

CERTIFIED ADVANCED HERBALISM COURSE - SESSION 19: The Circulatory System

The circulatory system provides a continuous supply of nutrients and oxygen to every cell in the body. Simultaneously, it picks up carbon dioxide and other waste materials produced by the cells and carries them away for removal from the body.



Health concerns related to the circulatory system include high cholesterol or triglycerides, high blood pressure, stress, poor circulation and heart disease.

Examining the Circulatory System

In order for your body to stay alive, each of its cells must have a continuous supply of food and oxygen. At the same time, carbon dioxide and other waste materials produced by the cells must be picked up for removal from the body. The circulatory system performs these two functions.

The human heart makes the circulatory system work. A hollow, pear-shaped, muscular organ, the heart is located between the lungs in the middle of the chest. It pumps blood through the body, supplying cells and tissues with oxygen and nutrients. In order to meet your body's energy demands, your heart must beat more than 100,000 times per day.

Like all other body tissues, your heart also needs oxygen and nutrients in order to function properly. Because blood flowing through the heart is traveling too fast for the heart to absorb, the heart has its own system of vessels that supply it with oxygen and nutrients.

The heart contains four chambers: the upper chambers are called atria and the lower chambers are ventricles. Each half of your heart works as a separate pump. The right side of the heart is responsible for returning the oxygen-poor blood to the lungs to expel carbon dioxide and reoxygenate the blood. The left side receives the newly oxygenated blood from the lungs and pumps it through the entire body. Although the average adult body contains less than 1.5 gallons of blood, amazingly the heart pumps 2,000 gallons each day.

Blood vessels are small tubes that carry blood to and from all parts of the body. The human circulatory system is composed of three types of vessels that total an incredible 60,000 miles in length.

The arteries are the largest blood vessels. They carry oxygen-rich blood from the heart to the cells and tissues of the body. Because arteries transport under high pressure, they have walls that are much more elastic than veins. The arteries pulsate as a result of the force with which the heart pumps new blood into them.

The veins are smaller vessels that carry oxygen-poor blood and waste products back to the heart. This blood moves slowly due to low pressure. Veins can expand or contract to accommodate variations in blood flow. Semilunar valves are found at regular intervals throughout the veins. These force the blood to move in only one direction.

Capillaries are microscopic in size. They link the arteries and veins to the tissues of the body. The exchange of oxygen and carbon dioxide takes place across thin capillary walls.

Blood supplies oxygen and transports nutrients, waste and hormonal messengers to each of the billions of cells in the body. Blood has four main components: red blood cells, white blood cells, platelets and liquid plasma. Red blood cells carry 99 percent of the oxygen the body needs and are the most abundant cells in the body, constituting 45 percent of the blood. White blood cells comprise an important part of the body's immune system. Their main function is providing defense against infectious agents. Platelets are tiny, specialized cells that are activated whenever blood clotting or blood-vessel repair is needed. Liquid plasma carries the other 1- percent of the oxygen the body needs and also helps repair damaged blood vessels. To do this, plasma is transformed into thin strands that create a protective mesh over the damaged area.

Did You Know?

- Randomized double blind clinical studies of standardized hawthorn berry extract show positive results, appearing to increase the efficiency of nerve impulses in, and protect against oxygen deprivation of, the heart muscle.
- Blood is made up of 55 percent plasma and 45 percent cells.
- Plasma is mostly water, but it also contains proteins (albumin, immunoglobulins, clotting factors, enzymes, transport proteins), salts, lipids (cholesterol), carbohydrates (glucose) and gases (oxygen, carbon dioxide).
- Garlic can offer significant protection against heart disease and stroke. It has also been shown to lower high blood pressure.

Circulatory System Analysis

If you have four or more of the following indications, you may consider nutritional aid to the circulatory system.

- Lack of energy
- Bags under eyes
- Smoking
- Poor concentration or memory
- Stressful lifestyle
- Hair loss
- Sore or painful joints
- Low endurance/stamina
- Slow recovery from illness
- High-fat/low-fiber diet
- High-carbohydrate/low-protein diet

Circulatory System Suggestions

- Eat low to moderate amounts of fat daily.
- Avoid saturated fats.
- Eat lots of fruits, vegetables, onions and garlic.
- Perform aerobic exercise, especially walking.
- Manage weight.
- Avoid stress.

