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Hydralite powder: a comprehensive blend of electrolytes, vitamins, minerals supplement to hydrate the body with typical ratios to support electrolytes lost in sweat during vigorous activity

Govind Shukla, Neha S.Giri, C.J. Sampath Kumar

Lactonova Nutripharm (P) Ltd, Makers of Hydralite Powder 81/3, IDA Mallapur, Hyderabad, Telangana, India-500 076.

*Corresponding Author: Govind Shukla

ABSTRACT

Hydralite is formulated with the typical ratios of sodium found in sweat and a blend of potassium, calcium, and magnesium to support electrolytes lost during activity. Hydralite is an electrolyte replacement formula that helps replenish vitamins and minerals lost through sweat, Hydralite powder is added with zinc, which is lost through sweat but rarely seen in electrolyte products, and D-ribose to help refuel muscles. Hydralite contains no sugar or caffeine. Hydralite powder is designed to optimize hydration. This review summarises the current available scientific literature regarding the effect of Hydralite Powder: A Comprehensive blend of Electrolytes, vitamins, minerals Supplement to hydrate the body with typical ratios to support electrolytes lost in sweat during Vigorous Activity.

Keywords: Hydralite Powder, Comprehensive blend, Electrolytes, Vitamins, Minerals, Hydrate the body, Support Electrolytes, Lost in sweat, Vigorous Activity

INTRODUCTION

The term “electrolyte” is the medical word for the electrically charged minerals in the body. Electrolytes are vital to health and act as chemical messengers in the body carrying electrical impulses from the nerves to control all tissue function and movement. An imbalance of any of the electrolytes can lead to serious disruptions in physiologic function. Many bodily processes are highly dependent on electrolytes, primarily heart and nerve function, muscle coordination and control, and maintenance of the body’s fluid levels. [1]

Electrolytes are found throughout body tissues. Blood, plasma (the acellular portion of blood) and

the fluid that bathes the cells are high in sodium (Na⁺) and chloride (Cl⁻), which is similar to sodium chloride (Na⁺Cl⁻) - otherwise known as common table salt. In other areas of the body (such as cells that make up organs), the electrolytes potassium (K⁺), chloride (Cl⁻), calcium (Ca⁺) and magnesium (Mg²⁺) are prevalent. [2]

Electrolyte levels are tightly controlled by several hormones and by the kidneys, which are primarily responsible for keeping electrolytes in a constant state of balance, retaining and removing them as necessary.

An electrolyte imbalance can lead to serious health issues, including eventual death, if not corrected. The most common imbalances occur

with sodium and potassium. An excessive blood level of sodium is known as *hypernatremia*, while an insufficient level is known as *hyponatremia*. Excessive blood levels of potassium are known as *hyperkalemia*, and insufficient levels are known as *hypokalemia*. [3]

Sodium

Sodium is extremely important for the regulation of fluid levels outside the cells in the body. It is an essential factor in hydration, as it “holds” water in the cells. While sodium is highly important as an electrolyte, it is found at excessively high levels in many foods and drinks.

The minimum physiological requirement for sodium is 500 milligrams per day. For comparison, the average diet contains roughly 3,000 to 5,000 milligrams of sodium per day, far exceeding the minimal requirement. For optimal health, it is recommended that one consume less than 2,400 milligrams of sodium per day. Excessive intake of sodium is associated with hypertension (high blood pressure) and swelling in the tissues.¹ High sodium levels are also associated with osteoporosis (thinning of the bones) due to sodium’s effect of increasing urinary loss of calcium.² Despite the widespread prevalence of sodium in the diet, many sports drinks continue to add high amounts of sodium into their formulations. This is done primarily for flavor enhancement, rather than to address the incorrect claim that people need extra amounts of sodium.

Hypernatremia

Defined as excessive blood levels of sodium, hypernatremia is a common occurrence due to the high amounts of sodium found in foods and beverages. Too much sodium may lead to increased thirst, resulting in more water intake, causing swelling in the hands, feet and face. Excess sodium will also pull water into the gut, leading to bloating, cramping and frequent “pit stops.” Hypernatremia also contributes to high blood pressure, as the sodium pulls more water into the bloodstream, raising the pressure in the cardiovascular system.

Hyponatremia

Low blood sodium levels, known as hyponatremia, occur when the blood volume is diluted with excessive water. This can occur when

an athlete replaces lost fluid with plain water. Hyponatremia has become a widespread concern, as the message to drink plenty of fluids is prevalent in the athletic community. Hyponatremia can cause swelling, wheezing, nausea and vomiting, dizziness, and eventual coma and death if untreated. Consumption of a sodium-containing beverage instead of plain water will prevent this condition.

Potassium

Potassium is integral to maintaining the body’s fluid balance with sodium. Along with sodium, it is one of the main electrolytes consistently lost in sweat. Potassium is the most abundant electrolyte found inside the cells of the body and is essential for many physiologic processes, including nerve impulse transmission, heart and skeletal muscle contraction, and processing of carbohydrates (energy production).³ The daily recommended allowance of potassium is roughly 3,500 milligrams. Potassium is found in many fresh fruits and vegetables, although the potassium found in vegetables is often lost through steaming and other forms of processing.

The standard diet contains roughly 2,000 to 6,000 milligrams of potassium per day; levels tend to be lower in people who sweat heavily, take certain prescription medications, drink coffee and/or alcohol and consume a high salt diet. People who follow low-calorie or fad diets, off-again, on-again dieting regimens or consume diet pills, diuretics (blood pressure medications) or laxatives may also be susceptible to low levels of potassium.

Potassium is typically found in low levels in many sports beverages and has a taste similar to sodium.

