

# CeraSport® Hydration

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## Of Rice and Men, or How A Rice-based Oral Rehydration Offers Benefits to Today's Athletes

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**W**e live in an on-the-go, drive-thru window, caffeine-dominated society. There are coffee shops and fast food venues on nearly every street corner. We often hear about the increased rates in obesity, heart disease, diabetes, cancer, and other health problems plaguing our nation due to the high stress, on-the-go lifestyle “norm” we have created.

One major health issue we often forget is the importance of proper hydration. Low levels of chronic dehydration are widespread in our society, particularly among the elderly. Chronic dehydration may cause significant health issues, including digestive disorders, fatigue, weight gain, skin disorders, joint problems, respiratory problems, increased blood pressure, and increased cholesterol levels. Dehydration often compounds and exaggerates other health conditions.

As dietitians, nutritionists, and health professionals, how do we address the issue of hydration with our patients? How can we explain to our clients the importance of hydration, and how do we keep well-hydrated ourselves?

Education is the first step. Most people do not understand that proper hydration means replacing what has been lost in composition and amount. So, what exactly does that mean?

If an individual has been sweating, suffered from heat stroke, or lost bodily fluids due to an illness, then this

individual has lost water and essential electrolytes. Consequently, both the water and the electrolytes need to be replaced. Water alone is not effective. If an individual has diarrhea or vomiting episodes, the concentration of essential electrolytes lost are much higher than compared to a person who has been sweating or who has experienced heat stroke.

### How do you measure fluid and electrolyte loss?

In cases of dehydration, individuals will probably not know the exact amounts. So they should estimate. An ideal recommendation would be “lose a cup, drink a cup of ORS.” Urine is also an indicator of hydration. An individual’s urine should be pale yellow in color;



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dark yellow and strong scented urine is indicative of dehydration. Additionally, a complicating factor is that as we age, we lose the “thirst drive,” so we do not feel thirsty until we are already “down” by a liter or two. Individuals need to be aware of this fact, and drink oral rehydration solutions before they get thirsty.

### **What fluids provide the best form of hydration?**

The type, quality, and amount of liquids consumed are all important components to consider. The new rice-based oral hydration products, including CeraLyte® ORS for medical rehydration and CeraSport®/CeraSport EX1 for sweat replacement, provide both quick and sustained hydration.

The Cera rice-based products, developed along with physicians at Johns Hopkins University, are fat-free, gluten-free, and do not contain any added sugar. The benefit of the rice-based carbohydrate blend in Cera’s products is that it provides energy without the osmotic penalty that comes with simple sugar or glucose-based solutions.

For patients who have diarrhea, CeraLyte provides calories and energy to promote quick recovery. For individuals who are exercising, CeraSport and CeraSportEX1 not only hydrate but also give individuals energy to enhance performance without causing cramping or nausea. Individuals who exercise occasionally, such as someone who goes to the gym once a week for 30 minutes, probably do not need any special hydration drink. It makes a big difference, however, for the serious athlete or “heavy sweater” who needs high amounts of fluid to replace their losses.

If they drink a solution which is high in sugar, it often causes gastrointestinal upset, weakness, and perhaps electrolyte imbalances. In severe cases, this can require intravenous or IV hydration and an unnecessary hospitalization.

### **A Thirst for Sports**

For athletes, rice-based oral rehydration has some great benefits: it provides a good source of energy and promotes endurance. The fluids lost during sweating are replaced quickly but stay in the body longer, providing good circulating blood volume. The lack of simple sugars in the rice-based oral rehydration drinks is also a good thing,



as simple sugars can pull fluids out, causing cramping, nausea, and even diarrhea. This is one reason many athletes “water-down” their sports drinks. The problem is that watering down sports drinks also cuts down the amount of essential sodium, potassium, chloride, and citrate that is getting absorbed into the body.