Circulatory System Products

The following products are listed with ingredients only as not to sell any particular product line. These ingredients can be purchased at any store you wish. If you are interested in the actual combinations listed below, please contact JLS directly.

- **Blood Pressure Combination** – This combination helps your body control the dangers of high blood pressure, regardless of the origin or cause. It inhibits damage to cells due to its potent antioxidant properties and helps relax and dilate blood vessels to encourage improved blood flow.
- **Cardiovascular Combination** – These herbs and nutrients protect the heart from disease and damage and support heart function and strength. Ingredients include hawthorn berries extract, red clover extract, ginkgo biloba, capsicum, folic acid, vitamins B6 and B12 and choline bitartrate.
- **CoQ10** – CoQ10 is essential for generating energy in every body cell and may help prevent heart disease and hypertension. It is also an antioxidant and is used in dental practices to help fight gum disease.
- **Magnesium** – The essential mineral keeps the heart muscle from going into spasm.
- **Grapine** – Grapine contains high amounts of proanthocyanidins – powerful antioxidants that help prevent cell damage by quenching oxidative free radicals. This combination of antioxidant nutrients has been shown to be many times more powerful than vitamin C or E. Proanthocyanidins also improve the integrity of collagen fibers, strengthening tissues in the skin, blood vessels, muscles, cartilage and other connective tissues.
- **Fat Grabbing Combination** – This combination contains guar gum, psyllium hulls, lecithin and chickweed herb. When taken with water, these ingredients combine in the stomach to create a gel that traps some fat molecules from food in the stomach, preventing their absorption into the bloodstream. This product promotes weight loss, increases dietary fiber intake and can help lower cholesterol (due to its psyllium hulls content).

- **Oral Chelation Combination** – This high-potency vitamin and mineral supplement contains herbs, amino acids and other nutrients designed to benefit the circulatory system. Minerals chelated to amino acids help remove plaque from artery walls, making this product a vital program for sufferers of arteriosclerosis.
- **Ginkgo & Hawthorn Combination** – These two herbs promote increased circulation and heart strength. In studies, hawthorn recipients also reported fewer overall symptoms, less fatigue and less shortness of breath. Ginkgo dilates blood vessels and bronchioles to improve circulation and oxygenation of cells. It also has scientifically proven nervous-system benefits.
- **Varicose Vein Combination** – This combination contains herbs that fortify and nourish the health, strength and resilience of veins, improving appearance and supporting optimal blood flow. The combination helps relieve congestion in the legs and minimizes damaged or weakened blood vessels.

Nature's Sunshine Mega-Chel Oral Chelation Program

Caution

The following program is based on the Nature's Sunshine Mega-Chel product as well as other Nature's Sunshine products. If you wish to use these products for this program please contact JLS. If you wish to follow a different oral chelation program, please follow the program that is advised for the product that you wish to use. Do not use this program with any products other than those Nature's Sunshine products listed below.

General Instructions

It is important to start slowly with this program and follow instructions. Otherwise, symptoms such as nausea, dizziness, headaches and skin eruptions may occur. It is also important to taper off as instructed, or fatigue and temporary nutritional deficiencies may result.

Working up to a Full Dose

For the first week, take the following with breakfast and dinner:

- 1 tablet of Mega-Chel
- ½ ounce of Colloidal Minerals OR 1 tablet of Mineral Maintenance.
- Every week increase the amount of Mega-Chel by one tablet. The second week, take two tablets of Mega-Chel and two tablets of Mineral Maintenance with breakfast and dinner. Continue this until you reach full program status (up to 12 tablets a day). If you are using Colloidal Minerals, gradually increase the amount of this supplement until you are taking 1 ounce in the morning and 1-ounce at night.

Full Program

A full dose of Mega-Chel is 4-6 tablets twice daily, depending on body weight. Large people should take 6 tablets twice a day. Small people should take 4 tablets twice a day. Individuals of average height and weight should find 5 tablets twice a day sufficient.

When you reach full dose, you will be taking the following with breakfast and dinner:

- 4-6 Mega-Chel tablets
- 1 ounce of Colloidal Minerals OR 4-6 Mineral Maintenance tablets.
- Stay on this full dose for a least one-month for each 10 years of your age. For example, if you are 40 you need to stay on the full dose for at least four months, six months if you are 60, etc.

