressure. Often small doses of a diuretic or a beta blocker medication are sufficient. In some patients combination therapy is required and in other patients certain agents are used for special or specific reasons such as angiotensin converting enzyme (ACE) inhibitors in diabetes and calcium channel blocking agents in the elderly. Medical evidence shows that aggressive treatment of blood pressure will reduce the risk of stroke and cardiovascular events considerably. If you have further questions regarding hypertension please discuss them with your physician.