



OPTIMUM CHOICES, LLC
Healthy choices for people and pets

Cholesterol and Bio-Algae Concentrates (BAC)

(Russian research taken from www.themagicisbac.com)

The finding of high blood cholesterol is often accompanied by signs of chronic sugar elevation in the blood. This shows a disturbance in fat metabolism as well as the metabolism of carbohydrates and protein. By now rest assured that other metabolism are disturbed.

Cholesterol is a major factor of good circulation and good health. Cholesterol is a fat like substance required to provide lubrication in the lining of the arteries. In addition to cholesterol from our food, the liver also manufactures cholesterol that is used for the cells which line the arteries.

When arterial cells break down, they are excreted by the body while new cells grow to absorb new cholesterol in the blood. The concentration of cholesterol in the blood increases when the breakdown (death of cells) of arterial cells exceeds the building up (birth of new cells).

Problems with cholesterol start when a diet is rich in altered fats. When natural fats are overheated, and cooked with starch as in fried potatoes, donuts, pie crust, pastries, potato chips, etc., they become defective and brought to the liver. When the liver manufactures cholesterol from these defective fats, the cholesterol is also defective and breaks down quickly in the arteries. This leads to degenerative atherosclerosis (plaque), which is usually accompanied by elevated cholesterol in the blood.

Natural fat does not lead to arterial disease. Many diets such as that of some Eskimos included large amounts of fat from seal and walrus, and the arteries were normal and healthy. The arteries supply blood to the heart. When the blood loses fluidity with too much fat, the supply to the heart is reduced and the heart works harder and is damaged. As the heart deteriorates, its muscles and valves lose strength and elasticity, and blood vessels harden. The walls dilate, the timing mechanism is disturbed and this magnificent organ fails.

(www.themagicisbac.com/page24-03.html)

Reduction of Bad Cholesterol

By now, Americans are well aware of the need to lower cholesterol levels in order to lower the risks of heart attacks and strokes, the number one cause of death. Besides dietary improvements, the search is underway to identify natural foods having a cholesterol reducing effect, such as fish oil or oat bran. BAC is one of these foods.

In a studies conducted by the Department of Internal Medicine of Tokai University in Japan, it was concluded that Spirulina (as contained in BAC) did lower serum cholesterol and was likely to have a favorable effect on alleviating heart disease since the arteriosclerosis index improved.

Thirty male employees with high cholesterol, mild hypertension, and hyperlipidemia showed lower serum cholesterol, triglyceride and LDL (undesirable fat) levels after eating Spirulina for eight weeks. These men did not change their diet, except adding Spirulina.

Group A consumed 4.2 grams daily for eight weeks. Total serum cholesterol dropped a significant 4.5% within four weeks from 244 to 233. Group B consumed Spirulina for four weeks, then stopped. Serum cholesterol decreased but then returned to the initial level. Researchers found triglyceride levels decreased slightly and LDL cholesterol decreased a significant 6.1% within four weeks. The reduction of serum cholesterol was even greater in those men with the highest cholesterol levels. The study did not speculate on how it lowered cholesterol. No adverse effects were noted.¹

In another study with rats, researchers attempted to find the compound in Spirulina that lowered serum cholesterol. They discovered that the benefit may be amongst other, through its effect on metabolism of lipoproteins. The oil soluble portion was found to suppress cholesterol levels in the serum and liver of rats.⁵

Researchers in West Germany had previously discovered cholesterol reduction during a weight loss study with Spirulina², while the Japanese research showed lower cholesterol without weight loss, suggesting that cholesterol reduction was not related to weight loss. Spirulina had been chosen in this study because it had previously been shown to lower serum cholesterol in rats.^{3,4}

References

¹ Nayaka, N. et al. Cholesterol lowering effect of spirulina. Tokai Univ, Japan. Nutrition Reports Int'l, June 1988, Vol 37, No. 6, 1329-1337. Nakaya, N. Effect of spirulina on reduction of serum cholesterol. Tokai Univ. Progress in Med. Nov. 1986, Vol 6, No. 11.

