

LE Magazine November 1997

## Late Breaking NEWS

### Why Americans Are So Fat

**More Americans are overweight now than ever before. In the 1980s, Americans added eight pounds to their average weight, yet consumption of diet drinks and low-fat foods was much higher than in the previous decade.**

Today, "lite" versions of almost every processed food on the market are being consumed by Americans obsessed with losing weight. Yet, despite diet manipulation, vigorous exercise and the use of diet drugs, the fat epidemic continues unabated.

The media blame high fat consumption for America's overweight problem, but the facts are that the members of previous generations often consumed higher percentages of dietary fat than do many overweight people today.

Could a widespread deficiency of a specific nutrient be a major factor in causing the excess body fat in many people? Let's take a look at this hypothesis.



#### A CLA DEFICIENCY

Conjugated linoleic acid (CLA) is a component of beef and milk that has been shown to reduce body fat in both animals and humans. CLA is essential for the transport of dietary fat into cells, where it is used to build muscle and produce energy. Fat that is not used for anabolic energy production is converted into new fat cells. New research shows how dietary CLA reduces body fat, but first let's take a look at why many Americans are now deficient in CLA, compared with their parents.

The primary dietary sources of CLA are beef and milk, and Americans are eating less beef and drinking less whole milk in order to reduce their dietary intake of saturated fat. People often drink non-fat milk, but it's the fat content of the milk that contains CLA. Since skim milk contains virtually no CLA, those seeking to lose weight by using skim milk are depriving themselves of a potential source of this fat-reducing nutrient.

Now, here's where the real problem occurs. In 1963, the CLA percentage in milk was as high as 2.81 percent. By 1992, the percentage of CLA in dairy products seldom exceeded 1 percent due to changing feeding patterns of cows. Cows that eat natural grass produce lots of CLA, while today's "efficient" feeding methods rely far less on natural grass. To illustrate, grass-fed Australian cows have three to four times as much CLA in their meat as American cows. As a result, most Americans have inadequate amounts of CLA in their diet. Here is the irony: 1) health-conscious Americans are avoiding beef and whole milk because these foods are high in fat; 2) when people do consume beef or milk, they are consuming very little CLA because of cows' altered feeding patterns; and 3) this CLA deficit may be at least partially responsible for the epidemic of overweight people of all ages that now exists.

#### CLA AND FAT LOSS

How significant is CLA in preventing excess accumulation of body fat? The results to date are preliminary, but extremely encouraging.

Athletes are taking CLA to push glucose into their muscle cells and connective tissues instead of letting them turn into fat. CLA has been shown to reduce protein degradation in both humans and animals.

CLA is required to maintain optimal function of the phospholipid membranes of cells. Healthy cell membranes will allow fat, protein and carbohydrate to flow into active cells such as muscle, connective tissue and organ cells, instead of being stored passively in fat cells. A deficiency of CLA can inhibit fat from entering muscle cells, which can result in excessive accumulation of body fat.



CLA has been studied in different species of animals, and the results consistently show that CLA reduces the percentage of body fat. An abstract from the 1996 Environmental Biology Conference demonstrated that rats fed supplemental CLA for 28 days showed a 58-percent reduction in body fat, compared with the control animals who did not receive CLA (10.13 percent body fat in the control group, compared with only 4.34 percent body fat in the CLA group). CLA did not induce weight loss, since muscle weighs more than fat; the percentage of muscle was greater in the CLA group.

In July, the results of the first human study on CLA were released by the Medstat Research Ltd. group of Lillesterom, Norway. This three-month preliminary study involved 20 healthy volunteers. Half the group was given six 500-mg CLA capsules a day, and the other half received identical-looking placebo capsules. The subjects were asked not to alter their diet or lifestyle. After three months, 18 of the 20 subjects completed the study protocol. The results showed that those in the CLA group experienced a 15- to 20-percent reduction in average body fat compared with the placebo group. In the CLA group, the initial body fat percentage was 21.3 percent at the beginning of the study, dropping to only 17 percent body fat after three months on CLA capsules. The placebo group had an average of 22 percent body fat at the beginning of the study and 22.4 percent body fat after three months.

## **CLA AND CANCER PREVENTION**

CLA received widespread media attention five years ago when it was identified as a component of red meat that helps prevent cancer. Further research showed that CLA is a potent anti-cancer agent, an anti-catabolic agent and-through a unique mechanism-a fat-metabolizing agent.