Muscle cramps are associated with dehydration, electrolyte deficits, and fatigue. Cramps are most common in athletes who sweat profusely. Water alone does not work well. Losing 2 pounds of sweat is equal to losing 1,000 mg of sodium and some “salty sweaters” may lose even more during high stress activity. Drinking CeraSport or CeraSportEX1 before, during, and after exercise can help maintain proper hydration as well as electrolyte balance.

Chronic stress – including that from poor nutrition, hormonal disturbance, chronic illness or injury, poor sleep, dehydration-mineral imbalance – is known to increase strain on the kidneys and liver. Chronic stress also affects the sodium potassium regulatory process leading to muscle cramping. CeraSport and CeraSportEX1 will help maintain proper serum levels in the blood as athletes train and race.

## Sports Drink Comparison Chart

When evaluating sports drinks it is important to review the nutritional composition of each product. The chart below compares a variety of sports drinks that are currently on the market.

Product	Calories	Total Carbohydrates (g)	Sugar (g)	Sodium (mg)	Potassium (mg)	Fat (g)	Protein (g)
CeraSport EX1	20	5	1	200	100	0	0
CeraSport	40	10	2	100	37	0	0
Accelerade	80	15	14	120	15	0	0
Cliff Quench	45	11	10	130	35	0	0
Cytomax	71	18	10	96	48	0	0
Gatorade	50	14	14	110	30	0	0
Gatorade Endurance	50	14	14	200	90	0	0
Gatorade G2	25	7	7	110	30	0	0
GU Electrolyte Brew	50	13	4	125	20	0	0
GU <sub>2</sub> O	54	13	3	122	21	0	0
Heed	51	13	1	20	8	0	0
Nuun	<5	<1	-	187	51	0	0
PowerADE	60	15	15	52	32	0	0
PowerAde Zero	0	0	0	100	25	0	0
Propel	10	2	2	75	0	0	0

\*The sugars in CeraSport and CeraSport EX1 are the naturally occurring sugars from rice. There are no added sugars or sugar derivatives.

### Avoid Hitting the Wall

CeraSport and CeraSportEX1 Oral Hydration Solutions can help athletes avoid that phenomenon known as “hitting the wall,” a term used to describe the cramping or significant slowing during the final phases of a race, when muscle glycogen is exhausted and muscle tissue must run on fatty-free acids.

High intensity work, such as what happens during a race, which is probably near and above VO<sub>2</sub> max, stimulates fatty acid mobilization and glycogen utilization. Athletes can postpone or avoid “hitting the wall” by drinking or eating complex carbohydrates, which supply a steady input of glucose. As the body systematically breaks down the rice-based carbohydrate in the CeraSport® ORS, quick and sustained hydration is delivered with the carbohydrate that the body breaks down into glucose. Rice-based carbohydrate is easily absorbed, has a low peak glucose impact, and a less aggressive insulin response compared to sugary “fuels” and drinks.

Hitting the wall can be averted by proper training and nutrition months before the race. Athletes are

told to train slowly to use fat for fuel – yet racing slowly is not what happens during the race. And avoiding dehydration must be addressed long before an event. Adrenal-stress gland and gut-intestine-stomach strain are hurdles that increase the strain on the body. Adequate rest, recovery, and restoration are key components to an endurance training regimen.

Not “hitting the wall” means preventing chronic stress from poor nutrition, hormonal disturbance, poor sleep, and dehydration-mineral imbalances. In short, this means balanced training, a long-term plan for good nutrition and hydration (not just water!), and getting enough rest – months and weeks before that big race.



## Meal/Snack Frequency During Activity

When an athlete exercises hard for more than 1 hour, they should consume 30 to 60 grams (120 to 240 calories) of carbohydrate per hour of training to maintain normal blood glucose levels and enhance endurance. Fueling during exercise is especially important for those who have not eaten a pre-exercise meal or snack.

