Electrolyte Synergy™ Packets

designs for health®
Science first.

A complete and balanced electrolyte formula

THIS INFORMATION IS PROVIDED FOR THE USE OF PHYSICIANS AND OTHER LICENSED HEALTH CARE PRACTITIONERS ONLY. THIS INFORMATION IS INTENDED FOR PHYSICIANS AND OTHER LICENSED HEALTH CARE PROVIDERS TO USE AS A BASIS FOR DETERMINING WHETHER OR NOT TO RECOMMEND THESE PRODUCTS TO THEIR PATIENTS. THIS MEDICAL AND SCIENTIFIC INFORMATION IS NOT FOR USE BY CONSUMERS. THE DIETARY SUPPLEMENT PRODUCTS OFFERED BY DESIGNS FOR HEALTH ARE NOT INTENDED FOR USE BY CONSUMERS AS A MEANS TO CURE, TREAT, PREVENT, DIAGNOSE, OR MITIGATE ANY DISEASE OR OTHER MEDICAL CONDITION.

Electrolytes play a critical role in the body. The body's four major electrolytes are potassium, sodium, calcium, and magnesium. Through a biochemical process, electrolytes become ions that can conduct electricity. The body requires electrical signals as a means of communication within itself. Some specific areas that electrolyte function is critical are cardiovascular health, adrenal health, diabetes and endurance exercise.

Supplement Facts

Serving Size 1 packet (11.5 grams)
Servings Per Container 30

Amount Per Serving		% Daily Value
Calories	25	
Calories from Fat	0 g	
Total Fat	0 g	**0%***
Total Carbohydrates	9 g	**3%***
Dietary Fiber	0 g	0%*
Sugar Alcohol	7 g	†
Sugars	1 g	†
Protein	< 1 g	**1%***
Magnesium (as Di-Magnesium Malate 57 mg; Magnesium Aspartate 29 mg; TRAACS® Magnesium Glycinate Chelate buffered 20 mg)	106 mg	26%
Sodium Chloride (as Sodium 150 mg; Chloride 225 mg)	375 mg	11%
Potassium (as Potassium Aspartate 100 mg; Potassium Bicarbonate 49 mg)	149 mg	4%
D-Ribose	1000 mg	†
Taurine	500 mg	†

*Percent Daily Values are based on a 2,000 calorie diet.
†Daily Value not established.

Other Ingredients: Xylitol, natural grape flavoring, citric acid, stevia, silicon dioxide, and magnesium stearate.

Cardiovascular Health

Potassium is especially important in its role in regulation of the heartbeat and function of the muscles; specifically muscle contraction. When potassium is not properly balanced, hyperkalemia (abnormally high levels of potassium) can occur or if potassium levels drop too low, hypokalemia can occur. These conditions, and others, associated with this imbalance can create cardiac abnormalities which can be potentially life-threatening. It is difficult to assess when levels of these minerals are low in the body. Levels seen in the blood are usually in the normal range. This is because the body works very hard to regulate them due to the fact that any steep fluctuation too high or low may result in a serious heart arrhythmia. The normal movement of one chemical of a higher concentration to that of a lower concentration is what is generally termed the sodium/calcium pump. Low potassium can result in elevated sodium within the cell because the two electrolytes balance each other. So, the proper balance of these chemicals is of critical importance in keeping fluid levels normal and thus, blood pressure regulated. Regulation of the flow of calcium and magnesium intercellularly and extracellularly is also important in the regulation of blood pressure.

Adrenal Stress

In our high-stress society, adrenal burnout and other hormonal "disturbances" are commonplace. Weak adrenals, for example, make the body unable to hold onto potassium. The adrenal glands produce three major groups of steroid hormones collectively called corticosteroids - the mineral corticoids, the glucocorticoids, and the sex hormones. The mineral corticoids are produced by the outermost layer of the adrenal cortex and regulate the mineral content of the blood.

A condition called hyponatremia, considered the most common electrolyte imbalance, is closely connected to disorders of the parathyroid glands that help control the amount of calcium in the blood (normal calcium levels help maintain muscle control). This hormone acts as a counter to calcitonin. When calcium levels drop in the blood, it breaks down bone and releases calcium into the blood. In hyponatremia, there exists a sodium imbalance which can be attributed to abnormal anti-diuretic hormone, aldosterone, or kidney function (the kidneys work to keep electrolyte levels in your blood constant despite changes in your body). These are just some of the ways in which Electrolyte Synergy can benefit the endocrine system.

