



International Institute of Nutritional Research

A Quality of Life Special Report #2

WHAT MAY BE THE SINGLE MOST SIGNIFICANT CAUSE OF HEART ATTACKS

Although all the media and public attention has been focused on high cholesterol levels as the major villain in causing heart attacks, overwhelming scientific evidence is pointing in an entirely different direction.

Early on in the investigation of the relationship between heart attacks and diet it was found that heart attacks were highest in nations with high meat consumption. In addition, half of those heart attack victims had higher than normal levels of cholesterol or triglycerides. From this, it was falsely concluded that it must be the high consumption of meat with all of its saturated fat that was causing the elevated cholesterol or triglycerides, which in turn resulted in heart attacks.



To test this conclusion, a large group of people were placed on diets low in meat and animal fat, and sure enough, the number of heart attacks in this group dropped. That seemed to prove the cause and effect relationship between animal fat, meat and heart attacks. The medical profession and the media have spread the word ever since that this was the “*smoking gun*”.

Unfortunately, there was actually something entirely different going on, and science has gone on to conclusively prove that animal meat, including its fat and cholesterol, DOES NOT cause heart attacks. Furthermore, we now know what the real cause is. Tragically, the total commitment of the medical profession and the media to the cholesterol theory has caused them to turn a blind eye to the real truth. The result of this unfortunate event has allowed the death rate from heart attacks to soar and remain the number one killer in America.

Now, it is time for you to learn the truth! Truth that can save your life and the life of your loved ones, if they will listen. Animal meat contains more high quality nutrition per ounce than almost any other food. The most important of these is a lot of protein, which makes up most of your own body, its enzymes, blood cells, hormones, neurotransmitters and muscles. Upon digestion this protein is broken down into individual essential (meaning you can't live healthily without them being supplied by your diet) amino acids.

A major portion of those meat derived amino acids is one called L-Methionine that is converted by the body into many other amino acids and important protein structures. During this conversion process methionine goes through a whole series of steps changing from one thing to another. At one point it changes into an amino acid known as homocysteine.

It is very important that you understand two things about homocysteine.

♥ **First, is the fact that except that it serves as a stepping stone on the way to becoming something else, the body has absolutely no other need for this amino acid.**

♥ **Second, homocysteine is a very powerful and destructive free radical that is extremely damaging to LDL cholesterol converting it to a free radical, and it also directly damages the lining of the blood vessels causing plaques to form that cause heart attacks.**

No one knew any of this until twin girls were born with a tragic genetic defect that did not allow them to convert the homocysteine into something useful. At an early age they developed atherosclerosis with blood vessels heavily lined with plaque. Which then led to a heart attack and death for each of them while still in their teens. The only thing that was different about these girls from normal teens, was a higher than normal level of homocysteine in their blood.



Of course you are thinking that since you do not have this genetic defect, you are safe. Well, that is exactly what the scientists thought - at first!

Then some scientists began to wonder if the blood level of homocysteine was also higher in those who had heart attacks, than it was in normal people. They were shocked and amazed at what they found!

ALL those who had heart attacks ALWAYS had at least a slightly higher level of homocysteine in their blood than people who had no evidence of heart or vascular disease.

This was the single most significant discovery in the history of studying heart attacks! This is because in all other risk factors which had been identified, there were always at least half of those who died of heart attacks who had normal levels of the so-called risk factors.

The question which next occupied the attention of scientists pursuing this line of investigation was “*why?*” *Why did heart attack victims have higher levels of homocysteine in their blood than healthy people?* One of the first clues appeared as early as 1951 when scientists discovered that when rhesus monkeys were made deficient in vitamin B-6 they quickly developed arterial plaques even though their cholesterol level was perfectly normal. Even when fed enough cholesterol producing foods to raise blood cholesterol to 4 times normal, as long as there was no vitamin B-6 deficiency, incredibly, no plaques developed!

This study was repeated by different scientists several times, each time with the same results. As long as vitamin B-6 was adequate, regardless of how high the blood cholesterol level, there were no arterial plaques and no heart attacks. In 1956 the investigation was expanded to include dogs and chickens, and again the results showed that as long as vitamin B-6 was adequate, even with high blood cholesterol levels, arterial plaques did not develop.

Then in 1969, at Harvard University Medical School Dr. Kilmer McCully made the following amazing discovery that brought all of this together. First, he found that when animals were injected with the amino acid homocysteine they all developed arterial plaques. A direct cause and effect was established. Second, he found that both animals and humans who have deficient levels of vitamin B-6 have elevated levels of homocysteine. Another direct cause and effect was established. Third, all patients with atherosclerotic plaques have low vitamin B-6 levels. Fourth, all patients with atherosclerotic plaques have elevated homocysteine levels.

