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What is a murmur?

The heart has four different areas, or chambers. These chambers are connected to each other by valves that control how much blood enters each chamber at any one time. The valves open and shut with every beat. As the valves shut to control the flow of blood through the heart, they make the sound known as your heartbeat. Each heartbeat is really two separate sounds: "lub-dub". Your heart goes "lub" with the closing of the valves that control blood flow from the upper chambers to the lower chambers. Then, as the valves controlling blood going out of the heart close, your heart goes "dub."
A heart murmur is a whooshing sound between the beats that a doctor hears through a stethoscope. It is caused by turbulent blood flow through a valve that either does not open properly, or does not close properly. In other words, the valve is "leaky".

There are mainly two types of heart murmurs: innocent and abnormal. People suffering from innocent heart murmurs have healthy hearts with no signs or symptoms of heart problems. These murmurs occur when the blood flows faster than normal, or when there is extra blood flow through the heart. These murmurs can also be caused due to changes in the heart after a surgery, aging, or during pregnancy. On the other hand, people suffering from abnormal heart murmurs can have symptoms of heart diseases. Congenital (birth) heart defects, septal defects (holes in the heart), infections, or any damage to the heart valves are some common causes of abnormal heart murmurs. These defects are related to the heart structure, interior walls and valves of the heart that transport blood to other parts of the body. In the majority of cases, heart murmurs are harmless.

Symptoms depend on the cause behind the murmur and how severe that cause is. Some of the signs and symptoms are: Shortness of breath, palpitations (racing heartbeat), chest pain, blue coloring of the skin on the fingertips and inside the mouth, dizziness or fainting, decreased energy, exercise intolerance and abnormal growth and poor eating habits in infants.

Murmurs are diagnosed by listening through a stethoscope. They can be classified by pitch, intensity and length. Another test the cardiologist might do is an echocardiogram. This test uses sound waves to make a picture of the heart as blood is pumped through its chambers and valves. This test can evaluate structure and function of the heart and determine exactly what is causing the murmur and how severe it is.

Most murmurs are innocent and do not require treatment. Some murmurs are abnormal, and require treatment because the limited/turbulent blood flow through valves may weaken and damage the heart over time. Medicines may be used to decrease the workload and improve function of the heart for mild to moderate abnormal murmurs. If a murmur is severe and is causing disabling symptoms or major damage to the heart, surgery may be performed to replace the dysfunctional valve or heart defect.

What is Hypertension?

AKA High blood pressure, it is a condition in which the pressure of blood flow in the blood vessels is chronically elevated. With every heart beat, the heart pumps blood through the arteries to the rest of the body. Blood pressure is the force of blood that is pushing up against the walls of the blood vessels.

If the pressure is too high, the heart has to work harder to pump, and this could lead to organ damage and several illnesses such as heart attack, stroke, heart failure, aneurysm, or renal failure. Like air in a balloon, blood fills arteries to a certain capacity—and just as too much air pressure can cause damage to a balloon, too much blood pressure can harm healthy arteries

Blood pressure is measured by two numbers. The normal level for blood pressure is below 120/80, where 120 represents the systolic measurement (pressure during every beat) and 80 represents the diastolic measurement (pressure in between beats). Blood pressure of 140/90 or above on two or more consecutive visits to the doctor is considered hypertension. The goal of treatment is to lower the pressure below 140/90, and even lower in people with diabetes and chronic kidney disease who have a higher risk of stroke and heart attack.

Hypertension may be classified as essential or secondary. Essential hypertension is the term for high blood pressure with no known cause, and accounts for the majority of cases. Secondary hypertension is the term for high blood pressure with a known direct cause, such as kidney disease, tumors, or birth control pills.

Though the cause of hypertension is generally unknown, there are several risk factors that are highly associated with hypertension: smoking, diabetes, obesity, lack of physical activity, high levels of salt intake, increasing age, stress, genetics and kidney disease.

Hypertension is also referred to “the silent killer” because it usually presents with no symptoms and a person feels perfectly fine until end organ damage occurs. Hypertension does not cause problems over days, weeks, or months; rather, it causes problems over many years and can affect your entire body. By adding strain to the blood vessel walls, hypertension makes them more likely to develop a buildup of fat and cholesterol -- also known as "hardening" of the arteries. This, in turn, puts extra strain on your heart as it pumps blood through the narrowed arteries.

Over time, the strain and build up of fat hypertension causes on the heart and blood vessels, can increase the risk of serious health problems, such as heart disease, stroke, heart attack and kidney damage. Therefore, it is very important to be treated for hypertension.

What is diabetes?

Insulin is hormone in your body, produced by the pancreas, that decreases sugar (glucose) in your blood. It does this by moving the sugar into cells, when sugar in the blood rises too high. Insulin is generally released after meals, when food causes an increase in blood sugar. In people with diabetes, there is an issue with this hormone, insulin, and blood sugar rises too high, causing serious bodily harm. Chronically elevated blood sugar can cause damage to the heart, blood vessels, eyes, kidneys, and nerves. Diabetes is the leading preventable cause of blindness.

There are two types of diabetes. Type 1 diabetes is generally seen young adults, and it is caused by a complete absence of the hormone, insulin. There is no known reason for this, but it is generally thought to be autoimmune and run in families. Type 2 diabetes is typically seen in overweight, sedentary adults and occurs when cells in the body stop responding to insulin even though it is there. This happens due to chronically elevated blood sugar and overproduction of insulin, causing cells that react to insulin the wear out. Chronically elevated blood sugar is generally seen in obese, sedentary adults, but is now more recently being seen in children due to the rising issue of obesity. Most people with diabetes have type 2. In either case, the glucose can't move into the cells and blood glucose levels can remain high.

Symptoms of diabetes include increased thirst and urination due to the high amounts of sugar in the blood and urine , and fatigue because sugar is not moving into the body's cells to be used as fuel.

Due to the harmful effects of diabetes, it is very important to control your diabetes and check your blood sugar daily to make sure it is not rising too high. Doctors will prescribe insulin or other medications to help control your diabetes, as well as recommending a healthy diet to help prevent blood sugar levels from fluctuating.