

By: Stefano/2008, Science Editor

Top 8 Heart Diseases

Your engine under attack

Hypertension, high cholesterol, diet, lack of exercising and smoking are factors favoring heart disease. 1. The coronary disease is the most common heart disease. It is caused by the obstruction of the coronary arteries carrying oxygenated blood to the heart's muscle. It can be caused by fat (especially cholesterol) deposits on the coronary arteries walls or by the thickening and hardening of their walls. Angina pectoris is a pain and discomfort sensation inside the chest, due to the decreased supply of the heart muscle with blood. The slowing down of the blood circulation can cause thrombosis (formation of blood clots). In this case, the blood circulation towards one of the heart's parts is interrupted, sometimes rapidly. The lack of oxygen and food will kill the muscle cells of the area. If over 40 % of the heart muscle is affected, the heart cannot function correctly, and blood circulation is stopped. Such a heart attack will cause the slowing down of the heartbeat and death, if the person does not receive immediate cardiopulmonary resuscitation. Nitrites, beta-blockers and calcium antagonists impede the formation of blood clots. Anticoagulant drugs can break down the protein involved in forming the blood clots. Angioplasty is a surgery of removing solid deposits (fats and others) from the arteries, but the arteries can be blocked again in 6 months after the operation. 2. Between the heart's upper chamber (atria) and lower chambers (ventricles), and between ventricles and arteries, there are valves that make the blood flow in one direction only. The narrowing of a valve (stenoses) gets the heart muscle exhausted. A cracked valve allows the blood to flow back, consuming more heart energy. All this will cause angina. Valve conditions can be congenital or caused by disease (like rheumatismal fever). 3. Diuretic drugs are used for drain water accumulations from lungs, feet or lower body, but they can cause a defective blood circulation. Sometimes the valves can be surgically corrected, but, in the case of the aorta valve, this must be replaced (a mix of human and animal tissue or an artificial one). Artificial valves are more resistant, but prone to thrombosis, that's why the patient must take anticoagulant medication. 4. The hole in the heart is a congenital affection in which non-oxygenated blood cross the heart without passing through the lungs, due to an abnormal opening inside the heart. The condition can heal in time, but, if not, it requires surgery. Sometimes veins - arteries connections are abnormal, so that non-oxygenated blood returns to the body. The child's skin can turn bluish and the condition is called "blue child". Some children are born with obturations or blockages of the coronary arteries. This will cause suffocation and lack of energy, tiredness and slower growth. 75 % of the cases can be solved surgically. 5. Pericarditis is the inflammation of the membrane surrounding the heart. It can be caused by repeated infections, kidney infection, and arthritis. The liquid must be surgically extracted. Miocarditis, inflammation of the heart's muscle, can damage the heart permanently, requiring transplant. 6. Cardiomyopathy means the muscle is weakened or not perfectly developed to function efficiently. The wall separating the ventricles gets thickened. Drugs, surgery or transplant are required, depending on the situation. 7. The first heart transplant was made in 1967 in South Africa. The immune rejection was a problem until the discovery of the immunosuppressive drugs. Today, over 65 % of the heart transplant patients outlive 4 years following the surgery. 8. Artificial devices can control the heart beats. It is important that the device maintain a constant rhythm; irregular rhythm causes fibrillation. Naturally, fibrillation occurs when the nodal tissue inside the heart and responsible with controlling its contractions, is damaged. The artificial devices, working on batteries, must be replaced from 6 to 6 months.