² Becker, E.W. et al. Clinical and biochemical evaluations of spirulina with regard to its application in the treatment of obesity. Inst. Chem. Pfan. Nutrition Reports International, April 1986, Vol. 33, No. 4, p. 565.

³ Devi, M.A. and Venkataraman, L.V. Hypocholesterolemic effect of blue-green algae spirulina platensis in albino rats. Nutrition Reports International, 1983, 28:519-530.

⁴ Kato, T. and Takemoto, K. Effects of spirulina on hypercholesterolemia and fatty liver in rats. Saitama Med. College, Japan. Japan Nutr Foods Assoc. Jour. 1984, 37:321.

⁵ Iwata, K. et al. Effects of spirulina on plasma lipoprotein lipase activity in rats. Journal Nutr. Sci. Vitaminol. 1990, 36:165-171.

(www.themagicisbac.com/page24-05.html)

Lowering blood cholesterol levels and improving lipid profiles

In a study conducted at the Avinashilingam Institute for Home Science, Deemed University in Coimbatore, India, Dr. Ramamoorthy and his colleagues tested the effects of Spirulina on patients with a combination of high cholesterol (above 250 mg/dl) and ischemic heart disease. They concluded that Spirulina played a key role in lowering blood cholesterol levels and improving lipid profiles.

Cardio-protective agent dissolves deposits

Spirulina's cell wall is unique too. It is made up of mucopolysaccharides that provide numerous health benefits. Many heart ailments may be caused by a build-up of low-density lipids (bad cholesterol. Gamma Linoleic Acid as found in BAC is shown in many studies to be a good cardio-protective agent; it is known to dissolve these deposits. Of special interest is the ability of these mucopolysaccharides to lower blood fats. This was also brought to light in a 1976 study showing that Spirulina controlled the tendency and ability of cholesterol and other lipoproteins to bond with arterial receptors and attach to artery walls.

GLA dissolves arterial deposits

Gamma linolenic acid (GLA), an essential fatty acid, is a precursor for the body's prostaglandins, master hormones that control many body functions. GLA as occurring in Bio-Algae Concentrates exhibits impressive immune stimulating and boosting properties. GLA has proven to be effective in the treatment of many serious diseases. In clinical trials for diabetes, GLA has reversed neurological damage and lowered plasma cholesterol and triglycerides.

“GLA supplementation results in blood's becoming more “slippery” since prostaglandins reduce blood platelet adhesion so that cholesterol deposits in arteries have less chance to build up and create arterial blockage, according to Prescription for Nutritional Healing by James Balch, M.D., and Phyllis Balch, C.N.C. (Avery)”

(www.themagicisbac.com/page9-01.html)

He rolled up his eyes

“I just wanted to share with you real quick some great news. I got my mother in law on the F3 because she has leukemia. Her doctor wanted to put her on all this medicine for her rising cholesterol and white blood cells. She told him to wait one month and she would get blood work again and they could go from there. Just after one month with the F3 (she did not change anything else) her levels all dropped.

Total cholesterol 258 to 185!

Tryglicerides 223 to 135!

Bad cholesterol 163 to 112!

White cell count went back to normal!

The doctor asked her what meds he put her on, thinking he forgot to write it in her chart. Smiling back she said “none”, and proceeded to tell him about the supplement. He just rolled up his eyes, even after seeing her results in the blood work! Go figure, maybe some day he'll choose to look into it for his clients.

I just wanted to thank you for such an amazing product. It has also helped tremendously with my Newfoundland who has kidney disease.

Thanks!”