Tapering Off

It is critical that you taper off slowly. On the full program you are taking large doses of certain vitamins and minerals, and your body will get lazy about extracting them from food. If you quit all at once, your body may experience a sudden drop in nutrient levels until it readjusts to absorbing these vitamins and minerals from food. Taper off by reducing the amount of tablets you take each week by two. After completing the program, some people use Mega-Chel as their daily vitamin and mineral supplement by taking two tablets per day.

Cleansing Reactions

As the body removes the plaque from the walls of the arteries, the blood cholesterol levels will temporarily rise. This is normal. The kidneys and liver will remove the calcium, cholesterol and impurities from the body. If there are indications that these organs are weak, it may be necessary to give them extra support. People with kidney weakness (history of symptoms like arthritis, chronic back pain, urinary infections, etc.) should take two KB-C with each meal. People with liver weakness (history of high cholesterol, skin problems, digestive upset, etc.) should take 1 teaspoon LOCLO in a large glass of water or juice upon arising and before retiring, plus two LIV-C with each meal.

You may also wish to add some of the following supplements for special problems. Work up to these amounts gradually if you wish. For heart problems, take two HSII or two Hawthorn Berries capsules with each meal. For mental support, take two Ginkgo & Hawthorn combination capsules with each meal. For varicose veins and high risk for stroke, take two Butcher's Broom capsules with each meal.

HEART/CIRCULATION/BLOOD VESSELS

CIRCULATION

Blood Pressure Problems

Indications:

Blood pressure readings exceeding 140 over 90
Family history of high blood pressure
Advancing age
Diabetes
Cigarette smoking
Obesity
Stress

Blood Pressure Combination
Capsicum, Garlic & Parsley
Stress Combination
Calming Combination

Cholesterol Problems

Indications:

Cholesterol over 200
Triglyceride levels over 200
High-density lipoprotein (HDL) levels less than 35
High-fat, low-fiber diet
High-carbohydrate, low-protein diet
Stress

Gratine
Fat Grabbing Combination
Guggal Lipids
Lecithin
Cholesterol Regulating Combination
Check Possible Thyroid Influences

HEART/CIRCULATION/BLOOD VESSELS

BLOOD VESSELS*

Congested Arteries

Indications:

High blood pressure
Cold hands/feet
Sores in extremities that won't heal
Absent-mindedness
Medical diagnosis of hardening of the arteries
Angina

Oral Chelation Combination
Ginkgo/Hawthorn Combination

Congested Veins

Indications:

Varicose veins
Hemorrhoids
Spider veins

Varicose Vein Combination
Gratine

*Consult a doctor for a diagnosis first.

HEART/CIRCULATION/BLOOD VESSELS

HEART*

Indications:

Crease in ear lobe
Large, red, bulbous nose (rule out acne, rosacea or alcohol)
Crease in tongue from tip to back
Cold hands and feet
Swelling in the feet and ankles
Angina
Family history of heart disease



Cardiovascular Combination
CoQ10
Magnesium

*Consult a doctor for a diagnosis first.

CERTIFIED ADVANCED HERBALISM COURSE – SESSION 19 – QUESTION & ANSWERS

NAME: _____
ADDRESS: _____
PHONE: _____
FAX: _____
E-MAIL: _____

Please be sure to fill out the information above, complete the test and e-mail or fax it back to us at 425-955-4639 (US) or at +353 1 647 5705 (EU) or e-mail it to us at joyful@best.com (US) or at answers@med-herbs.com (EU). We will grade your question & answer session and will let you know if we have any questions or concerns.

1. What large blood vessels carry oxygen-rich blood from the heart to the cells and tissues of the body?
2. How many miles long is the human circulatory system?
3. Veins are smaller vessels that carry _____ blood and _____ back to the heart.
4. Blood has four main components: red blood cells, _____, platelets and _____.
5. What are some indications that this system is weak and may need nutritional aid?
6. Who can I help? List five people who exhibit the above indications and who may benefit from nutritional aid to the circulatory system.
7. Experiment: In a small bowl, crush two tablets of an oral chelator until powdered. Fill two glasses with warm water and add the product to one glass. The other glass will be your control. Add three tarnished pennies to each glass and stir with a plastic spoon. Wait about three hours and stir again before removing the pennies. Place the pennies on a paper towel and observe the difference. The chelating agents in the oral chelator should have removed the tarnish on the pennies. There should be no change to the pennies in the control glass. Please write notes about your results.