Understanding The River of Life

How to Support the Blood Cells That Protect and Nourish Your Health



Blood is the source of life for every cell in your body. Just as a river supports life wherever it flows, your blood supports the life of every cell in the body. This river of life is nearly 60 thousand miles long, which means that the blood vessels in your body would circle the earth about two and a half times if laid end to end.

Traditional medicine has always placed great emphasis on blood. Checking the flow of blood through pulse diagnosis is one of the most universal diagnostic systems in traditional medicine, and terms like blood purifier, blood mover, blood builder and blood tonic are still used to describe the healing actions of various herbs.

Modern medical diagnosis relies even more heavily on analysis of the blood. Blood tests are continually used to both evaluate health and to screen for disease. Standard medical tests check the levels of various minerals, proteins, lipids, hormones and immune factors. It also includes counts of the various types of red and white blood cells found in the blood. Drugs are then used to alter the blood chemistry in various ways such as: reducing blood sugar, cholesterol and triglycerides, thinning the blood and lowering the blood pressure.

Most people are unaware that drugs aren't the only way to alter blood chemistry, or even the best way. It can also be improved using herbs and nutritional supplements. While there are hundreds of health issues that can show up in the blood, this issue of *Sunshine Sharing* will focus on the most common problems involving the three types of cells found in the blood: red blood cells, white blood cells and platelets.

Doctors use a blood panel called a CBC (Complete Blood Count) to assess the number and health of the cells in the blood. If you've had a CBC done, the following information will help you understand what it means. But, even if you don't have any blood work, this newsletter will help you understand how to build and maintain healthy blood, which will help you build and maintain a healthy body.

Red Blood Cells and the Breath of Life

You might not think of oxygen as a nutrient, but it is the most vital substance needed to maintain life. It is possible to live weeks without food and days without water, but only minutes without oxygen. Oxygen, however, is a two-edged sword. It is not only necessary for life, but potentially destructive to tissues because it acts as an oxidizer or free radical.

It is the responsibility of the red blood cells (RBCs) to safely transport this necessary, but potentially tissue damaging, gas from the lungs to the cells. In the tiny blood capillaries oxygen is exchanged for the waste product carbon dioxide, which is transported back to the lungs for elimination.

RBCs are so small that there are about five million of them in every drop of blood. Every second millions of them die and are replaced with new red blood cells produced in the bone marrow. RBCs rely on hemoglobin, a special protein built around a molecule of iron, to do their job. This is important to help understand the problem of anemia.

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Important Notice

The information in *Sunshine Sharing* is for educational purposes only and should not be used to diagnose and treat diseases. If you have a health problem, we recommend you consult a competent health practitioner before embarking on any course of treatment.

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Anemia, Low RBCs and Iron Deficiency



Anemia is a problem that occurs when there aren't enough healthy red blood cells to provide the oxygen cells need. Anemia causes a person's complexion and tongue to be pale. They will also lack energy and have a reduced ability to fight disease. In traditional Chinese medicine (TCM) it is referred to as blood deficiency.

During their child-bearing years, women are more prone to anemia than men because of the blood they lose each month during menstruation. Women often become anemic during the later months of pregnancy as well. However, anyone, male or female, who is tired, easily chilled and has a pale tongue and complexion should consider that they might be suffering from blood deficiency or anemia.

Blood Building Herbs and Foods

TCM has traditionally recommended formulas containing blood building herbs for women to take throughout their childbearing years. These formulas contain herbs like ganoderma mushroom, peony root, dong quai, bupleurum root and rehmannia root. The liver, which is associated with the wood element in TCM, is seen as the organ that builds the blood, so these formulas can be referred to as *wood increasing formulas*. These liver and blood tonics are taken daily by millions of Asian women.

Western blood building herbs like yellow dock, alfalfa, nettles and red raspberry can also be used to build the blood. In Western herbalism these are usually referred to as *herbal iron formulas*.

There are several foods that are very helpful for building the blood, one of the best being red meat. Often demonized as unhealthy, it is primarily beef from feed-lot animals that is unhealthy. Organic, grass-fed beef is a very good blood-nourishing tonic and source of iron.

Another great food source for iron is black strap molasses. Beet root and dark, leafy green vegetables are also good sources of iron and other blood-building nutrients.

Other Nutrients for Red Blood Cells

Many cases of anemia aren't caused by a lack of iron, which illustrates an important principle. If your blood work shows you are low in a nutrient (such as iron, calcium or potassium) taking that nutrient may not solve the problem. This is because nutrients work in combination with each other and require healthy organ function to maintain proper levels.

