

Ketone Notes & Suggestions For Increasing

Ketones are used as fuel instead of glucose when patients are fasting or exposed to a low carb diet. But another way to increase ketones is to use Medium Chain Triglycerides or MCTs. Just to give you an idea of the safety of MCTs; 10-17% of human breast milk contains medium chain triglycerides. When you consume MCT oils your liver easily converts them to a ketone called beta-hydroxybutyrate, which is taken up very quickly by the brain and can be used by the brain for fuel. Medium chain triglycerides (MCT) are 6-12 carbon saturated fats. By comparison fish oil contains 20-22 carbons and is considered a long chain fatty acid (LCFA). Not only do ketones cross the blood brain barrier but they also cross the double mitochondrial membrane very rapidly and unlike LCFAs do not require the presence of L-Carnitine. The result, MCT oil is burned faster than LCFAs and up-regulate the metabolism. Most of the research in the field of neurology uses the C-8 fraction. Biotics **Bio-MCT** oil contains approximately 98% of the C-8 fraction.

When increasing oils the liver will increase the production of bile to emulsify the increase of fat. Bile will flush the bowel and diarrhea is a possibility if oils are added too quickly. This is a good thing as toxins leave the liver via bile so there is an increased natural level of toxin release from the liver. Bile also creates an environment that dysbiotic bacteria, fungus and parasites do not enjoy. In this way the increase of bile is a type of eubiotic agent as it also allows for the increase of one's natural probiotics.

Suggestions to increase ketosis:

- 1) **Change Percentages for fats, carbs and protein.** In general use 50-70% healthy fats and 15-25% protein and 15-25% carbohydrates. Follow with blood or urine and then increase fats and reduce carbohydrates as necessary. The goal is to be slightly ketotic. Sometimes you can increase ketosis by just removing bread, pasta, chips, just the basic refined carbohydrates that are often times a staple for most people. **The goal for vegetables not fruits is 6 -10 servings a day. This will add fiber and minerals to buffer excess acidity.** Add lots of healthy fats like avocado, macadamia nuts, walnuts, coconut flakes.
- 2) **Intermittent fasting** by stopping food by 6:00-7:00pm and do not eat until noon the following day. This 17-18 hour fast will raise ketones naturally.
- 3) Add **Bio-MCT** 1-4 tablespoons in divided doses. Consider using oil for breakfast as a Ketone Enhancing Coffee or tea, some people call it fat burning coffee. Use organic tea or coffee. One to Two times a day. **Bio-MCT** oil is tasteless and can be used on vegetables in a protein smoothie etc., if patients are sensitive to caffeine.

Ketone Enhancing Coffee (fat burning coffee); 1-2 tablespoons of **Bio-MCT** oil, 1-2 tablespoons of organic butter from grass fed cows (high in omega 3s), place in a blender to get a foam. Start with one tablespoon of each as it can cause diarrhea if too much oil is added too quickly. If caffeine is a problem use green tea or other herbal teas, one of my staff adds english toffee flavored liquid stevia and or powdered cinnamon. Above all have fun.
- 4) **Acetyl L-Carnitine** 1 grams after lunch and 1 gram before bed

- 5) **Increase healthy sources of oils** i.e. avocados, organic raw nuts, protein from grass fed animals.
- 6) **See Anti-Inflammatory diet for ideas for healthy foods**
- 7) **Potassium HP with magnesium** $\frac{1}{4}$ -2 tsp in divided doses. Potassium citrate is an important buffering agent.
- 8) **If treating Neurologic conditions consider supporting mitochondrial repair as well as adding long chain fatty acids. A simple way to accomplish this would be to use the following which includes the Co Q, Lipoic acid, Resveratrol, carnitine (discussed above), vitamin D, EPA, DHA, and the vitamin, mineral, cofactors that are suggested in the literature for repair.**
 - a. **VasculoSirt** 5 bid
 - b. **Optimal EFAs or EFA Sirt Supreme** 3-5 bid

Dr. Veech said the only best way to determine ketosis levels was by blood, urine is not as consistent or precise. He has tested the Abbott laboratories unit called Precision Xtra and found it effective. However, clinically we are trying to engage patients in their own care, the goal is not perfection but to move in the correct direction. Whether someone has .5 or 1.00 may not be important as important if they are feeling better. Losing weight and operating at a higher level of performance. The goal is slight ketosis and the urine test can be helpful to make sure someone doesn't get too ketotic. Dr. Veech calculated that the heart gets 28% more energy when it's metabolizing ketones bodies and it is when it's metabolizing glucose" When ketotic, there is a decrease the urinary excretion of uric acid. If in ketosis for quite a while, it is possible to elevate your uric acid and actually precipitate gout. Use a small amount of potassium citrate (**Potassium-HP with magnesium** $\frac{1}{4}$ tsp) as an alkalizing agent to assist the kidney excrete uric acid.

Clinicians should monitor inflammatory markers such as homocysteine, hs-CRP.

Links to follow for more information:

Interviews with Dr. Mary Newport: <http://www.coconutketones.com/>

1. Mary Newport: The Coconut Oil and Low-Carb Solution for Alzheimer's, Parkinson's, and Other Diseases: A Guide to Using Diet and a High-Energy Food to Protect and Nourish the Brain, Paperback – August 1, 2015
2. Mary Newport: Alzheimer's Disease: What If There Was a Cure? The Story of Ketones, Paperback – April 15, 2013