LOSE WEIGHT AND LOWER CHOLESTEROL AND TRIGLYCERIDES BY BLOCKING FAT ABSORPTION

A patented fiber developed in Norway is now being used throughout Europe to lower cholesterol and triglyceride levels. This fiber works by binding to fat and cholesterol in the intestine, thus preventing fat and cholesterol from being absorbed into the blood,

Based on preliminary studies, this fiber has the potential of becoming one of the safest and most effective weight-loss therapies ever developed.

THE FIRST "DESIGNER" FIBER

Chitosan is a natural component of the material that insects and shellfish make for their exo-skeletons.

Scientists in Norway have taken chitosan and custom processed it so it has a natural magnetic binding affinity for fat and cholesterol in the digestive tract. The binding occurs when positively charged chitosan binds with negatively charged fat and bile acids. The binding of these fat and cholesterol molecules to chitosan fiber prevents them from being absorbed into the bloodstream. Chitosan is the first fiber designed specifically to attract and hold fat and cholesterol for safe elimination.

Most fibers absorb fat and bile acids to limited extent, but chitosan is designed to function like a magnet in attracting negatively charged fat and bile acids. Chitosan can absorb fat and bile by 7-8 times its weight in the digestive tract. The fat and cholesterol are then excreted through the bowel, there by improving bowel functions. It is easy to verify how well chitosan works by noticing the fat content in one's stool.

CHOLESTEROL REDUCTION

There are cholesterol-lowering drugs the FDA has approved that have dangerous side effects such as liver toxicities, vitamin deficiencies and increased risks of colon cancer. Chitosan on the other hand has the ability to bind with cholesterol better than other cholesterol-lowering products sold in the United States with no toxicities observed even when very high doses have been tested.

Clinical studies with chitosan have shown that in five weeks, total cholesterol can be reduced by 32%. More importantly, the good HDL cholesterol that helps to keep your arteries free of atherosclerotic plaque has been shown to increase by 7.5% after five weeks of using chitosan. These studies also showed that triglyceride levels could be reduced by 18% after five weeks of chitosan therapy.

FAT REDUCTION

While chitosan was originally tested as a cholesterol triglyceride reducing agent, people were most impressed with the weight-loss effects. Chitosan's strong fat-binding abilities lower calorie-value of food by making the fat content of the food much less absorbable.

By reducing dietary fat absorption, chitosan can dispense with the need for extreme dieting and exercise while sustaining significant weight loss. chitosan does not block the carbohydrate (sugar) content of food from absorption, but fat calories cause far more weight gain than do carbohydrate calories.

Here is an example of how chitosan can reduce fat absorption:

	Grams of fat	Chitosan caps (#)to absorb
1 slice of average pie	15	**7-8**
1 slice of average pizza	**20**	**10**

This off-setting of dietary fat by using chitosan is not recommended on a routine basis, but can enable a person seeking to lose weight to splurge without putting the unwanted fat pounds right back in.

USING CHITOSAN AS A LIFE EXTENSION THERAPY

Calorie restriction is the most documented way of extending maximum lifespan. While scientists attribute many of the benefits of calorie restriction to the decreased intake of protein, reducing the amount of fat absorbed could also add quality years to your life. The FDA even allows the health claim that diets containing soluble fiber (like chitosan) can reduce the risk of heart disease.

Fat absorbed into the body increases your risk of cancer along with the risk of heart disease. Using chitosan to block the uptake of fat and cholesterol into the bloodstream could reduce many of the negative health effects of excess fat absorption including excessive weight gain.

The average dose to control cholesterol in adults is to take three 250 mg capsules before each meal (maximum 10 grams per day). The dose depends upon body size and how high cholesterol levels are in the blood.

Persons with a genetic predisposition for high cholesterol should note that, even though they may be on a low-fat and low-cholesterol diet, their liver can still produce a large amount of cholesterol. Normally, most cholesterol is attached to bile acids and travels from the liver into the intestines where the bile is reabsorbed into the blood to produce elevated serum levels of cholesterol preventing them from being reabsorbed into the bloodstream. Unlike other fibers, chitosan does not interfere with the absorption of vitamins and minerals.

The FDA approved drug called Questran (cholestyramine) works to lower cholesterol by removing a very high percentage of bile acids from the liver, chitosan also removes some bile acids, but primarily binds to cholesterol and dietary fat. Questran can cause such severe gastrointestinal disturbances that some people cannot take it. What's worse about Questran are disturbing reports in the scientific literature that indicate that it may increase the risk of colon cancer and be toxic to the liver. A study published in the Proceedings Soc. Biological Medicine (USA, 1988, 189/1 (13-20) that compared Questran to chitosan, While, Questran lowered cholesterol better than chitosan, animals fed Questran produced significant damage to the lings of their small and large intestines which would make these animals very susceptible to bowel cancer. The effects similar to those of cholestyramine without the deleterious changes in intestinal mucosa.

Another study reported in Endocrinology (USA, 1993, 132/3 (1078-1084), again showed cholestyramine superior to chitosan in reducing cholesterol, but showed serious liver toxicities that led the researchers to conclude, "There was not significant change in liver weight or appearance in the chitosan group, but the choestryamine group manifested secondary effects, including small, yellowish livers. These results taken collectively indicate that chitosan maintained adequate cholesterol rate, despite increased intake of dietary cholesterol".

We have identified numerous published papers showing chitosan to be an effective lipid-lowering fiber without the side effects of FDA-approved cholestyramine. As is typical with FDA-approved products, they are expensive in addition to having dangerous side effects, Members of the Foundation can purchase chitosan for 65% less than what cholestyramine costs,

IMPROVING BOWEL FUNCTION

Chitosan's binding to fat and cholesterol usually results in improved bowel function, with less gas, diarrhea or constipation. The fiber induced increase in transit time through the bowel helps prevent damage from entertoxins which can cause cancer. Chitosan has been shown to have a favorable influence on intestinal bacteria by binding to toxic bacteria and removing them from the gut before they can spread to other areas of the body to cause disease. An Italian study showed that chitosan was far superior in removing dangerous bacteria from the gut than any other fiber tested.

CHITOSANS OTHER POTENTIAL BENEFIT

There are 355 published studies on chitosan we have identified in the international date bases. Some of these papers document a significant potential for chitosan to be used as an effective cancer treatment, especially in conjunction with other cancer treatment modalities. We will send copies of these published papers about chitosan potential cancer treatment effect to any one who send us a double stamped, self-addressed envelope. We hope report on practical ways of using chitosan as a cancer therapy in future issues of this newsletter.