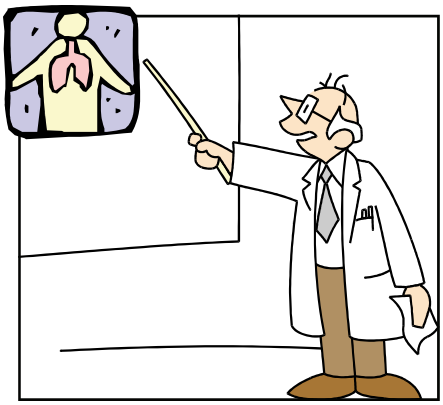
Lesson Four



Body System:

The Circulatory System

CIRCULATORY SYSTEM

Your entire body works together to keep you healthy. All parts of your body depend upon all the body systems to do their job.

The Circulatory System consists of your Heart Blood Vessels and The Lymph *System*

Your **CIRCULATORY SYSTEM** provides each of your cells with nutrients and oxygen and also provides a means for removing the metabolic waste produced by each cell.

Your Circulatory System is made up of arteries, veins and the heart, plus the Lymphatic system.

The "heart" of the matter is your heart. It's about the size of a man's fist, usually weighs somewhere around 11 ounces and is located slightly off of center in your lower left chest. It has two sides and each side has two chambers called the atrium and the ventricle. These chambers have one-way valves to keep your blood flowing in the right direction and not "backing up." The right side of the heart pumps blood to the lungs where it receives its oxygen. The blood is then returned to the left side of the heart where it pumps oxygenated blood to the entire body.

Your heart is very busy, in fact it never takes a vacation. It works every moment of our lives and beats an average of 70 times per minute, pumping about sixteen pints of blood through the body, even while you're sleeping.

Your veins and arteries are an incredible network of blood vessels: about 60,000 miles of blood vessels. Even the blood vessels specialize. The heart has its own blood vessels which are called coronary arteries and cardiac veins. Their only job is to supply the heart with nutrients and oxygen. The cardiac muscle is thick and strong, surrounded on the outside by the pericardium and on the inside by the endocardium. These are layers of tissue that protect the heart and work to prevent blood from leaking out of the heart into your chest cavity.

Although it is *specialized* muscle tissue, it is still "muscle" and needs regular exercise to strengthen it. Exercise for the heart means that you need to work it harder than you normally work it, get your heart rate up, make it beat quicker for a sustained period of time. Strengthening your heart will allow it to pump more

HERBS & CLASSIFICATIONS

AROMATIC HERBS

CAPSICUM (3rd degree)
PARSLEY (1st degree)
GARLIC (2nd degree)

BITTER HERBS

BUTCHER'S BROOM (2nd degree)
GOTU KOLA (3rd degree)
HAWTHORN BERRIES (2nd degree)

Most herbs used for the circulatory system are in the aromatic and bitter category. Remember that aromatic herbs MOVE things by stimulation and the bitter herbs RELAX AND CLEANSE.

When expert herbalists FORMULATE combinations, they use herbs that work together to give the best results. You'll find things like LOTUS SEED in a combination for the circulatory system because it will help the body clean up the "stuff" that the bitter herbs have loosened and cleansed and the aromatic herbs have moved out of the arteries and veins.

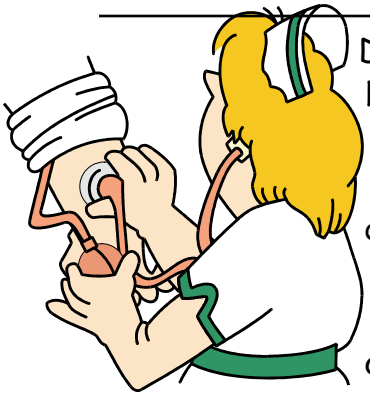
These formulations use what is called "SYNERGY" to make a great herbal combination. The best way I know to describe synergy is this: A cake has FLOUR and SUGAR and EGGS plus more. But a cake is a cake, not flour or sugar, it's that and MORE. Through synergy, it becomes something more than just it's "parts."

ASTRINGENT HERBS

BUTCHER'S BROOM 2nd degree)

MUCILAGINOUS HERBS

RESEARCH ON ELEVATED BLOOD PRESSURE

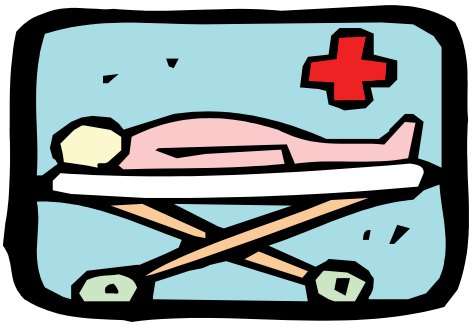


Dr. John McDougall has stated that elevated blood pressure is NOT a disease but rather a sign of a life-threatening sickness of the blood vessels or circulatory system.

What is blood pressure? It's a measurement of the force necessary to push blood through the blood vessels of the circulatory system. This pressure is generated by the heart.

What is considered normal blood pressure? 110/70 without medication. If the lower number is too much over 80 researchers say that you can have up to double the chance of dying from atherosclerosis, related problems such as heart attacks, and strokes or kidney failure. However, HIGH blood pressure is usually defined as anything over 95 (lower number.) And it's estimated that one out of every four persons in the United States today has dangerously high blood pressure. One out of every eight high school students are found to have dangerously high blood pressure!

So what we're really talking about here is not simply high blood pressure, but a disease known as atherosclerosis. Elevated blood pressure is just one symptom of that disease.

Dr. McDougall gives an easy way to understand what this means. He says imagine you're a doctor and a patient is brought to you with an infected lung (pneumonia), and one of the symptoms of this problem (infected lung) is fever. Usually fever is present when there is any amount of infection in the body.

What do you do? How do you treat this problem? Well, if you treated only the symptom or sign of the disease instead of the cause, you might only prescribe aspirin to bring down the fever. But if you don't do anything about the infection in the lung, shortly you will have a dead or dying patient on your hands. Of course he will die with a normal