



LeanBoost lipotropic injections

General Information

LeanBoost lipotropic injection is a mixture of compounds that may aid in the reduction of adipose tissue (fat). The mixture of compounds individually may be effective, however in combination they may exhibit more lipotropic activity than when administered alone in a synergistic fashion. Injection of this mixture of lipotropic compounds may be more effective than oral supplementation, this is due to the increased bioavailability of parenteral exposure.

These lipotropic agents are structurally and functionally closely related to the B-vitamins, or are involved in the homeostasis of energy production from fat. These compounds are often employed together in the hope of potentiating fat-loss. The non-vitamin compounds (MIC) that are injected into the body stimulate the liver into optimizing the process of metabolism, elevate the movement of and utilization of fat, and provide the needed metabolic environment of the body for a fatty acid (fat) mobilization and utilization. Injections can be administered up to once a week.

Lipotropic compounds are used to increase the potential for release of fat deposits in some parts of the body and to improve overall metabolism and energy level. The lipotropic agents included in the LeanBoost injection are:

Methionine

Methionine helps the liver maintain the optimal ability to process fatty acids ¹. Methionine is a major constituent of S-adenosylmethionine which has been shown to be associated in genetic regulation and activation of certain genes ². Methionine contributes to methyl donation to histones that activate certain genetic processes that may be involved in the increase in lean tissue. Although indirectly linked to lipolysis, it is believed that the increase in lean tissue increases resting metabolic rate, therefore increasing the overall required calories that must be obtained from storage or dietary intake. Methionine, via S-adenosylmethionine, has been shown in animal models to increase CNS activity, therefore increasing the caloric requirements required by the CNS³. The downstream effects of this may ultimately lead to increased caloric requirements for the entire organism. Although studies have not been replicated ⁴ in humans, there may be an association due to the similarity in pathways shared between organisms.

Inositol

Inositol is a sugar-like molecule, referred to as a sugar alcohol. Even though very similar in molecular structure to glucose, this molecule does not exhibit the traits that simple carbohydrates exhibit. Contrary to simple carbohydrates, this sugar alcohol has been shown to

not actively increase adipose storage. In fact, Inositol has been found to decrease fatty acid synthase activity, a multi-enzyme protein that catalyzes fatty acid synthesis. This set of enzymes ultimately enables the body to produce triglycerides fat molecules that reside in adipose tissue (body fat) [3](#).

Inositol may be effective in reducing insulin resistance, a common condition associated with increase adiposity (body fat) [5](#). Insulin resistance, a condition to which your body becomes resistant to the activities of the hormone insulin. This condition leads to excess blood glucose levels and a host of symptoms and dysfunctions. A chemical called Inositol phosphoglycan is known to regulate the body's sensitivity to insulin signaling. Inositol phosphoglycan structurally incorporates Inositol, thus inositol is required for this molecule to exert its regulating behavior.

The proper functioning and sensitivity to insulin is found in most healthy individuals, and is essential in maintaining overall health. Excessive exposure to blood glucose ultimately leads to insulin resistance and poor nutrient transport. Inositol may be effective in reducing this condition while at the same time reducing fatty acid (fat) synthesis.

Choline

Choline is a simple molecule usually classified as a B vitamin. The B vitamin class is usually involved in the generation of energy and support of metabolism. Choline is an important precursor to the neurotransmitter acetylcholine. This neurotransmitter is involved in a host of activities, one of which includes muscular function and contraction. Acetylcholine is a fundamental neurotransmitter that enables the communication between neurons. Increased neural communication results in increased CNS activity which ultimately leads to increased energy expenditure. Energy expenditure requires nutrient input, either from stored energy (fat), or dietary nutrients. Choline exist in a delicate balance and homeostasis with methionine and folate. When these nutrients are not in balance adverse health effects may be present. Along with the increase in CNS activity comes increased cognitive ability, reported by many users. Choline may be effective as a nootropic, or a substance with ability to increase cognition. Increased neural cognition is thought to be due to choline's role as a precursor to acetylcholine.

The supplementation of choline has been shown to reduce serum and urinary carnitine [4](#). The reduction of carnitine in these fluids may indicate carnitine has been partitioned in tissues that utilize it as a fatty acid mitochondrial transport. When carnitine is used in the mitochondria it transports fatty acids to the location which they are broken down and used as energy. It has also been reported that molecular fragments of fat have been found in urine after carnitine and choline supplementation, which may be due to incomplete fatty acid oxidation and the removal of the subsequent byproducts [4](#). This means, choline supplementation may increase the utilization of carnitine and increase the removal of fatty acids, even though all fatty acids are not burned as energy. The fragments of fatty acids not burned as energy are extruded in the urine as molecular fragments.

B12 (Cyanocobalamin)

Cyanocobalamin is an essential nutrient known as vitamin B12. This version of B12 contains a functional cyano. Cyanocobalamin is a form of vitamin B12, it is the most widely used form of vitamin B12. The vitamin B12 is fundamental in many biological processes, many of which are important to the survival of the organism. Vitamin B12 is involved in processes including DNA synthesis, fatty acid and amino acid metabolism.