CLA is one of the substances the Food and Drug Administration is investigating for disease prevention. New studies are appearing every month about the ability of CLA to possibly function as an adjuvant (assisting) cancer therapy. CLA appears to be especially effective in preventing breast cancer.

Using CLA to reduce body fat may reduce your risk of getting cancer. Compare this with FDA-approved diet drugs that now are being linked to heart valve degeneration in women who have used them for more than a year. Some of these women have had to undergo heart valve replacement surgery.

In conclusion, a deficiency of CLA in our diet may be a major factor in causing Americans to gain so many fat pounds. In addition, CLA is a potent antioxidant, but it also appears to prevent cancer via other mechanisms of action.

A dose of six of the new higher-concentrated capsules of CLA, taken in the morning on an empty stomach, may be an effective part of an overall weight-loss program. The studies indicate that it usually takes about three weeks before body fat loss occurs in response to CLA supplementation.

## **. . . AND WHAT WE CAN DO ABOUT IT!**

Based on newly published research, the Life Extension Foundation has designed a weight-loss program that should work for most people seeking to lose excess body fat. Every component of the Foundation's weight-loss program is safe. It provides documented additional health benefits, such as serum cholesterol and glucose reduction, protection against magnesium deficiency-induced atherosclerosis, and even a probable reduction in the risk of cancer.

## **FAT LOSS COMPONENT NUMBER 1**

### ***Conjugated linoleic acid.***

CLA inhibits fat storage by enhancing the ability of cell membranes (other than fat cells) to open up and allow the absorption of fats and other nutrients. CLA promotes the growth of muscles by letting nutrients into active muscle cells. That's why CLA has become such a popular supplement among body builders.

The fat-reducing mechanism of CLA involves the rejuvenation of cell membranes in the muscles and connective tissues to allow fats to enter freely, and to generate energy and growth. This anabolic effect could provide anti-aging benefits in the elderly, but there have been no studies to date to investigate this.

The new CLA capsule is about 50-percent stronger in the cis-9, trans-11 isomer, which scientists consider the most active. The CLA fraction is more than 70 percent in the new CLA, compared to 60 percent in the previous version. Suggested dose: Take six of the new and improved 500-mg CLA capsules first thing in the morning on an empty stomach.

## FAT LOSS COMPONENT NUMBER 2

### **Chitosan**

Chitosan is a fiber that binds to fat molecules in the gut to prevent dietary fat from being absorbed into the bloodstream. Fat in the blood readily converts into body fat. The best way of using chitosan is to take between 1,500 and 3,000 mg of chitosan immediately before a meal containing fat. Drink at least eight ounces of water with the chitosan.

The chitosan capsules will burst open within five minutes and be available to absorb dietary fat in the stomach and intestine before the fat can be absorbed into your bloodstream. The fat bound to the chitosan is then carried out of your body in the feces. Studies show that chitosan absorbs 44 percent more dietary fat on average than any other fiber tested.

Chitosan is now available in 500-mg capsules, thus making it much easier to consume the optimal amount of chitosan needed to bind to the dietary fat contained in a typical high-fat meal. Those seeking to lose weight should take three to six 500-mg chitosan capsules before each fatty meal. This dose should also help to reduce LDL cholesterol by binding to bile acids secreted into the intestine by the liver, and preventing their reabsorption into the bloodstream.

Studies show that ascorbic acid (Vitamin-C) helps dissolve chitosan in the stomach and intestine into a fat-absorbing gel. When ascorbic acid was given to rats along with chitosan, far more fat was trapped and excreted than when chitosan was given without ascorbic acid. It is important to take pure ascorbic acid to enhance the fat absorbing effects of chitosan. Buffered ascorbate will not work.

The most significant human study using chitosan was published in the August-October 1994 issue of the journal *ARM Medicina-Helsinki*. In this study, 30 moderately obese patients were given chitosan, while members of a control group on the identical diet received a placebo. Within four weeks, members of the chitosan group lost an average of 15 pounds each, while members of the control group lost just 5.5 pounds. This study confirmed the findings of a previous uncontrolled human study conducted in Norway.