Hypokalemia

Low potassium levels may occur for a number of reasons, although those listed above are typical causes. The most common symptoms of hypokalemia are fatigue and weakness. Other signs are low blood pressure and decreased heart rate. Advanced cases of hypokalemia can result in irregular heart rhythms (dysrhythmia) and, if untreated, death.

Hyperkalemia

Elevated potassium levels occur more rarely; typically, this happens in people who have reduced

kidney function, protein-breakdown diseases or severe infections. Some medications may also predispose a person to hyperkalemia.

Supplement Facts

Hydralite Powder, A Comprehensive blend of electrolytes, vitamins, minerals Supplement to hydrate the body with typical ratios to support electrolytes lost in sweat during Vigorous Activity. Hydralite powder is an electrolyte replacement formula that helps replenish vitamins and minerals lost through sweat. Hydralite is formulated with the typical ratios of sodium found in sweat and a blend

of potassium, calcium, and magnesium to support electrolytes lost during activity. Hydralite powder is added with zinc, which is lost through sweat but rarely seen in electrolyte products.

Hydralite contains no sugar or caffeine.

Servings per container: 30

One Level Scoop (9 g) Contains:

- Calories — 20
- Total Carbohydrate — 5 g
- Sugars — 3 g
- Other Carbohydrate — 2 g

COMPOSITION

Materials	Compound ingredients	Label Claim
Vitamin C	Coated Ascorbic Acid	40mg
Thiamine	Thiamine Mononitrate	1.2mg
Riboflavin	Riboflavin	1.4mg
Vitamin B6	Pyridoxal 5 Phosphate	2.mg
Folate	Folic acid	20mcg
Vitamin B12	Cyanocobalamin	1mcg
Pantothenic acid	Calcium pantothenate	4mg
Calcium	Calcium citrate malate	80mg
Zinc	Zinc sulphate monohydrate	5mg
Chromium	Chromium picolinate	15mcg
Sodium Chloride	Sodium chloride	240mg
Potassium	Potassium Chloride	80mg
Magnesium	Magnesium oxide	40mg

Other Ingredients: — Tapioca Maltodextrin, Citric Acid, Flavors, Dicalcium Phosphate, Silicon Dioxide, Stevia extract (leaf) (Rebaudioside A 95%).

PRESENTATION: POWDER

Usage

Hydralite Powder, A Comprehensive blend of electrolytes, vitamins, minerals Supplement to hydrate the body with typical ratios to support electrolytes lost in sweat during vigorous activity. Hydralite is an electrolyte replacement formula that helps replenish vitamins and minerals lost through sweat. Hydralite is formulated with the typical ratios of sodium found in sweat and a blend of

potassium, calcium, and magnesium to support electrolytes lost during activity. Hydralite powder is added with zinc, which is lost through sweat but rarely seen in electrolyte products. Hydralite contains no sugar or caffeine. Hydralite powder is designed to optimize hydration and can be blended with other performance boosters.

Contra-indications

Product is contra-indicated in persons with Known hypersensitivity to any component of the product hypersensitivity to any component of the product.

Suggested use

Mix 1 level scoop of powder with at least 10 ounces of water, juice, or preferred beverage daily or as recommended by your health-care or performance professional.

WARNINGS

Allergy-warning

This product is contraindicated in an individual with a history of hypersensitivity to any of its ingredients.

Pregnancy

If pregnant, consult your health-care practitioner before using this product.

Interactions

There are no known adverse interactions or contraindications at publication date

FAQS

Why isn't there dextrose or other sugars in the formula?

Traditional sports drinks have always included both carbohydrates and electrolytes (sodium), but are often too low in electrolytes to cover sweat loss. They also include levels of carbohydrates that might or might not be needed to reach your performance goals. As science continues to evolve and we have a better understanding of what an individual needs to perform, we've realized the need to get carbohydrates and electrolytes separately from fluid. Catalyte Isotonic uses an advanced formulation of electrolytes and other nutrients to help you meet your hydration needs.

Although sweat rates can vary between individuals, a person can lose 240 milligrams of sodium in as little as 8 ounces of sweat, which may only take 30 minutes of exercise. Research shows that supplements with more electrolytes are better for rehydrating, particularly those with more than 26 mmol/L. Traditional sports drinks have 110 milligrams of sodium per ounce (or 18 mmol/L).

The sodium content of Catalyte Isotonic makes it an optimal hydrator during exercise.

The amount and type of carbohydrate consumed during exercise should be based on how long and how hard you're exercising. If you're exercising longer than 60 minutes, you can benefit from additional carbohydrates (between 30-60 grams per hour). Adding carbohydrates to meet your needs will ensure your sports supplement is customized to you.

Can I use more than one serving?

Yes. For longer events, consuming more than one serving can help you maintain optimal electrolyte levels.

Storage

Store in a cool, dry and dark place.

Funding

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Conflicts of interest statement

The authors declare that there is no conflict of interest.

SUMMARY & CONCLUSION

Hydralite Powder, A comprehensive blend of electrolytes, vitamins, minerals supplement to hydrate the body with typical ratios to support electrolytes lost in sweat during vigorous activity. Electrolytes are vital to physiologic function, and to athletic performance at a higher level. The body constantly maintains electrolyte balance, as variations in either high or low levels are detrimental to performance and health. Hydralite is an electrolyte replacement formula that helps replenish vitamins and minerals lost through sweat. Hydralite is formulated with the typical ratios of sodium found in sweat and a blend of potassium, calcium, and magnesium to support electrolytes lost during activity. Hydralite powder is added with zinc, which is lost through sweat but rarely seen in electrolyte products. Hydralite contains no sugar or caffeine.

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