

BioThermol and BioThermol Boost: A Revolutionary Approach to Improving Metabolism

A Unique Two Part Fat Loss Product

We live in a world where weight loss diets and fads are always popping up. Losing weight can be one of the toughest things for an individual to do. For years, studies on obesity have found that soon after overweight people lose weight, their metabolism slows down and they experience hormonal changes that can actually increase appetite.

Scientists hypothesized that these biological changes could explain why most obese dieters quickly gained back much of what they had so painfully lost.

But now, this journey has become simpler. Scientists have found through new studies a signaling molecule capable of activating brown fat cells, paving the way for new therapies to help people lose weight.

An international team of researchers led by Professor Alexander Pfeifer from the Institute of Pharmacology and Toxicology of the University Hospital Bonn have discovered a new way to stimulate brown fat synthesis, and thus burn more energy from fat storage.

There is now a process that can be stimulated through two unique supplements that cause a conversion of white fat to brown fat. This process takes about 8 weeks to begin to create enough brown fat cells to increase the resting metabolism of an individual. Stimulating this process, assists the body in developing its own NEW internal mechanism to help burn up unwanted fat stores and then keep it off.

BioThermol Boost is designed to give you quick results during the first 8 weeks, and **BioThermol** is formulated for long lasting weight loss utilizing the activation of the brown/brite fat. This unique combination delivers fast results as well as support longer term weight fat loss and maintenance.

For more information on "**BioThermol**" and "**BioThermol Boost**" see our product flyer and ingredients rationale papers.

Fighting FAT with FAT for Reducing Fat Loss Rebound

For most people, "fat," particularly the kind that bulges under the skin, is a four-letter word. It makes our thighs jiggle, gives us muffin tops, love handles, plump hips and overflowing bellies. Too much of it increases our risk for heart disease and type 2 diabetes. For decades researchers have looked for ways to reduce our collective stores of fat because they seemed to do more harm than good.

In the late 2000s several research groups independently discovered something that shattered the consensus about the absolute dangers of body fat. Scientists had long known that humans produce at least two types of fat tissue—white and brown. Each white fat cell stores energy in the form of a single large, oil droplet. In contrast, brown fat cells contain many smaller droplets, as well as chestnut-colored molecular machines known as mitochondria. These organelles in turn burn up the droplets to generate heat. Babies, who have not yet developed the ability to shiver to maintain their body temperature, rely on thermogenic deposits of brown fat in the neck and around the shoulders to stay warm. Yet in the past investigators assumed that all brown fat disappears during childhood. The new findings revealed otherwise. Adults have brown fat, too.

Very recently, people started throwing around terms like holy grail to describe the promise of brown could fat to combat obesity. The idea was appealingly simple: if researchers figure out how to incite the body to produce

extra brown fat or somehow rev up existing brown fat, a larger number of calories would be converted into heat, reducing deposits of white fat in the process.

Science is just now understanding the role brown fat has in the body. Scientists have learned new ways to pinpoint its location underneath the skin. The latest evidence shows that brown fat can indeed reduce excess stores of fat even in the obese. Researchers have also identified compounds that can activate brown fat. As bizarre as it sounds, fat may become an important ally in the fight against obesity.

Studies found that in mice, brown fat does something remarkable. Brown fat burns more calories when mice are overfed, protecting them from obesity.

A team led by the University of Pennsylvania discovered a switch for creating a brown fat cell—a protein called early B cell factor-2 (Ebf2). By comparing the active genes in brown and white fat cells, they discovered Ebf2 is present in larger quantities in brown fat. This protein seems to mark which genes will later be turned on to transform certain types of precursor cells into brown fat. When the team engineered mice lacking this protein, the animals had white fat cells on their upper back and spine rather than the typical brown fat. When the team expressed high levels of Ebf2 in white fat, these cells turned brown and consumed more oxygen—a sign they were producing more heat.

A second team, led by Harvard's Joslin Diabetes Center, noted that mice have two types of brown fat: constitutive brown fat, which they have from birth, and "recruitable" brown fat, scattered throughout the muscles and white fat. When researchers engineered mice lacking a protein called Type 1A BMP- receptor (BMPR1A)—which is needed for the correct development of brown fat—the mice were born with just a tiny bit of constitutive brown fat on their back.

You would think that these mice would be terribly cold. Surprisingly, they kept a normal body temperature. How did they manage this feat? The lack of brown fat apparently sends a signal via the brain to recruit white fat cells, telling them to make a switch and transform into brown fat. These mice stayed warm, and the newly recruited brown fat even protected them from obesity.

Recent studies have also revealed that brown fat benefits go far beyond burning calories. A 2011 study using mice found that brown fat can fuel itself with triglycerides taken from the bloodstream—exactly the kind of fatty molecules known to increase the chances of developing metabolic syndrome, a cluster of conditions that raises the risk for heart disease, stroke and diabetes. Brown fat cells also draw sugar molecules from the blood, which could help lower the risk for type 2 diabetes. Chronically high levels of blood glucose wreak havoc on the body's ability to manage those levels, which in turn sets the stage for diabetes.

How do we stimulate proliferation of brown fat for weight management?

