

# Dynamic Endurance from *Body Dynamics™*

## The Energy Source

Dynamic Endurance provides a broad range of nutrients and natural bio-energizers, which have been shown to augment and optimize different aspects of muscle metabolism to maximize the sheer power, energy and endurance of your hard working muscles. So you can do those extra reps run those extra miles or push your body longer without tiring as much, no matter what sport or training you participate in. To help you understand how Dynamic Endurance will optimize your muscle energy metabolism to allow prolonged, high intensity workouts, here is a brief description of how each of its ingredients works:

### 1. The Energy Sustainers and ATP

The calcium/magnesium/potassium succinate complex boosts your muscle cells' production of ATP. ATP is the bio-energy molecule that supplies the energy to power all of the activities of your body. With core ATP you can run faster and longer, lift more and throw farther. The succinates also reduce lactic acid build-up and post-training acidosis, promoting quicker, less painful recovery after training. Finally the succinates increase your muscle cells' production of creatine phosphate, a high energy biochemical that helps your cells bypass the Krebs Cycle for quicker ATP production under intense demands for muscle energy, as in circuit weight training or 440 yard dashes. Glycogen – the starch fuel that can be directly stored in your muscles, and which is increased by “carbohydrate loading”, is also more easily stored in muscles well supplied with mineral succinates. Inosine is a natural nucleic acid derivative and a precursor (building block) for ATP. The Inosine in Dynamic Endurance enhance ATP and RNA/DNA production. Rapid RNA/DNA production helps your muscles grow faster and repair quicker. Inosine also improves the transfer of oxygen from red blood cells to muscle cells, where the oxygen helps burn fuel to make ATP. PAK (Pyridoxine Alpha Ketoglutarate) is an East German athletic favorite, highly touted in European exercise physiology journals. It increases VO Max, the volume of oxygen processed through the body. PAK also reduces lactic acid build-up during exercise. This reduces fatigue and pain.

### 2. Building Blocks for the ATP Cycles

Virtually all of the ATP energy produced in your cells is made through two interlocking cycles: the Embden-Meyerhof glycolytic cycle and the Krebs tricarboxylic acid cycle. The secret of super energy and strength is providing the proper nutrients to support these two energy production cycles. The Krebs cycle creates sustained energy, at lower intensity. It generates about 90% of the ATP energy we use. Coenzyme Q10 is one of the key catalysts and regulators of the Krebs cycle. Vitamins B<sub>1</sub>, B<sub>2</sub> and B<sub>3</sub> are the main vitamin coenzymes used in this cycle. Magnesium is the main mineral Krebs coenzyme factor, and is present in Dynamic Endurance in two forms: citrate and succinate, which are normal cell metabolites. Your cells also store a small amount of ATP in the form of magnesium ATP.

### 3. Branched Chain Amino Acids

Your hard working muscles use large amounts of the three-branched chain amino acids, leucine, isoleucine and valine. These three amino acids increase the rate of muscle protein synthesis and serve as fuel to provide large amounts of energy to the muscles during prolonged workouts. By ingesting these amino before training you will prevent your body from “cannibalizing” already-formed muscle tissue to liberate branched chain amino for fuel during intense exercise.

### 4. More Key Nutrients for Heavy Training

Glycine is an amino acid precursor for creative phosphate. Tyrosine is an amino acid precursor for dopamine, noradrenaline and adrenaline. Your brain uses these three neurotransmitters to generate the mental qualities of courage, determination, assertiveness and intensity of motivation. They are rapidly used up during periods of extreme stress and long, vigorous training sessions certainly qualify as major stress! Vitamin B<sub>6</sub> is a coenzyme for all the many enzymes your muscles use to convert different amino into each other as needed. Folic acid and B<sub>12</sub> are two B vitamins that have critical roles in red blood cell formation. Adequate red blood cells are a critical necessity to deliver energy-promoting oxygen to all your body cells.

### 5. Antioxidants

While exercise and rigorous training provide much health and strength benefits, they also have a significant downside: excessive generation of cell-toxic free radicals. Exercise physiology journals have published studies with humans showing massively increased free radicals levels from intense Krebs cycle production of ATP, which always occurs during intense exercise. These free radicals damage various cell structures, including fatigue, premature aging and other health problems. To help lessen these inevitable toxic-products of serious training, we've included Vitamin E. Vitamin E is nature's premier free radical quenching antioxidant. Calcium, Magnesium and Potassium are the key electrolytes used in muscle cell contraction and relaxation. The citrate and succinate forms of these minerals found in Dynamic Endurance are well absorbed and tolerated, since citrate and succinate are naturally part of the Krebs cycle muscles that can contract and relax with speed, precision and power.

### 6. Korean Ginseng and Siberian Ginseng Extract

These are classic herbal “adaptogens”. Adaptogens are natural substances that promote greater energy and efficiency under stress. Russian athletes and cosmonauts are routinely fed ginseng to promote stamina and endurance. They have been used as energizers in the orient for 5,000 years.

We hope this brief tour through the intricacies of muscle biochemistry has helped you understand just how truly state-of-the-art Dynamic Endurance is. But, of course, the deepest level of understanding will come from using it. ***Experience the power of Dynamic Endurance! 972-245-5500***

## New Ingredients in *Body Dynamics*<sup>TM</sup>

### Dynamic Endurance

*Schizandra* is an herb capable of increasing the immune system and protecting the body against stress. It contains properties to increase energy and nourish the veins. It protects against free radical damage. It normalizes blood sugar and blood pressure.

*Gotu Kola* is called “Food for the Brain”. It increases mental and physical power. It combats stress and improves reflexes. It relieves high blood pressure, mental fatigue and helps the body defend itself against various toxins.

*Ho-Shou-Wu* has a toning effect on the liver and kidneys. It helps the nervous system. It is said to improve health, stamina and SUPPORTS THE IMMUNE SYSTEM. It is good for backache as well as aches and pains of the knee joint.

*Body Dynamics 972-245-5500 or 1-800-MEGA-910*