**Suggested dose:** *Take three to six 500-mg chitosan capsules and one 1,000-mg ascorbic acid capsule right before a high-fat meal.*

**Caution:** Do not take chitosan and CLA together. The chitosan will absorb the CLA and prevent it from getting into the bloodstream. Do not take coenzyme Q10 rice bran oil capsules, Mega EPA, MEGA GLA or flax oil with chitosan, since these important oils also will become trapped in the chitosan and be unavailable for absorption. It is best to take your essential fatty acid oil supplements all together first thing in the morning if you are going to use chitosan throughout the day to absorb dietary fat.

## FAT LOSS COMPONENT NUMBER 3

### **Chromium and Magnesium.**

Insulin resistance prevents serum glucose from entering cells. If glucose cannot get into the cells to produce energy, it will be stored in the body as fat. Chromium picolinate and magnesium have been shown to help break down cellular insulin resistance. For chromium to be effective in the body, it needs to have niacin present. Many health-conscious people receive supplemental niacin with their B-complex formula, but Life Extension's chromium supplement contains 30 mg of niacin in addition to 200 micrograms (mcg) of chromium picolinate in each capsule. This small amount of niacin does not usually produce a niacin "flush," but does ensure that niacin will be available to work with chromium to reduce serum glucose levels by breaking down insulin resistance. The published studies actually show that magnesium is more effective than chromium in breaking down insulin resistance. Magnesium deficiency is another cause of excess weight gain in Americans. Chromium can lower cholesterol levels as well as serum glucose levels, while magnesium can protect against heart attacks and stroke. These supplements also may provide significant life extension benefits, in addition to weight loss.

**Suggested dose:** *Take one 200-mcg chromium picolinate capsule (two to three chromium-niacin capsules) a day. Take at least one 500-mg capsule of elemental magnesium each day with a heavy meal. Some people benefit by taking more magnesium, with the only side effect being diarrhea.*

## FAT LOSS COMPONENT NUMBER 4

### **Soy protein.**

A deficiency of thyroid hormone can slow down metabolic actions in the body and cause weight gain. Consumption of soy protein

can boost the body's natural secretion of thyroid hormone, thereby increasing the body's metabolic rate. Thyroid hormone also is necessary to drive glucose into the cells.

The isoflavones (especially genistein) contained in soy protein extracts have potent cancer-prevention effects, especially against breast and prostate cancer. Cancer patients often take high doses of soy protein extract as an adjuvant (assisting) therapy because of studies showing that genistein inhibits cancer cell proliferation via several well-established mechanisms. Soy protein also has been shown to lower cholesterol, possibly via its thyroid hormone stimulating effect.

**Suggested dose:** One heaping tablespoon (20 grams) of Soy Power powder, or five to 16 1,200-mg Soy Power tablets a day.

## FAT LOSS COMPONENT NUMBER 5

### **DHEA.**

Hormone deficiencies are a cause of age-associated weight gain. DHEA has kept old animals remarkably thin, but has not worked this well in human tests.

However, many older people taking DHEA report anabolic muscle gain and fat loss. For one thing, DHEA has been shown to boost insulin growth factor (IGF-1) in humans. The increase in this youth factor may be responsible for the fat reduction and anabolic effects seen in some elderly people.

The main benefits to people over 40 in restoring DHEA levels to youthful measurements include immune enhancement, protection against neurological disease and memory loss, reductions in risks of certain cancers, alleviation of depression, and protection against osteoporosis.

**Suggested dose:** Men-50 to 75 mg a day; women-25 to 50 mg a day.

**Caution:** Refer to the Foundation's DHEA precautions before taking DHEA.

These are published in the 1997-1998 edition of the Directory of Life Extension Nutrients and Drugs. If you don't have it, call 1-800-841-5433 and you will be sent a free copy.

Weight Management Products

[Back to the Magazine Forum](#)

All Contents Copyright © 1995-2009 Life Extension Foundation All rights reserved.

**LifeExtension**<sup>®</sup>

These statements have not been evaluated by the FDA. These products are not intended to diagnose, treat, cure or prevent any disease. The information provided on this site is for informational purposes only and is not intended as a substitute for advice from your physician or other health care professional or any information contained on or in any product label or packaging. You should not use the information on this site for diagnosis or treatment of any health problem or for prescription of any medication or other treatment. You should consult with a healthcare professional before starting any diet, exercise or supplementation program, before taking any medication, or if you have or suspect you might have a health problem. You should not stop taking any medication without first consulting your physician.