## Celiac Sufferers

Many athletes seem especially prone to gut disturbances. Rice provides gluten-free hydration and is also a bonus to individuals who have Celiac disease or are sensitive to gluten. Rice products are rarely a cause of any allergic reactions, and the CeraSport/CeraSportEX1 products also use natural flavors and colors.

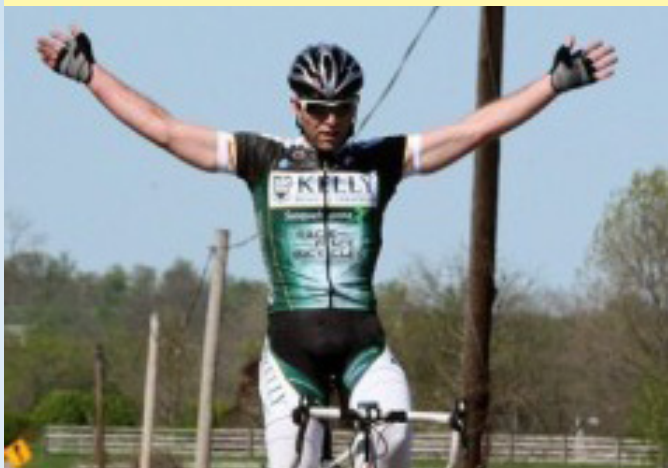
## CeraSport and CeraSportEX1 for the Gluten-Free Athlete!

**CeraSport and CeraSportEX1** are officially Gluten-Free, having met the requirements for the Celiac Sprue Association® Recognition Seal Program, the first program in the United States to recognize companies that meet the strictest criteria of “WBRO-free (free of wheat, barley, rye and oats) in Product, Processing and Packaging.”

The CSA Recognition Seal Program is designed exclusively for premiere producers in the country. The CSA Recognition Seal indicates those products which are appropriate for a medically prescribed Celiac diet. Cera



Products Inc. has provided CSA with a copy of their specific procedures and policies necessary to produce a product free of WBRO. CSA periodically conducts on-site inspections and engages the University of Nebraska for product testing by ELISA Method, sensitive to 5ppm (parts per million) to assure continuity in the WBRO-free quality.



## Regarding Athlete's Mouth

Another advantage of **CeraSport and CeraSportEX1** is that they are easier on the teeth compared to typical sugary sports drinks! Typical glucose-based sugary sports drinks can rehydrate you after a workout, but they also may wreak havoc on your teeth. Prolonged consumption of these types of beverages could lead to possible erosive tooth wear. Tooth surface damage occurs as a result of acid in contact with the tooth surface. When this contact is frequent, the tooth surface may be damaged permanently. Athletes may prevent tooth wear by simply washing their mouths out with water, drinking water or brushing their teeth, just shortly after consuming these beverages. **CeraSport and CeraSportEX1** also have less carbohydrate and no added sugar making them a healthier option!

## For Diabetic Athletes

The low glycemic index of CeraSport and CeraSportEX1 averts insulin spiking, which happens with sugary drinks. People with diabetes should still count calories and carbohydrates allowed in their daily meal plan.

One group that can testify to the benefits of CeraSport includes the Adventures for the Cure cycling team, led by Adam Driscoll, a Type-1 diabetic who trains all year and races in Mountain Bike, Cyclocross, and even the Race Across America (RAAM), which helps publicize how healthy living can be so helpful for individuals with diabetes. Last year the Adventures team won the race from California to Maryland in 7 days and 1 hour.

In the two previous years, the team came in 3rd and 4th, but was racing on single-speed, fixed gear bikes against individuals with gears. All the team members and crew were drinking CeraSport to help keep their energy levels stable and their hydration good.

For all ages, whether in good health or not, hydration is critical to health and wellness. A rice-based oral rehydration drink has the benefit of delivering and replenishing electrolytes and fluids with an even flow and without insulin spiking. This is an easy and important step in today's health and wellness programs.

For more information, please contact customer service at Cera Products, Inc.

**1.888.237.2598.**



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