In the case of iron, deficiencies of **vitamin C**, **vitamin B12** and **folate** are far more common causes of anemia than low levels of iron. For example, a recent broad study showed that an average of 60% of Americans had sub-optimal B12 levels, with 20% being severely deficient. B12 deficiency can not only directly result in anemia, it can also cause low stomach

acid, fatigue, neurotransmitter imbalances and more. So consider taking a supplement containing methyl B12 (methylcobalamin) if you're tired or anemic.



Megaloblastic anemia (enlarged red blood cells) is caused by a defect

in red blood cell DNA synthesis and is most often due to vitamin B12 and folate deficiency. So taking a *B12 and folate supplement* may help here.

Vitamin C is critical to iron absorption. Other nutritional supplements that help the utilization of iron include **vitamin A**, **vitamin B6** and **zinc**.

Digestive problems that interfere with the absorption of protein and minerals (like low stomach acid, Celiac's disease or Crohn's disease) may also be an issue. So it is important to ensure the GI tract is functioning properly. In particular a *protein digestive aid* containing bentain hydrochloric acid may assist iron absorption and utilization.

Hemochromatosis

Hemochromatosis is the opposite problem of anemia. In this disorder there is too much iron in the blood. Excessive iron in the blood is dangerous because it increases oxidative damage to tissues. Most people won't know that they have this problem until a blood test is done, since it is typically asymptomatic in the early stages.

When symptoms do develop they may include unexplained weight loss, fatigue, joint pain, bronze or gray-colored skin and loss of sex drive. Just like there are many factors that can cause anemia, there are many factors that can cause too much iron in the blood such as genetic disorders, multiple blood transfusions and a lack of iron binding capacity.

In some cases hemochromatosis may simply be a zinc deficiency, which may explain why this disorder is more common in men than in women. Zinc and iron are antagonists. Low levels of zinc can contribute to higher levels of iron and vice-versa. Women tend to need more iron, while men tend to need more zinc because they lose zinc with every ejaculation. So, supplementing with zinc may help to reduce the levels of iron. Other nutrients that help the body utilize iron better may also be helpful for hemochromatosis, including folate, vitamin B6 and vitamin B12.

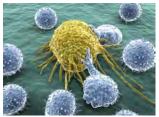
Additional Help and Information

For more information about how to use herbs and supplements to build healthy blood contact the person who gave you this newsletter. You can also consult the following resources:

The Comprehensive Guide to Nature's Sunshine Products, 6th edition by Steven Horne and Kimberly Balas

Blood Chemistry and CBC Analysis by Dicken Weatherby and Scott Ferguson

A Natural Approach to Blood Chemistry by Kimberly Balas



White Blood Cells

Your blood contains numerous white blood cells (WBCs), which are also called leukocytes. Although white blood cells are far less numerous than red blood cells,

they are critical to a healthy body because they are responsible for creating immunity to infectious diseases.

When a doctor runs a Complete Blood Count test (CBC), it will contain counts for the various types of white blood cells. Here's a breakdown of what these various white blood cells do, as well as how to enhance or balance white blood cell activity.

Neutrophils

The most abundant white blood cells in the blood (60-70%) are neutrophils. They circulate in the blood until they receive signals from inflammatory reactions, which causes them to leave the blood stream and enter the damaged tissues. The pus from an infected wound is composed of these cells, which die after engulfing infectious organisms.

When wounds become infected, applying a poultice of activated charcoal made into a paste with a little aloe vera juice or gel can help to draw out the infection. You can also apply herbs like goldenseal and echinacea topically. Aquasol silver gel is another great remedy for infected wounds.

Lymphocytes

Lymphocytes are more common in the lymphatic system than in the blood. These include the B-cells, which make antibodies to tag pathogens and defective cells for destruction, and the T-cells which act to destroy cells and pathogens that have been tagged. Natural killer cells are another class of lymphocytes, which target defective cells, such as virally infected cells or cancer cells.

When the body is fighting an acute infection, levels of neutrophils and lymphocytes are typically higher. Herbalism is unique in that it can actually help boost these immune responses, rather than just attack the infection directly. Three herbs that have been shown to be good at boosting lymphocytes in clinical trials are **echinacea**, **licorice root** and cat's claw or **uña de gato**.

Astragalus and shiitake mushrooms may also be helpful. These herbs have been shown to boost the T-cells that fight cancer. You can find *immune boosting formulas* that contain these key ingredients. Consider taking one the next time you feel like you're coming down with a cold or acute infection, or as part of a holistic approach to cancer therapy.