To summarize, Dr. McCully found that low levels of vitamin B-6 in both man and animals led to elevated blood levels of homocysteine, which always led to the formation of arterial

plaque which then produced heart attacks. The smoking gun of heart attacks had been found! But by now, the medical profession, and the drug companies were making a fortune from cholesterol lowering drugs and by-pass operations, and no one wanted to hear that an inexpensive vitamin could eliminate it all.

Further investigations discovered why a deficiency of vitamin B-6 created this problem. The more meat there is in the diet, the greater is the conversion of its protein and amino acids into the various essential proteins required by a healthy body. It was found that none of this could take place without the use of vitamin B-6. When vitamin B-6 was too low, the conversion process of the amino acid methionine got stalled at the dangerous homocysteine stage. As homocysteine builds up in the blood it damages the LDL cholesterol and the arterial walls causing plaque to form, which in turn produces heart attacks.

Methionine → **Homocysteine + Vitamin B-6** → **Healthy Essential Proteins**

Meat in your diet is broken down into various amino acids that include methionine. Methionine is then converted to Homocysteine which when combined with adequate levels of vitamin b-6, then becomes essential proteins that your body uses to keep you in good health.

Since meat is low in vitamin B-6 relative to the need for it to convert amino acids to useful forms, without a diet that also contained whole grains with their B vitamin rich bran still intact, a meat rich diet laced with refined and simple carbohydrates becomes deficient in vitamin B-6, which elevates the homocysteine level, resulting in atherosclerotic plaque and heart attacks.

There are two simple ways to correct this problem, eat a diet naturally rich in B vitamins, or simply take a vitamin B-6 supplement. The result of either approach is a normal homocysteine level, greatly reduced arterial plaque and no more heart attacks.

As further evidence of this amazing relationship, consider the results of a study by Dr. W. J. Serfontein and colleagues at Pretoria University. They examined the blood of men who had suffered a heart attack within the past 24 hours. They then compared their blood to that of healthy men. They were shocked to find that those who had heart attacks, on average had lower levels of the bad LDL cholesterol than did the healthy men. They even had higher average levels of the good HDL cholesterol. Well by now you have already guessed it, the men with heart attacks had low vitamin B-6 levels and higher levels of homocysteine.

When Dr. Serfontein’s team examined the blood level of the men who smoked and had heart attacks, they were found to have the lowest vitamin B-6 levels and the highest levels of homocysteine. This finding eliminates the mystery as to why smokers have more heart attacks than non-smokers. Their blood level of vitamin B-6 is too low, and as a result their homocysteine is too high.

A 1989 study reported in the respected American Journal of Cardiology compared the vitamin B-6 level of 84 men who had heart attacks with the level of this vitamin in 84 healthy men who were matched for age and other risk factors. Again, it was found that in every case, those who had heart attacks had lower levels of vitamin B-6 than those who were healthy.



It has been found that a low level of vitamin B-6, even when no other risk factors are apparent, is the number one cause of sudden death heart attacks in men from age 26 to 46! At Harvard Medical School they found that men with even slightly elevated levels of homocysteine have a risk of a heart attack that is 3 times that of normal, even when all other risk factors are considered.

Meat is one of the most nutrient concentrated and beneficial foods you can eat. Neither the protein, fat or the cholesterol of meat is dangerous to your health. Quite to the contrary, they are ALL highly beneficial to your health.



What is dangerous, is a diet that contains a lot of refined grains and simple carbohydrates that produce a lot of fast glucose, excess insulin and too few B vitamins. Especially too little vitamin B-6 to adequately process the amino acid methionine. This results in an elevation of the powerful free radical homocysteine, which in turn damages the arterial walls causing plaque. It also turns LDL cholesterol into a free radical, further damaging the arteries and creating even more plaque. The ultimate end result of this deficiency of vitamin B-6 is a heart attack.

While proper dietary changes to raise the natural intake of the B vitamins is the best way to improved health, there is also a simple, and very inexpensive way to lower your homocysteine level and lower your risk of plaque and heart attacks. It is found in a supplement available from Vitality and is called **Mag-Six**. It was especially formulated by Dr. Robert Preston to contain the needed vitamin B-6 along with several forms of magnesium which serves as an essential co-factor which is required to eliminate homocysteine by allowing the successful conversion of methionine to its useful forms.

This special report was prepared by Dr. Robert Preston ND. If you would like to know more about diet, blood glucose conversion and how you can eat right, refer to the "Acne" report available on <http://www.IINR.org>.