Figuring out whether cool temperatures trigger the production of brown/beige fat, in addition to revving up brown fat activity, seemed like a good starting point. Last year Japanese researchers asked 12 young men with lower than average amounts of active brown fat to sit in a 63 degree F room for two hours a day for six weeks. At first, the study participants burned an average of 108 extra calories in the cold compared with more normal indoor temperatures. After six weeks, however, their bodies were burning an extra 289 calories in the cold, and PET-CT scans indicated that their beige fat activity had indeed increased. A group of similarly aged and healthy men who were not repeatedly exposed to the cold showed no change in their metabolism. The researchers think that over the six weeks low temperatures increased the activity of a gene named *UCP1*, which seems to guide the conversion of white fat into beige fat. Not many humans desire to sit in low temperatures for weight loss purposes. Fortunately, recent investigators have identified several molecules that are able to stimulate such "browning" of white fat without the need for cold. 2012 studies showed that a hormone called irisin, which is released from muscle cells after exercise, inspires white fat to behave like brown fat. In one of these studies,

researchers injected mice with a gene that tripled the levels of irisin in their blood. Mice that were obese and had dangerously high amounts of sugar in their bloodstream lost weight and regained control of their glucose levels in just 10 days. Exercise has also been shown to increase *UCP1* activity in brown fat, making it more active so exercise is still important too. Japanese human cold studies have shown that after the *UCP1* gene is activated by irisin it takes 8 weeks for the body to make enough brown/brite fat cell to catabolize significant amounts of white fat.

BioThermol Weight Loss Supplement

Anova Health's **BioThermol** is a weight loss supplement based on the science of recruiting the proliferation of brown and brite adipose tissue, with activation of thermogenesis in these two tissues. **BioThermol** is meant to be used in concert with a healthy life style of exercise and healthy eating habits for weight loss.

BioThermol proliferates and activates brown fat for long term lasting results. It takes about 8 weeks for the body to make brown fat which will then activate metabolic burning of white fat stores.

BioThermol Boost works in the first two months of the Anova Health program by controlling appetite and increasing metabolism and energy levels. **BioThermol Boost** also encourages muscle proliferation, increases tissue oxygenation, improves digestion and is a powerful mood booster.

In several trial subjects, individuals lost an average of 2 to 5 pounds a week while using the **BioThermol Boost** during those first weeks. *Burning an extra 500 to 1000 calories a day adds up quickly.* 3,500 extra calories burned is equaled to a pound of fat. "Even very modest increases in metabolism over a long period can lead to significant weight reduction," says Barbara Cannon, a physiologist at the Wenner-Gren Institute for Experimental Biology in Stockholm.

BioThermol -- Ingredients:

Hops Extract 90% Xanthohumol
Shilajit 12:1 (5% Fulvic Acid)
DL-Aspartic Acid
Magnolia Extract 98% Honokiol
Litsea Cubeba Extract
Yellow Horned Poppy Extract 98% Glaucine
Tribulus Extract: 90% Saponins
Chinese Golden Thread Extract: 98% Berberine HCL
Boswellia Extract: 65% Boswellic Acids
Turmeric Extract: 95% Curcuminoids
Black Pepper Extract: 95% Piperine
Green Tea Extract: 90% EGCG
Honeysuckle Extract: 25% Chlorogenic Acid
Green Coffee Bean Extract: 55% Chlorogenic acid
Tongkat Ali 200:1 Extract
Lemon Extract
Grapefruit Extract
Oleamide
Citric Acid
Laser Enhanced Bio-Information

NanoSphere Delivery Blend

Phosphatidylcholine, Medium Chain Triglycerides, Monatomic Palladium, Monatomic Platinum

BioThermol Boost -- Ingredients:

Decocainized Coca Leaf Extract

L-Theanine

Kava Extract: 70% Kavalactones

Hop Extract: 90% Xanthohumol

Shilajit (5% Fulvic Acid)

Magnolia Extract: 98% Honokiol

DL-Aspartic Acid

Octopamine

Wild Mint Extract

Lemon Extract

Grapefruit Extract

Monatomic: Gold, Platinum, Cooper, Zinc, Iron, Manganese, Rhodium, and Iridium

Purified Water

Glycerin

Citric Acid

Custom Laser Enhanced Bio-Information

Phospholipid Targeted NanoSphere Delivery System

One of the key components for the effectiveness of **BioThermol** is its targeted delivery of micro nutrients, directly to the cells receptors sites. This is accomplished through the electro charged Phospholipid NanoSpheres encapsulation protective membrane. Made from the same phospholipids that form the membranes around each cell in the human body, NanoSpheres shield nutrients from dilution and degradation. They more efficiently transport ingredients into the circulatory system and directly target cells for overall greater absorption and efficacy.

Our pharmaceutical-grade nutraceutical ingredients are independently tested for purity and potency. Reducing the size of those ingredients into nanometers has many benefits. As particle dimension decreases the surface area for the same mass increases exponentially in turn increasing solubility, absorption and a new biokinetic charge. Capturing the nano-sized nutraceuticals in a protective lipid membrane nanosphere structure, protects, solubilizes and stabilizes these nutraceuticals for rapid, direct delivery across mucosal boundaries (mucous membranes) that would otherwise block their absorption. The end result is a highly bioavailable targeted array of nutraceutical ingredients available to targeted cells.