B12 is purported by its users and practitioners to help speed up overall metabolic processes and create a greater feeling of overall energy and well-being ⁶. Individuals may be deficient in vitamin B12, these individuals must supplement B12. Deficiency is present for a variety of reasons including dietary deficiency and poor dietary absorption. The human body is incapable of producing vitamin B12 on its own, B12 must be consumed in the diet. Consumption of vitamin B-12 may be an effective agent to speed up metabolism, especially if the individual has a deficiency.

B1 (Thiamine)

Thiamine was the first B vitamin discovered. Thiamine is involved with many of the body's reactions, including the burning of carbohydrates for energy. It helps the body adapt to stress and avoid adrenal burn out, helps with metabolism of thyroid hormones and is required for proper nerve function.

L-Carnitine

L-Carnitine is an amino acid composite - one of the building blocks of protein. It is known to increase the number of androgen receptors in muscles. These receptors allow muscle to utilize testosterone resulting in an enhanced ability to build muscle. It also enhances the body's ability to metabolize fat thereby enhancing energy levels. The combination of L-Carnitine and exercise enhances fat burning.

B5 (Dexpanthenol)

Pantothenic acid is a precursor of coenzyme A, which serves as a cofactor for a variety of enzyme-catalyzed reactions involving transfer of acetyl groups. The final step in the synthesis of acetylcholine consists of the choline acetylase transfer of acetyl group from acetylcoenzyme A to choline. Acetylcholine is the neurohumoral transmitter in the parasympathetic system and as such maintains the normal functions of the intestine. Dexpanthenol is important for our bodies to properly metabolize carbohydrates, proteins, and lipids.

B6 (Pyridoxine)

Pyridoxine is the 4-methanol form of vitamin B6 and is converted to pyridoxal 5-phosphate in the body. Pyridoxal 5-phosphate is a coenzyme for synthesis of amino acids, neurotransmitters (serotonin, norepinephrine), sphingolipids, aminolevulinic acid. Vitamin B₆ functions as a coenzyme in amino acid, carbohydrate, and lipid metabolism.

B3(Niacinamide)

Niacinamide acts as an antioxidant by preventing NAD depletion during DNA repair by inhibiting poly (ADP-ribose) polymerase (PARP). Niacinamide inhibits free radical formation and facilitates beta-cell regeneration. niacinamide is required for the proper function of fats and sugars in the body and to maintain healthy cells

What is this medicine used for? Lipotropic injections are used to help release fat deposits in some parts of the body. Some of these areas include the stomach, inner thighs, neck, buttocks and hips. Lipotropic, or fat burning, substances include methionine which helps the liver remove fat; inositol, similar to methionine; choline, which distributes cholesterol and prevents it from getting deposited in one part of the body. In some cases, a combination of these may be given. Injections can be administered up to twice a week. B12 is purported by its users and practitioners to help speed up the overall metabolic processes and create a greater feeling of overall energy. Because lipotropics directly aid fat breakdown and are closely related to B vitamins, when used together they are thought to intensify each other's effects. They are usually injected separately, but as part of the same overall injection cycle. The amino acids that are injected into the body stimulate the liver into optimizing the process of metabolism. These injections boost the metabolic power of the body. The injections are only effective temporarily. As soon as the effect of these substances wears out, the body starts returning to normal gradually.

Who should not take this medicine? If you have an allergy to sulfa, methionine, inositol, choline, or any part of this medicine. Tell your healthcare provider if you are allergic to any medicine. This includes rash; hives; itching; shortness of breath; wheezing; cough; swelling of face, lips, tongue, or throat; or any other symptoms involved.

What are the precautions when taking this medicine? You may experience injection site irritation. Be careful if you drive or do anything that requires you to be alert.

Key warnings before taking this medicine: This medication is to be injected intramuscularly.

How is it best taken? This medication is to be injected intramuscularly. DO NOT inject intravenously. This medicine can be taken at any time during the day. Follow diet plan and exercise program as recommended by health care provider.

What do I do if I miss a dose? If you miss a dose, you may take it a day later. If it is almost time for your next dose, skip the missed dose. Take your next regularly scheduled dose. Do not take two doses at the same time.

What are some possible side effects of this medicine? Potential side effects include stomach upset and urinary problems due to the strain the injections place on the kidneys. Depression is another possible side effect. Some patients are unable to control their urine, and/or have

diarrhea. Finally, some patients reported an unpleasant odor. Lipotropic injections change the function of the digestive system temporarily. This can result in extreme exhaustion, since the body is not used to working at this level and condition. Unexplained pain in unrelated parts of the body is another potential side effect. Patients have complained of pain in the neck and parts of the hand. How these injections cause these pains is not clear. Some patients have also experienced joint pains and allergic reactions to the injections. Call your healthcare provider immediately if you are experiencing any signs of an allergic reaction: wheezing; chest tightness; fever; itching; bad cough; blue skin color; fits; or swelling of face, lips, tongue, or throat; also if you experience severe behavioral problems, chest pain or pressure or fast heartbeat, severe dizziness or passing out, nervousness and excitability, or severe headache.