

The Rebuilding of Muscle Tissue for the Young and Old

By Dr. Bruce Miller

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Rebuilding muscle tissue is one of the most important functions of the human body.

There Are Three Phases to Building a Muscle

Catabolic: Muscle tissue is broken down every day.

Recovery: Glucose and amino acids pump into the muscle.

Anabolic: Using glucose and amino acids, the muscle rebuilds stronger and larger.

Some use Steroids To Speed The Three Phases

MINOR SIDE EFFECTS INCLUDE: Personality changes, sleep disturbances, acne, masculinization for women, breasts for men, and growth reduction for adolescents.

MAJOR SIDE EFFECTS INCLUDE: Cholesterol imbalance, liver tumors, hepatitis, and leukemia.

Wouldn't it be nice to be able to move from catabolism into recovery and muscle/bulk building quickly **without the side effects of steroids?** That is exactly what a new product called Physique by the Shaklee Corporation does. Let's review exactly how all this works.

THE WHOLE STORY

1. The **muscle cell** is broken down and is tired. It needs glucose and amino acids to recover and build.
2. **Insulin** is the main muscle building hormone in the body. It opens the "cell's door" to let in all of the nutrients the cell needs.
3. Every door needs a **door knob** (insulin receptor). The knob is chromium.
4. Once the door is opened, a **quality mix** of glucose, branched chain amino acids, and the rest of the essential amino acids must be available for maximum muscle building, bulk, and recovery.

WE NEED TO THOROUGHLY UNDERSTAND THREE THINGS

1. Insulin (door opener)
2. Chromium (door knob) or insulin receptor.
3. The three branched chain amino acids (primary builders).

INSULIN

1. The pancreas needs to be stimulated to produce insulin.
2. The main stimulators are:
 - Glucose, the final breakdown product of any carbohydrate.
 - The branched chain amino acids (valine, leucine, and isoleucine).
 - The proper ratio of carbohydrate and protein. Divide the carbohydrate in a product by the protein content. A **ratio of 2.7** gives excellent insulin stimulation. Look for this ratio in **any** product you buy.
3. Physique's unique quantity, quality, and ratio of these stimulators results in maximum production of the primary strength hormone!

CHROMIUM

1. No matter how much muscle building hormone (door opener) you have available...no door knob (chromium), no entry.
2. The U.S. Department of Agriculture tells us that 90% of Americans consume diets low in chromium. Athletes use up chromium at a high rate, so they are at extreme risk.
3. There are a number of chromium supplements in various muscle building products, and they work to varying degrees.
 - Chromic Chloride - Extremely poor utilization
 - Chromic Acetate - Poor utilization
 - Chromium Tripicolinate - Some utilization
 - Chromium Picolinate - Fair utilization
 - Chromium Nicotinate - Excellent utilization
4. Physique is the **only** drink I have found on the market that contains chromium nicotinate! **If muscle tissue is not replaced and doesn't rebuild properly the muscle will come back thick & non-elastic.**

HOW INSULIN AND CHROMIUM HELP BUILD MUSCLE

Increased uptake of amino acids... both in speed and number.

Increased assembly of amino acids into muscle protein.

From a sports text: "Insulin's participation in protein synthesis, or anabolism, is not limited to bringing raw materials into the muscle cell. It also promotes the assembly of amino acids into protein through its effect on the cell's genetic material, DNA and RNA (similar to the steroids). The net effect of all of this is increased protein available for building muscle tissue. Then combined with resistance exercise, this results in more muscle development and fat loss. Insulin is the body's primary anabolic hormone. Testosterone, the substance from which anabolic steroids are derived, does have anabolic effects, but they are secondary to those of insulin."

THE THREE BRANCHED CHAIN AMINO ACIDS (BCMS) PLUS THE OTHER 6 ESSENTIAL AMINO ACIDS

1. Do not buy a muscle building product based on the number of grams of protein. Look at the BCAAs, valine, leucine, and isoleucine.
2. The muscle is 35% BCAAs which are broken down rapidly during a workout.
3. After a workout, the muscle is starved for the BCAAs which also pull in the other 6 essential amino acids needed to build muscle and aid in recover. The other 6 "spare" or protect the BCAA's.
4. In the first 3 hours after a workout, the BCAAs account for 50% of the total amino acid uptake. That is why you consume a power drink immediately after a workout and then again within 2 hours.
5. Physique's amino acid profile is unique.

There are 10,000 mg of essential amino acids in a serving.

An astounding 44% of these are BCAAs.

I know of no other drink with that profile.

From a sports text: "For the athlete, the BCAAs have great promise. They can be used to actually produce better performance. In fact, they are similar to anabolic steroids in their effects on athletic performance, but they have none of the side effects associated with steroids. Besides their tissue sparing properties, they have potent anabolic (building) qualities, and they yield metabolic by-products that boost your energy production for long-term sports activities."

COMPARISON

In comparing Physique by the Shaklee Corporation to some 50 randomly chosen "muscle" products, we find the following:

- It is the **only one** whose delivery system has been **clinically tested** (published in a referred nutritional journal) to raise insulin levels.
- It is the **only one** with chromium nicotinate.
- It is the **only one** with the unique ratio of carbohydrate/protein - 2.7.
- It is the **only one** mentioned lactose-free. (Over 30% of Americans have lactose problems.)
- It is the **only one** listed biologically complete with a protein efficiency ratio (PER) of 3.0.
- It is the **only one** that is Kosher.
- It has all natural flavors.
- It contains no artificial colors, sweeteners or preservatives.
- The label is free of sales "hype."