Basophils

Basophils are responsible for allergic reactions. They release the histamines that draw blood into injured tissues as part of inflammatory actions. They help trigger eosinophils and neutrophils to enter infected tissues. High levels of basophils on a blood test typically signal the presence of inflammation or parasites. If a CBC shows high levels of basophils and a person has allergies or food sensitivities, they should consider taking an *allergy reducing formulas* containing herbs like nettles and bitter orange to reduce histamine reactions.

Inflammation will often elevate levels of neutrophils and basophils. Herbs that combat inflammation can balance levels of these immune cells in the blood while reducing inflammation and pain. Here, herbs like turmeric (and its chief constituent curcumin), yucca, willow bark and boswellia may be helpful. An *anti-inflammatory formula* containing several of these herbs is even better.

Eosinophils and Monocytes

Eosinophils comprise only about 2-4% of white blood cells. They primarily deal with parasitic infections, but are also involved in allergic reactions such as hay fever, asthma and hives. High levels of eosinophils are typically found in people with intestinal parasites, asthma or various types of food and environmental allergies.

Monocytes are the largest WBCs. When they leave the blood stream they are known as macrophages (big eaters). Their job is to clean up cellular debris and engulf various pathogens. High levels of monocytes are seen during recovery from acute infection, when intestinal parasites are present and sometimes with liver dysfunction.

High levels of eosinophils and monocytes could indicate a parasitic infection. So, if a CBC shows this and you have any kind of vague health problems, a *parasite cleanse formula* containing herbs like garlic and wormwood, may be helpful.

Toxicity

So far, we've dealt with high levels of various types of white blood cells. However, when the body is toxic, especially from heavy metals, white blood cell counts may be low. Here is where the herbs traditionally known as blood purifiers or alteratives may prove helpful.



In traditional herbalism many disorders are attributed to impure or toxic blood. These include skin eruptions, such as rashes, pimples, pox and boils. Swollen lymph nodes, cysts and tumors were also attributed to toxicity in the blood.

Blood purifiers appear to work through several mechanisms. First, they help to improve GI tract health, which can result in reduced toxicity from the intestines. They also help liver detoxification and lymphatic drainage.

Even if the exact mechanism isn't known, traditional **blood purifying formulas** containing herbs like dandelion, echinacea, Oregon grape, red clover, sarsaparilla and yellow dock frequently help skin eruptive diseases and the other conditions described above. **Immune stimulating formulas**, mentioned earlier, may also be helpful to increase white blood cell counts.

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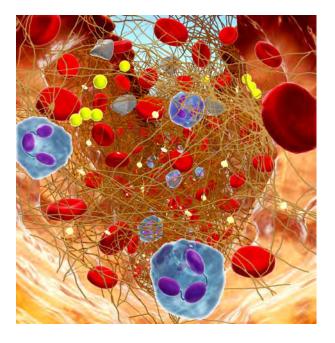
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Build Good Health by Building Healthy Blood

Blood nourishes every cell of the body with water, nutrients and life-giving oxygen, making the flow of blood the river of life for the human body. The blood carries three types of cells, red blood cells (RBCs), white blood cells (WBCs) and platelets.

Learn about these three types of cells, what they do for your health and how you can keep these vital cells functioning properly in this issue of *Sunshine Sharing*.

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Platelets and Blood Clotting

The third type of cells in the blood are platelets, also called thrombocytes. These tiny cells are primarily responsible for forming blood clots. When the endothelium or lining of the blood vessels is damaged, platelets attach to it and start releasing chemical messengers that eventually result in fibrin deposits which catch red blood cells to form the clot.

Normal platelets can respond to inflammatory processes on the blood vessel linings which results in thrombosis, the formation of blood vessels within an intact vessel. This can cause problems with blood clots blocking circulation in the legs, lungs (pulmonary thrombosis), heart (coronary thrombosis) or brain (stroke). This causes the death of tissues beyond the clot, something called ischemia.

Medical doctors frequently prescribe blood thinners to reduce the risk of clotting. The most common side effects of these drugs involve excessive bleeding, such as heavy periods, nosebleeds, bleeding gums or prolonged bleeding from cuts. They can also cause dizziness, muscle weakness and rashes.

There are many herbs and nutrients that can reduce the risk of thrombosis without these side effects. **Vitamin E**, for example, inhibits abnormal platelet aggregation. The studies that have been done on this suggest that a vitamin E supplement with mixed tocopherols works the best.

Herbs that can be helpful for preventing thrombosis include **butcher's broom, horse chestnut, garlic** and **ginkgo**. It is also important to keep blood pressure down and stay properly hydrated to reduce the risk of thrombosis.