Diabetes

Diabetes is the most obvious metabolic disease that can bring about the need for electrolyte balance. One of the telltale symptoms of diabetes is an intense thirst. As mentioned above, this thirst is often associated with an electrolyte imbalance involving sodium. When the body has adequate fluids, coupled with the appropriate amount of insulin, sodium and other chemicals tend to balance out. Diabetic ketoacidosis is a complication treated with intravenous fluids (to dilute the glucose levels in the system and rehydrate the dehydrated person), with insulin (to aid in helping glucose get into the cells), and with electrolytes (usually potassium, sodium, phosphates, and bicarbonates) which also aid in getting glucose into the cells. Two of the most common electrolytes needing replacement are potassium and sodium. Patients living with diabetes and other metabolic diseases are often prone to electrolyte imbalances. A product such as Electrolyte Synergy can act as a balancing agent when the body is unable to properly balance itself.

Who should take Electrolyte Synergy?

Designs for Health's Electrolyte Synergy formula can be an important aid in supporting cardiovascular health and replenishing electrolytes lost during excessive exercise. This formula includes Taurine which supports healthy blood pressure and regulates the flow of electrolytes in and out of the cell. It also governs osmotic control (prevents dehydration and catabolism), is a natural diuretic, protects eyes from UV damage, and aids insulin function. D-Ribose was included in this powdered formula because of its importance for cardiac function, exercise recovery and energy production.

This complete and balanced electrolyte formula can be used to improve symptoms of dehydration, after excessive diarrhea or vomiting, or after excessive sweating. Athletes may benefit from regular use of Electrolyte Synergy. Chronic stress can lead to low levels of one or more of these electrolytes especially magnesium and potassium. Symptoms may include fatigue, lethargy, dizziness, cramping or twitching, tachycardia, arrhythmia, heavy legs, irritability and/or noise sensitivity. Patients with sodium sensitive hypertension should not take Electrolyte Synergy. It is not recommended for patients with a pacemaker, nor for patients with high blood sodium, potassium or calcium levels.

Children can take Electrolyte Synergy during the flu or any illness involving diarrhea or vomiting to prevent dehydration.

Convenient and easy to use

Mix an Electrolyte Synergy Packet into any beverage, sports bottle, or put it in water and place in ice rack to make into grape popsicles. Electrolyte Synergy is sugar-free and gets its sweetness from small amounts of natural xylitol and stevia. The natural grape flavoring gives it a great grape taste.

How to take Electrolyte Synergy

As a dietary supplement, take one (11.5 grams) packet daily or as directed by your health care practitioner.

References

1. Dodd SL, Johnson CA, Fernholz K, and St Cyr JA. The role of ribose in human skeletal muscle metabolism. Med Hypotheses. 2004; 62(5):819-24.
2. Maughan RJ, and Leiper JB. Sodium intake and post-exercise rehydration in man. Eur J Appl Physiol Occup Physiol. 1995;71(4):311-9.
3. Zeybek A, Ercan F, Cetinel S, Cikler E, Saglam B, and Sener G. Taurine ameliorates water avoidance stress-induced degenerations of gastrointestinal tract and liver. Dig Dis Sci. 2006 Aug 30.
4. Cuisinier C, Michotte De Welle J, Verbeeck RK, Poortmans JR, Ward R, Sturbois X, Francaux M. Role of taurine in osmoregulation during endurance exercise. Eur J Appl Physiol. 2002 Oct; 87(6):489-95.
5. Pastene J, Germain M, Allevard AM, Gharib C, Lacour JR. Water balance during and after marathon running. Eur J Appl Physiol Occup Physiol. 1996;73(1-2):49-55.
6. Maughan RJ, Owen JH, Shirreffs SM, Leiper JB. Post-exercise rehydration in man: effects of electrolyte addition to ingested fluids. Eur J Appl Physiol Occup Physiol. 1994;69(3):209-15.
7. Maughan RJ, Leiper JB, Shirreffs SM. Restoration of fluid balance after exercise-induced dehydration: effects of food and fluid intake. Eur J Appl Physiol Occup Physiol. 1996;73(3-4):317-25.