

GOOD GOOD GOOD



Hydration[©]

Health News From Cera Products, Inc.

SPECIAL EDITION

Volume 6

www.ceraproductsinc.com

Number 1

Water is not good enough!

How we can prevent falling victim to the silent killer of dehydration

Why is it that each summer we hear several tragic news stories about the death of an otherwise healthy person due to dehydration? Some of its victims include professional athletes in training, police going through exercise drills, and outdoor workers. How can something that is so easily prevented be sneaking up on us so suddenly with such a traumatic ending?

The common response to someone feeling dehydrated is to drink some water, but research shows water alone is not good enough. William Greenough, M.D., Professor of Medicine at Johns Hopkins Schools of Medicine and Public Health and Hygiene explains this common myth. "When you sweat, you lose both salts and water. The faster you sweat, the more salts - sodium and chloride - in the sweat are lost. If you're in prolonged sweat loss, you need to replace the sodium and potassium your body has lost."

Those people who drink massive amounts of water can actually put their lives at risk from a condition known as water intoxication.

Greenough, continue on page 2...



Heat Illness and Sweat Loss Can Affect Productivity

Hydrating an Outdoor Summer Workforce.

Heat Stress and dehydration are common causes of lost productivity and accidents during the hot summer months. Dehydration of the body, it is essential that fluid intake contain the proper concentration of fluids and electrolytes lost during the workday.

Maryland is experiencing a growth in jobs with no end in sight as the Base Realignment

sets to expand populations both north and south of Baltimore.

As the population grows, so does the need for heat intensive industries such as construction, roadwork, and landscaping; this, placing our industries and workers at a greater risk for heat induced productivity losses.

Heat Illness, continue on page 2...

Greenough, continued from page 1...

“In fact, too much water can be deadly,” exclaims **Dr. Greenough**. “Our body’s cells are bathed in water and salt that are regulated within a narrow limit. If you drink too much water and dilute the outside area around the cell, it swells. This can lead to brain swelling, convulsions and death.”

Dr. Greenough emphasizes the importance of consuming drinks, such as CeraSport, a unique long-chain carbohydrate sports drink that has the right balance of salts and electrolytes to replace what the body has lost. “A sports drink will not only keep you feeling well, but it will improve performance,”



he says. “It is easier for the body to absorb a rice based drink like CeraSport than a sugar-based sports drink. Rice also avoids cramping,” explains **Dr. Greenough**.

Charlene Riikonen, President

of Cera Products Inc. explains, “All Cera’s hydration products are unique because of our patented long-chain carbohydrate formula that speeds absorption of valuable electrolytes, salts and minerals, which match the body’s natural composition up to 20 to 30 percent, and provides sustained absorption, compared to sugar-based formulas.”

CeraSport is used by professional and amateur athletes as well as policemen and women, firefighters and is even with our troops overseas. CeraSport has made the journey with climbers up Mt. Everest, to the Burning Man Festival in New Mexico, with hikers through the Grand Canyon and is recommended by extreme bicyclists, among others. ■

Heat Illness, continued from page 1...

The cost of supplying an outdoor workforce with plentiful hydration, including a high quality sports drink, is small compared to an expensive ER visit for heat exhaustion or, even worse, heat stroke, estimated to cost \$1,800 per day plus lost productivity.

Research conducted by the National Institute for Occupational Safety and Health (NIOSH) shows that work in hot environments is linked with lower mental alertness and physical performance, and subsequently, more injuries.

The problem not only lies in exposure to heat, but also what is put back into our bodies. It is not recommended to consume products containing sugar or caffeine, such as colas, iced coffee and iced tea. Sports drink with simple sugars can cause cramping and nausea.

Water alone does not have the proper blend of electrolytes, either. The most optimal solu-

tion is one that is low in sugar and contains electrolytes in proportion to what the body has lost in sweat.

A low osmolarity and long chain carbohydrate formulation made from rice (such as CeraSport) avoids the cramping cause by sugar and enables the body to quickly replace the correct balance of electrolytes lost to sweat.

“Our body’s response to ingested fluids depends on the osmolarity of the fluid. Drinks with high osmolarity can cause fluids losses as water is drawn from the body into the gut. Drinks with a low osmolarity enhance

water and electrolyte absorption,” explains says Dr. David Sack of the Johns Hopkins Bloomberg School of Public Health and Director of the ICDDR, Center for Health and Population Research in Bangladesh, an expert in oral rehydration.

Hot summer months are the time to implement a proper hydration strategy for Maryland’s workforce. Heat stress prevention should be a core component of any work environment. These steps provide an outline of necessary steps to take. ■



Osmolarity: What Does It Mean to You?

Osmolarity is a scientific term that refers to the concentration of particles dissolved in a fluid. This is important because it impacts performance among athletes or anyone else who loses fluids through sweat. Anyone engaged in high sweat loss activities should choose to drink fluids, such as CeraSport, with a low osmolarity and the right blend of electrolytes to optimize performance.

