

EHC-D NEWSLETTER

The Chemical Factory within Us



Anyone who is chemically sensitive knows that **ammonia** is a harsh and caustic chemical with a strong, pungent odor. Dozens of chemical plants around the world produce ammonia for industrial use and 80% of its production is generally used for making fertilizers. Ammonia is also used in the petroleum, metal mining and paper production industries and is used in a dilute form as a household cleaner. The oxidation of ammonia is used to make nitric acid for the formation of explosives such as dynamite, gunpowder and nitroglycerine. *Yet, this very same caustic chemical occurs naturally in the human body!*

In a healthy body, the liver neutralizes toxins, and then either recycles them for use in the body or excretes them. If liver function is impaired due to illness, chemical overload and/or lack of nutritional support, harmful toxins cannot be effectively processed. Ammonia production occurs in the body during the break down of protein, most of which happens when intestinal bacteria breaks down protein and gives off ammonia as a by-product. A properly functioning *urea cycle* in the liver will convert ammonia to urea for disposal by the kidneys through the urine.

However, if there is a break down in the urea cycle, ammonia can accumulate in excessive and toxic amounts causing a condition known as *hyperammonemia*. Symptoms of hyperammonemia can include ***chronic fatigue, brain fog, mental confusion, lack of concentration, headache, irritability, diarrhea or nausea, and intolerance to foods, especially high protein ones.*** An ammonia odor can at times be detected out-gassing especially in the sweat and/or breath and urine of people experiencing hyperammonemia.

There are a number of things to do if one suspects their symptoms could be resulting from hyperammonemia. First, look at ones diet to see if it is a well balanced diet rich in fruits, vegetables, complex carbohydrates, beneficial bacteria (probiotics) and *moderate, not excessive, amounts of protein.* Second, since the urea cycle depends on a number of specific nutrients, including Manganese and Magnesium and can be enhanced with the use of L-arginine, specific lab tests can be ordered to check these nutrient levels. Also, Alpha-ketoglutarate is a nutrient that when used with Vitamin B6 is known to remove excess ammonia. This explains why Alpha-ketoglutarate is a popular detoxification supplement for use during heat depuration or sauna therapy.

A standard blood test can check plasma ammonia levels to see if ammonia is in excess. Also, Organic Acid and Amino Acid panels can be performed to look for imbalances resulting in high ammonia levels and to indicate needed nutrients for removal of ammonia and proper rebalancing of vital detoxification processes.