

# Homocysteine

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## What is homocysteine?

Homocysteine is an amino acid (a building block of protein) that is produced in the human body. Homocysteine may irritate blood vessels, leading to blockages in the arteries (called atherosclerosis).

## How is a high homocysteine level harmful?

High homocysteine levels in the blood can also cause cholesterol to change to something called oxidized low-density lipoprotein, which is more damaging to the arteries. In addition, high homocysteine levels can make blood clot more easily than it should, increasing the risk of blood vessel blockages. A blockage might cause you to have a stroke or a problem with blood flow. Up to 20% of people with heart disease have high homocysteine levels. What causes a high homocysteine level?

Homocysteine is normally changed into other amino acids for use by the body. If your homocysteine level is too high, you may not have enough B vitamins to help this process. Or you may not have enough of the chemicals (enzymes) to process homocysteine.

Enzymes could mean both the food enzymes in the food you eat and digestive enzymes supplied by the body to further assist in the breaking down of the foods we ingest. The actual number of digestive enzymes we have in the body are decided in the early stages of each person's development, by their DNA. Many people not watching the foods they eat will ingest foods that are over cooked, or foods that lack all food grade enzymes that are acceptable by the human body. Foods that lack food grade enzymes then require the body to develop or produce more digestive enzymes to digest this food therefore, depleting their store house of digestive enzymes. Later they suffer the consequences of this habit with a break down in their natural body functions. (Emphasis added by Bill Fowler)

Most people with a high homocysteine level don't get enough folate (also called folic acid), vitamin B<sub>6</sub> or vitamin B<sub>12</sub> in their diet. Replacing these vitamins helps return the homocysteine level to normal. Other possible causes of a high homocysteine level

include low levels of thyroid hormone, kidney disease, psoriasis, some medicines, or inherited deficiencies in the enzymes used to process homocysteine in the body.

Here again we have an example of how western medicine miss the whole point. The problem goes back to the single fact of enzyme deficiencies. Here the author is suggesting "inherited deficiencies". Not for one moment connecting the dots as I have explained above. Western medical science cannot see the forest because they are standing too close to the trees. (Emphasis added by Bill Fowler)

## How is the homocysteine level measured, and what do the results mean?

Homocysteine is measured using a simple blood test. It can be measured at any time of the day. It is not necessary to prepare in any special way for the blood test (such as fasting). Most hospital labs can measure homocysteine, or a blood sample can be sent out to a special lab.

A healthy homocysteine level is less than 12  $\mu\text{mol}$  per L. A level greater than 12  $\mu\text{mol}$  per L is considered high. If your homocysteine level is 12 to 15  $\mu\text{mol}$  per L and you have blockages in any blood vessel, you need to lower your homocysteine to less than 12  $\mu\text{mol}$  per L. If you have no other major risk factors for cardiovascular disease and you do not have atherosclerosis, it may be okay for you to have a modestly high level of homocysteine (12 to 15  $\mu\text{mol}$  per L).

Typical medical double talk to protect their, "you know what". Go get the test done and if you have a higher than normal results, why would you want to take a chance of creating blockages in any blood vessel. If you haven't changed your diet to eating more food grade enzymes this test should be another clue you need to change today. (Emphasis added by Bill Fowler)

While no studies have proved that lowering homocysteine levels ultimately helps reduce strokes, heart attacks and other cardiovascular events, it is a good idea to lower a high homocysteine level because it is a risk for heart disease.

## How can I lower a high homocysteine level?

Eating more fruits and vegetables (especially leafy green vegetables) can help lower your homocysteine level by increasing how much folate you get in your diet. Good sources of folate include many breakfast cereals, lentils, chickpeas, asparagus, spinach and most beans.

Good advice but missing several key facts. 1. Eat only live fruit and vegetables. Not over heated above 105 degrees. 2. Most breakfast cereals are very acid. I eat raw uncooked oaks which are stills not the best, but then I prepare a Sunrider Herbal drink to pour over the cereal which is an alkalized food and add nuts and rasins. 3. Lentils, beans etc need to be sprouted before ingestion. So it's not just eating fruits, vegetables and nuts that are important to your diet. It's how they are prepared. This fact alone makes Sunrider foods some of the most valuable food on mother earth. (Emphasis added by Bill Fowler)

If adjusting your diet is not enough to lower your homocysteine, you will also need to take specific vitamins. You may need to take a fairly large amount of folate (about 1 milligram per day). Additional vitamin B<sub>6</sub> and vitamin B<sub>12</sub> also help the body process homocysteine. Vitamin B supplements generally have no side effects.

The usual recommended vitamin and folate doses for lowering homocysteine levels are as follows:

A daily multivitamin containing 400 µg of folate and less than 5 mEq of iron.

An additional 800 µg of folate per day for eight weeks.

If taking these vitamins doesn't lower your homocysteine level, your doctor may have you try a higher dose. Or you may need to have some tests to see if you have a health condition that causes high homocysteine levels.

Here again is an example of western medical thinking. 1. Your vitamins should be natural and they should come from the foods you eat. 2. Synthetic vitamins are not easily assimilated by the body simply because they are not food. They are a chemical extract usually taken from another source, such as "oil or tar". 3. The human body can only assimilate so many milligrams of vitamins per day. The answer

to this deli mina goes back to your diet. (Emphasis added by Bill Fowler)

## What happens next?

It is important to get your homocysteine level re-checked after you have been taking the multivitamin and folate for 8 weeks. If your homocysteine level remains high, your doctor may change your treatment. You may need to take more folate (2 mg per day). If you have had a high homocysteine level, you will probably need to have your level checked regularly - maybe 2 or 3 times a year.

*This article provides a general overview on this topic and may not apply to everyone. To find out if this information applies to you and to get more information on this subject, talk to your family doctor.*

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