Your blood has an osmolarity of 300 milliosmoles per liter (mOsm/L). Any fluid with an osmolarity below 300 is absorbed quickly and effectively. Unfortunately, most popular Colas and Sports Drinks have an osmolarity above 300 due to their high sugar concentration. Fluids with an osmolarity higher than 300 mOsm/L (such as Colas and Gatorade) will not be well tolerated

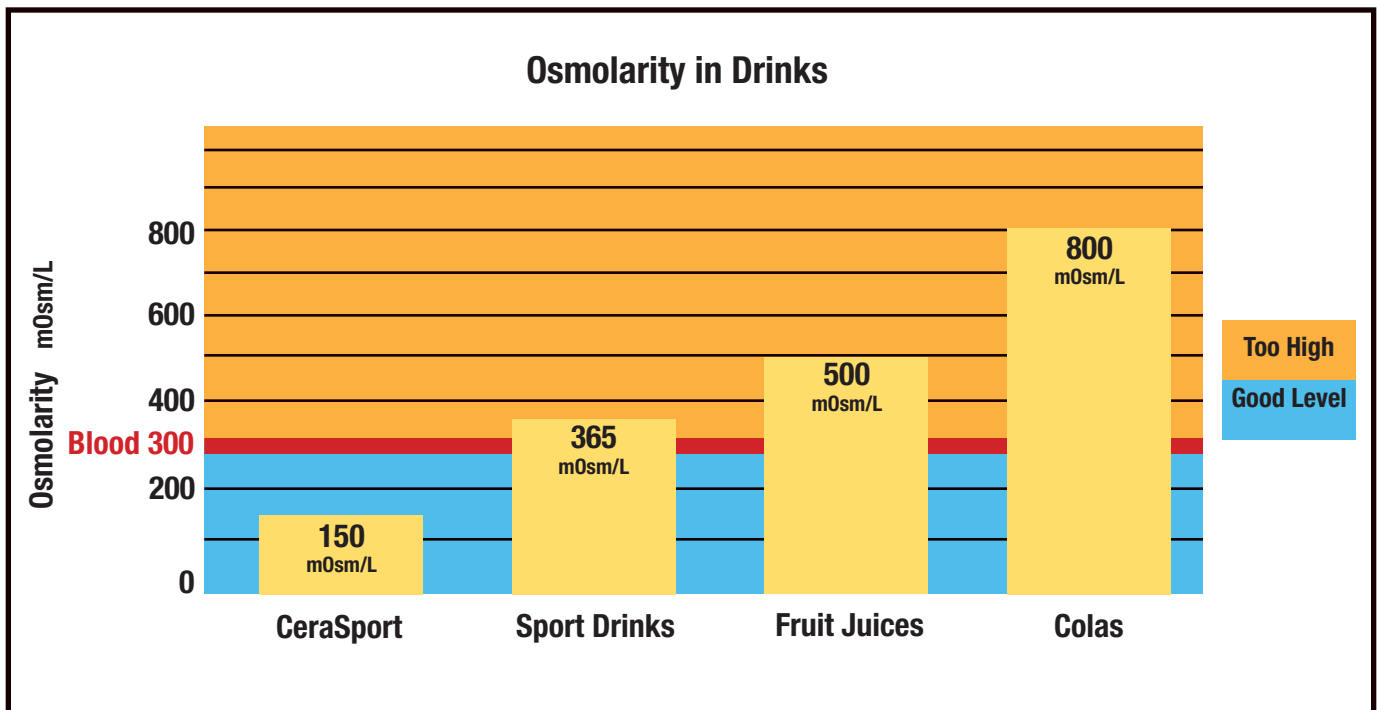
Product	Sugar-Free Sports Drink (CeraSport)	Typical Sports Drink	Colas	Water
Electrolytes - Sodium (mEq/L)	20	16	2	0
- Potassium (mEq/L)	5	3	3	0
- Osmolality	<150	365 or more	800	5

and may cause diarrhea or vomiting. (please refer to graph below).

Proper rehydration requires replacement of both water and electrolytes in proportion to what the body has lost. The problem with most sports drinks and soft drinks is that they are high in sugar, and thus osmolarity.

CeraSport is a low osmolarity drink because it is formulated from a mixed-chain rice carbohydrate rather

than sugar. It also has the proper blend of electrolytes to replace losses due to sweat or diarrhea. Clinical tests have shown that mixed-chain carbohydrates, like those in CeraSport, promote faster fluid absorption when compared to simple sugar based sports drinks. CeraSport gives athletes and others what they need for quick recovery and for sustained performance. Try CeraSport and see for yourself! ■



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Tips To Avoid Heat Stress

Do not overlook the dangers of heat stress. Working in a hot environment puts stress on the body's cooling system, which is sweating. When heat is combined with other stresses like hard physical work, loss of fluids, or fatigue it may lead to heat-related illness, hospitalization, disability, or even death. The following measures should help prevent the development of heat-related illnesses.

- Encourage workers to drink plenty of fluids with the proper electrolyte blend about 1 cup of fluid every 15 to 20 minutes.
- Help workers adjust to the heat by assigning a lighter workload and longer rest periods for the first five to seven days of intense heat.
- Encourage workers to wear light-weight, light-colored, loose-fitting clothing.
- Use general ventilation and spot cooling at points of high heat production. Good airflow increases evaporation and cooling of the skin.
- Train first-aid workers to recognize and treat the sign of heat stress, and be sure all workers know who has been trained to provide aid.
- Consider a worker's physical condition when determining fitness to work in hot environments.
- Alternate work and rest periods, with rest periods in a cooler area. Shorter, more frequent work-rest cycles are best. Schedule heavy work for cooler times of the day and use appropriate protective clothing.
- Monitor temperatures, humidity and workers' responses to heat at least hourly.