—Shannon, Taylor, Paws & Claws
Breckenridge, Colorado, February 2007

(www.themagicisbac.com/page52.html)

Bio-algae concentrates Testimonial—Cholesterol (Bio-algae concentrates is a type of bio-algae concentrate)

After finishing my second bottle of your bio-algae concentrates, I had my cholesterol tested again. My doctor and I were thrilled to discover my **total cholesterol was reduced by 32% from 223 to 151** and my **bad (LDL) cholesterol was reduced by 48% from 134 to 70**. This is pretty amazing to me since I have only been taking 4 capsules per day. Your bio-algae concentrates is the only thing I've done differently since my original lab test. (See lab results below)—LB

New WEST
Physicians
14141 North Holly Road
Suite 510 • Denver, CO 80246
303.388.4078

Dr. Douglas McCallum
Dr. David Thomas
Dr. Michelle Thomas

Date: 6/15/15

The results of your tests were normal or within the desired range:

<input checked="" type="checkbox"/> Complete blood count	<input type="checkbox"/> Pap smear
<input checked="" type="checkbox"/> Blood glucose/HgA1c	<input type="checkbox"/> Mammogram
<input checked="" type="checkbox"/> Thyroid function tests	<input type="checkbox"/> Prostate specific antigen (PSA)
<input checked="" type="checkbox"/> Electrolyte/chemistry panel	<input type="checkbox"/> Exam of your moles/lesions
* Total cholesterol <u>223</u>	HDL ("Good cholesterol") <u>56</u>
Triglycerides <u>163</u>	* LDL ("Bad cholesterol") <u>134</u>

X-rays of your * CRP level ↑↑

Protime/INR _____

Other H pylori - negative

Comments your cholesterol is too high - SBE M.E!

Please schedule an appointment with your health care provider _____

Please schedule an appointment for your next exam in _____

Please contact our office for more information about your tests.

Doug McCallum MD

Total cholesterol=223
Bad (LDL) cholesterol=134

New WEST
Physicians
14141 North Holly Road
Suite 510 • Denver, CO 80246
303.388.4078

Dr. Douglas McCallum
Dr. David Thomas
Dr. Michelle Thomas

Date: 8/4/15

The results of your tests were normal or within the desired range:

<input checked="" type="checkbox"/> Complete blood count	<input type="checkbox"/> Pap smear
<input checked="" type="checkbox"/> Blood glucose/HgA1c <u>63</u>	<input type="checkbox"/> Mammogram
<input checked="" type="checkbox"/> Thyroid function tests	<input type="checkbox"/> Prostate specific antigen (PSA)
<input checked="" type="checkbox"/> Electrolyte/chemistry panel	<input type="checkbox"/> Exam of your moles/lesions
<input checked="" type="checkbox"/> Total cholesterol <u>151</u>	<input checked="" type="checkbox"/> HDL ("Good cholesterol") <u>55</u>
<input checked="" type="checkbox"/> Triglycerides <u>171</u>	<input checked="" type="checkbox"/> LDL ("Bad cholesterol") <u>70</u>

X-rays of your _____

Protime/INR _____

Other _____

Comments great labs!

Please schedule an appointment with your health care provider _____

Please schedule an appointment for your next exam in 4 months

Please contact our office for more information about your tests.

Doug McCallum MD

Total cholesterol=151
Bad (LDL) cholesterol=70

Bio-algae concentrates has no advertised ingredients that specifically address high cholesterol symptoms — no cholesterol reducing herbs, no beta-sitosterol complexes, no cholesterol targeting vitamins, no extracts of guggul and no beta-glucans from oats. And yet look at the 48% reduction in LDL and 32% reduction in total cholesterol in the above testimonial. How did bio-algae concentrates accomplish this feat? It did not. Bio-algae concentrates simply supplied the body with the super nutrients of Omega 3, 6, 9 and GLAs (gamma linolenic acid), over 4,000 plant enzymes, 20 amino acids, B vitamin complex, and thousands of other nutrients so the body could **reduce the cholesterol itself naturally and holistically**. Bio-algae concentrates is such a revolutionary product (concept) it is 100 years ahead of its time. Now that is true holistic wellness!

These results are an individual case study. We cannot guarantee your results will be the same. Since each individual body responds differently to the super nutrition in Bio-algae concentrates/Bio-algae concentrates your results will be different. These statements have not been evaluated by the FDA. This information is not intended to diagnose, treat, prevent or cure any disease.