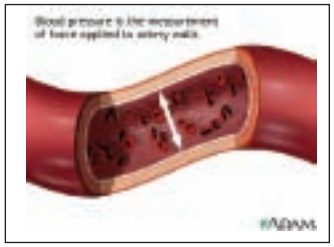
Blood Pressure

Blood pressure is the force exerted on the blood vessel walls. Increased blood pressure has many risk factors such as obesity, increased age, stress, or smoking. The extra force on the vessel walls can cause damage to the vessels. Blood is also filtered by the kidneys. The extra force may also damage the kidneys. To protect the kidneys and blood vessel walls antihypertensive drugs are used to lower blood pressure[6].



Conclusion

Not every treatment option is right for every individual. Talk to your doctor about the appropriate options for yourself. Remember that the best thing for you and your family is prevention with a healthy lifestyle.

Works Cited

1. *American Heart Association.* Summer 2007 <http://www.americanheart.org>.
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Advice for Life

What you need to know about *Metabolic Syndrome*

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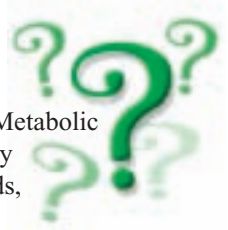
Metabolic Syndrome



Metabolic syndrome affects 20-25% of the population[1]. Metabolic syndrome is a cluster of body states such as abnormal lipids, increased blood pressure, increased blood glucose levels, insulin resistance, clotting, and inflammation[3]. These states may be present with or without any symptoms, thus it is important to have measurable markers to diagnose metabolic syndrome.

Metabolic syndrome more than doubles the risk of getting type II diabetes and cardiovascular disease[1]. If caught early enough and treated, the progression to diabetes or the progression in an already diabetic patient can be slowed. Cardiovascular disease can lead to events such as heart attacks, strokes, and even death. It is important to prevent and treat metabolic syndrome for the health of each individual.

Diagnosis of metabolic syndrome is based on having 3 of the following 5 determinants[2]:

Abdominal obesity
men: >102 cm
women: >88 cm

Fasting blood glucose
>6.1 mmol/L

Triglycerides
>1.7 mmol/L

HDL-C ***(high density lipoprotein cholesterol)***
men: <1.3 mmol/L
women: <1.0 mmol/L

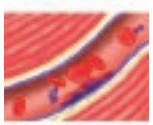
Blood pressure
>130/85 mmHg

Prevention and Treatment

The first step in preventing or treating metabolic syndrome is to live a healthy lifestyle. Try to decrease the fat situated around the abdomen. Eat right, exercise regularly, and do not smoke. "Canada's Food Guide to Healthy Eating" is a great place to start. It recommends eating a variety of foods and choosing lower fat options more often.

Try to work yourself up to 60 min/day of exercise. This might sound overwhelming but it all adds up. Try taking the stairs more often, wash the car by hand, go dancing, or try more suggestions from "Canada's Physical Activity Guide." Find the activities that are right for you[4]. Smoking can cause insulin resistance and can lead to cardiovascular problems[5]. Lifestyle modification is a great place to start, but just remember that it may not always be enough therefore talk to your doctor about your additional options.

Thrombosis



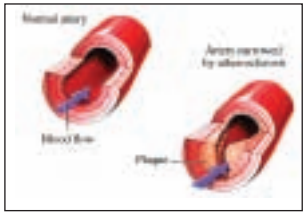
Prothrombosis (or clotting) is a symptom corresponding to metabolic syndrome. With an already narrowed blood vessel due to atherosclerosis and plaque, there is danger of a clot getting stuck in a vessel and blocking blood flow to the heart. Also, the mechanism to prevent the aggregation of blood platelets is impaired in a diabetic increasing the risk of a clot forming. To help prevent clotting a blood thinner such as Aspirin or Plavix may be used[2].

The first step in preventing or treating metabolic syndrome is to live a healthy lifestyle.

Blood Glucose

Increased blood glucose levels may be an indication of insulin resistance. Carbohydrates, which are found in foods such as pasta and bread, are broken down by the body into glucose. Insulin helps the body use up the glucose for energy. If insulin no longer can help the body use up the glucose then the blood glucose levels rise. Raised blood glucose levels can cause damage to the blood vessel walls leading to cardiovascular problems[4]. Blood glucose levels can be controlled with oral hypoglycemic medications and/or insulin.

Triglycerides



Triglycerides are a naturally occurring form of fat in the body. The body can store or use it for energy. Too many triglycerides in the body can lead to the formation of atherosclerosis, the depositing of material along vessel walls, narrowing the vessels. In a diabetic atherosclerosis is accelerated[1]. Atherosclerosis may lead to cardiovascular events. Fibrates are the drugs of choice to treat elevated triglycerides.

Cholesterol

Cholesterol is an essential component for the body but it needs to be kept at the appropriate proportion. High density lipoproteins carry cholesterol away from plaque and to the liver to be eliminated from the body therefore HDL-C is also known as the "good cholesterol." The amount of HDL-C in the body reflects the body's amount of defense against cholesterol and plaque formation, risk factors for cardiovascular events[1]. Therefore it is important to keep the HDL-C levels appropriately high while keeping overall cholesterol levels low. Medications such as statins or fibrates may be used to help control cholesterol levels[5].