Scientific Bio-Logics, Inc.®
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Metabolic & Physical
Performance Support

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7-Keto DHEA

Topical Cream with Liposomes, L-Arginine, and L-Citrulline

SKU: SBL124
UPC: 736211568243
Contents: 50ml

7-Keto DHEA cream with L-Arginine and L-Citrulline provides powerful support for the body's metabolic rate while also improving blood circulation for enhanced physical performance.

Indications:

Adrenal support and hormone balancing, metabolic support and thermogenesis and nitric oxide production

Suggested Use:

Best absorbed through thin skinned areas of the body that are well supplied with capillary blood flow such as neck, upper chest, inner forearm, and inner thigh. Apply once or twice a day or as directed by your healthcare professional.

Ingredients:

Deionized Water, Caprylic/Capric Triglyceride, Cetearyl Alcohol, L-Arginine, L-Citrulline, Shea Butter, Stearic Acid, 7 Keto DHEA, Citric Acid, Cetyl Alcohol, Glyceryl Stearate Citrate, Lecithin, Alcohol, Glycerin, Polyacrylate 13, Polyisobutene, Polysorbate 20, Sodium Hydroxymethylglycinate, Potassium Sorbate, Xanthan Gum

For external use only.

7-Keto DHEA

7-Keto is a brand name for a compound called 7-oxo-dehydroepiandrosterone (7-Keto DHEA), which is a hormone metabolite produced primarily in the adrenal gland as well as small amounts in the skin and brain. The 7-Keto DHEA metabolite helps improve the body's metabolism or the conversion of ingested food into energy. Specifically, it enhances thermogenic enzymes that stimulate fatty acid metabolism in the liver. Thermogenesis refers to the process of metabolising the food we eat into a form of energy called heat. Increased activity of these thermogenic enzymes will improve the body's metabolic rate, enhancing the conversion of stored fat into energy. The synthesis of 7-Keto DHEA begins with Cholesterol, is then converted into different hormone intermediates, and is eventually synthesised to DHEA. Dehydroepiandrosterone or DHEA is the most abundant steroid hormone in the human body. It is the precursor to not only the 7-Keto DHEA metabolite, but the sex hormones testosterone and estrogen as well. Please refer to the Androgenic Hormone Production Chart below to see the hormone intermediates that are in the biochemical pathway for 7-Keto DHEA synthesis in the body.

DHEA and 7-Keto DHEA synthesis in the body steadily decreases as we age. In fact, by age fifty there is an approximate 50% decline in serum levels of these two hormones in the body. Preventing age related declines in DHEA and its metabolites may have important health benefits including: enhanced immune system functioning, increased energy levels, fat management through enhanced thermogenesis, increased lean muscle mass and improved cognitive functioning and memory. 7-Keto DHEA is a non-steroidal metabolite of DHEA which means it is not converted to estrogen or testosterone or other steroidal hormones in the body. It does not bind to any androgenic receptors and is not a substrate for estrogen forming aromatase enzymes that convert DHEA and other hormones to estradiol. 7-Keto DHEA supplementation is safe for both men and women and is 2.5 times more effective in inducing fat burning enzymes than DHEA. Studies have shown that topical applications of 7-Keto DHEA allows for greater absorption and increased levels in the bloodstream.

The adrenal gland is a walnut sized organ that sits on top of the kidneys that manufactures and secretes essential hormones throughout the body. One of the main functions of the adrenal gland is to enable the body to properly respond to

Androgenic Hormone Production Chart

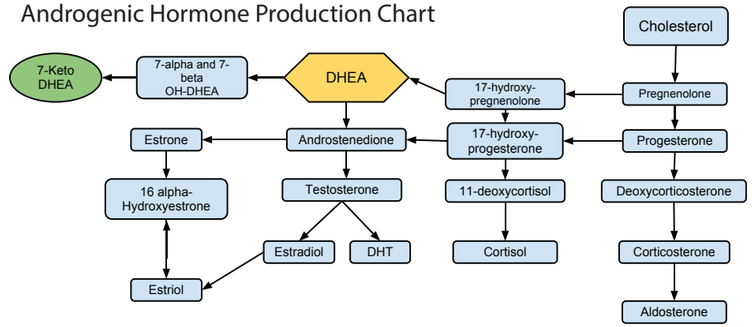

Figure 1: The Androgenic Hormone Production Chart shows the biochemical pathways for the synthesis of adrenal and gonadal hormones in the body. The 7-Keto DHEA metabolite does not get converted into any gonadal hormones including estrogen or testosterone.

environmental, physical and mental stress by secreting hormones such as adrenaline, cortisol and DHEA. The levels of these hormones can fluctuate throughout the day depending on the amount and intensity of the stressors that one encounters. Once a stressful situation has been resolved the body must return to homeostasis and the levels of the stress related adrenal hormones should once again be in proper balance. All of the adrenal hormones play a critical role in the body and must be in proper balance in order for one to maintain optimal health. For instance, cortisol levels should be highest in the morning when the body is waking up because it needs to be able to stimulate the release of stored energy and elevate blood pressure levels in order for people to get up and perform normal activities without feeling fatigued. When individuals do not produce enough cortisol, it may result in low blood pressure, morning fatigue and brain fog. However, when individuals are producing too much cortisol throughout the day , they may experience high blood pressure, imbalances in blood sugar levels and lowered immune system functioning. In a fast paced and high-stress culture, it is important that people have ways to manage levels of stress in their life through a nutritious diet, proper supplementation, lifestyle habits, and regular visits to a healthcare provider to check their existing hormone levels.

As individuals age, their immune system may have a decline in its responsiveness and they may be prone to infections. Imbalances between cortisol and DHEA in the body can dramatically impair immune system functioning. When cortisol is released during stressful situations, the body must counteract the effects by increasing DHEA levels and bringing balance back to these two hormones. Since DHEA and 7-Keto DHEA levels decrease faster with age than cortisol, this creates an imbalance in the body and may cause a decline in cellular immunity. Supplementing with 7-Keto DHEA can improve immune system functioning by counteracting the negative effects that chronic high levels of cortisol have on circulating white blood cells.

L-Arginine and L-Citrulline

L-Arginine and L-Citrulline are two amino acids that are involved in the production of nitric oxide (NO), which helps with the dilation of blood vessels. The release of nitric oxide from vascular endothelial cells results in the relaxation of vascular tissue, inhibition of platelet aggregation and adhesion, regulation of blood pressure and the reduction of oxidative stress on LDLs. Vascular endothelial cells produce NO from the precursor molecule L-Arginine. This reaction is catalyzed by the enzyme nitric oxide synthase, which will produce NO and the amino acid L-Citrulline from the substrate L-Arginine. The body can synthesise L-Citrulline into L-Arginine. By supplying both L-Arginine and L-Citrulline one gets the building block for NO production and the ingredient to replenish and recycle that building block. Improving NO production increases blood flow and oxygen utilization in the muscles, providing heightened endurance levels. Increased blood flow to the muscles during exercise will also facilitate the removal of lactic acid, reducing fatigue and recovery time. It is important to consume antioxidant rich foods like colorful fruits and vegetables to protect the NO from converting to other molecules. L-Arginine is also one of the amino acids that is used in the synthesis of Creatine,a compound released in the muscles to recycle ADP back to ATP in order to increase energy availability during anaerobic exercise.