

Proper hydration starts with water followed by consumption of electrolytes. These electrolytes can be consumed through proper nutrition or supplementation. It is crucial to consider the importance of electrolytes, particularly sodium. We as firefighters are in many situations that make us sweaty - including a trip to the sauna and a workout. You can imagine that most people probably walk around dehydrated.

The physical effects of dehydration are serious and if left untreated they can lead to dizziness, fever, seizures, coma or even death. Researchers are now finding that even mild dehydration has negative cognitive effects.

A recent study conducted by Yale University showed that participants who were just 1 percent dehydrated had a 12 percent increase in errors when performing tasks that required cognitive flexibility. This effect was reversible when hydration returned to normal.

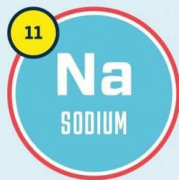
In addition, dehydration is known to worsen mood and attitude, contribute to confusion and poor decision-making, and negatively affect memory and judgment.

Sodium works like a magnet, drawing water into the cells. Without proper sodium levels, proper hydration cannot take place. It is essential to consider that everyone's life styles and bodies require different needs. This holds true for consumption of water and introduction of supplementing electrolytes. Here are a few ways to maintain homeostasis:

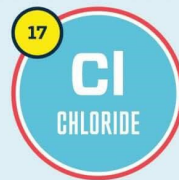
1. Avoid processed foods. This is where the controversy begins that salt is "bad" for you.
2. Consider drinking 8-12 oz. of water immediately after waking up with 1/4 teaspoon of salt and a squeeze of lemon. This will aid in early hydration. Do not get caught up on which salt to use.
3. Start to think about how you are feeling throughout the day. Consider activities that are making you sweat and be conscious on how you are hydrating and most importantly feeling.
4. Don't be afraid to salt your food, especially if you are eating a relatively clean diet that is minimally processed.
5. Consider adding electrolyte "packets" to your water 1-2 daily. This is again great upon wakening due to your fasted state during sleep, and again necessary if you have multiple activities throughout the day that are making you sweat.

A few electrolyte packets: LMNT, NUUN, BPN electrolytes. There are so many on the market. All of these brands have different levels of electrolytes and sometimes added sugar (which could be beneficial). Please do your own due diligence based on your needs and your level of exertion, sweating.

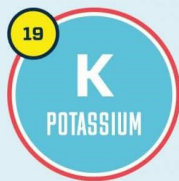
THE
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6 ELECTROLYTES
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6 WHY THEY'RE IMPORTANT



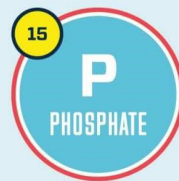
DUTIES: Nerve conduction and muscle contraction, including maintaining heart rhythm + Regulating body temperature and level of thirst + Energy production



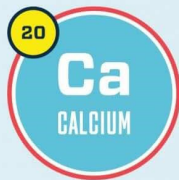
DUTIES: Good digestion
+ Body-wide fluid pH balance
+ Optimal exchange of oxygen and carbon dioxide



DUTIES: Functioning opposite sodium in many ways



DUTIES: Building bones and teeth + Cellular energy production + Integral part of cell membranes and our DNA



DUTIES: Metabolic function + Blood clotting + Heart rhythm regulation + Acting as an enzyme co-factor



DUTIES: Nerve firing + Muscle function + Enzyme reactions + Bone formation + Healthy sleep cycles + Contracting and relaxing of muscle fibers

ELECTROLYTE SOURCES: BAD • BETTER • BEST

BAD

BETTER

BEST

**PROCESSED
FOODS**

**FROZEN FOODS
& RESTAURANT
MEALS**

**GREEN LEAFY
VEGETABLES &
LOW-SUGAR FRUITS**

**ELECTROLYTE
DRINK
SUPPLEMENTS**