STEVE NEWPORT –COCONUT OIL CASE STUDY UPDATE – APRIL 2, 2009 By Mary Newport, M.D.

A lot has happened since the first article was written in July 2008. Initially, we began cooking with coconut oil and replaced most other fats in our diet with coconut oil so that Steve received at least 2 tablespoons twice a day at breakfast and dinner. Ketone levels were done with 35 grams (just over 2 tablespoons) coconut oil at breakfast and at dinner and two weeks later using 20 gm (4 teaspoons) of MCT oil at breakfast and dinner. His levels with coconut oil peaked at 3 hours after breakfast and were nearly gone by dinner. After dinner the levels were higher and still heading up after 3 hours. With MCT oil the levels peaked at 90 minutes and were gone by three hours. Thereafter, Steve received coconut oil at each meal to try to keep the ketones circulating all of the time. With the encouragement of Dr. Veech, we increased the amount of MCT oil that Steve was receiving as tolerated and then had to back off when he began to have some diarrhea. We have found that this is less likely to happen if taken with food. I began experimenting, mixing MCT and coconut oil, and settled on the following amounts:

MCT 4 teaspoons + Coconut Oil 3 teaspoons at each meal three times a day.

I have found that mixing MCT and coconut oil together stays in liquid form on the counter, so I mix 16 ounces of MCT oil and 12 ounces of coconut oil in a glass mason jar, or in a quart MCT oil bottle, and measure out what we need for each meal.

This formula and this much quantity will not work for everyone, since many people experience diarrhea when they get to a certain point, so I suggest starting with a small amount, such as 1 teaspoon and increase gradually.

Many people ask how Steve is doing now and what improvements we have noticed since the July 2008 article. Steve has, in fact, retained all of his improvements and continues to improve more than 10 months later. Some of the other things that have happened since July 2008:

- His gait has become normal.
- He was unable to run for more than a year and can run again.
- He had a visual disturbance that prevented him from reading. He describes it as the words moving around erratically on the page. This has not happened for more than 6 months. He also feels that his reading comprehension has improved very recently. He recently relayed to me details of two articles he read from Scientific American a couple of hours later.
- He has a mild tremor that only appears if he is late getting his oil.
- He no longer feels depressed and believes that he has a future. He says he feels like he "got his life back." His libido also returned shortly after he started the oil.
- He is much less distractible and able to stay with a specific task, such as yard work or vacuuming.
- Family members, who talk to or see Steve every couple of months, report that his conversational skills have improved each time they have contact with him.
- His shoes used to get separated and he would very often wear only one shoe or sock. We used to have piles of the same sided shoes and no match by the doors and in his closet! He would remove one shoe in his garage and they would accumulate there. He is no longer having this problem.
- Within the past 6-8 weeks his memory for recent events is improving. He often brings up events that happened days to weeks earlier and relays telephone conversations with accurate detail.
- He used to spend many hours rearranging his garage, but recently became "bored" and wanted to do something more. He now volunteers twice a week at the hospital where I work, helping in the warehouse with boxes and stickers, and working with someone to deliver supplies around the hospital. He is very pleased with his new job and enjoys the people he is working with.

Twice Steve missed getting his oil in the morning due to fasting blood work and travel. He became "dazed and confused" with a full-blown tremor. He returned to normal shortly after receiving the oil. If he

is late getting the oil at other meals he will sometimes have slight tremor, especially if he has been physically active.

There are also some developments to report with Dr. Veech's research. He is going to begin human toxicology testing with the ketone ester in April 2009. If there are no untoward adverse effects, then there will be a short study of "rowers" and "couch potatoes" to determine if there are effects on cognitive and physical performance in otherwise healthy people. He then hopes to begin testing the ketone in disease states such as Parkinson's and Alzheimer's disease. He will be able to achieve much higher levels with the ketone than is possible by taking large amounts of MCT or coconut oil. This should translate into more improvement.

The people who work in his lab are making the ketone every day and producing a limited supply for these studies, so he still needs funding for a facility to mass produce the ketone ester to begin the study with Alzheimer's. The process of making them is very similar to ethanol and it is conceivable that one of these plants could be converted over to making ketones. Many of these plants are now bankrupt and out of operation. He is also trying to reduce the cost of making it so that the average person can afford it.

In February 2009, Dr. Veech, Dr. George Cahill, and I met with U.S. Representative Ginny Brown-Waite, who represents our district, in Washington D.C. to discuss the research that needs to be done and we believe that she will be very helpful. Dr. Cahill is 80 and discovered in the 1960's that neurons could use ketones to produce energy. Up to that time it was believed that neurons could only use glucose. It was a great honor to meet these two men whose research has had such a profound positive effect on my husband's condition. In January 2009, Steve and I also had the privilege of meeting Dr. Theodore VanItallie, now 89 years old, who has studied ketones and effect of the ketogenic diet on persons with Parkinson's disease.

The last week of March 2009, Steve and I went to Washington D.C., where we visited and made a presentation for Dr. Veech and others at the NIH and they, likewise, made presentations for us about their research. We attended the Public Forums for Alzheimer's disease and were present for the annual hearing of the Special Committee on Aging, where Maria Shriver, Newt Gingrich and Sandra Day O'Conner testified about Alzheimer's disease, specifically the need for an Alzheimer's Disease Center to bring together experts from the various disciplines to find the answers to this problem. Steve and I also had separate meetings with Senators and U.S Representatives to discuss the potential for ketones to treat Alzheimer's and other neurodegenerative diseases and to encourage them to fund this research.

Since the St. Petersburg Times published the article about us October 29, 2008, the information has become widely disseminated on the internet and by people giving copies to others. I have received numerous reports from loved ones, and have also read on various forums and message boards about some people who have had dramatic improvements like Steve, and many others with more subtle improvements, such as having more energy and being more talkative. Some have had very gradual improvement that turned into very significant improvement over several months. Others feel they see no change, but I encourage them to continue the oil and to keep a journal, so that they can decide months from now if their loved one has at least stabilized and not worsened. One lady emailed me that she did not realize how much the oil was helping until she stopped it for one day. In the MCT clinical trials, nearly half improved and the other half declined minimally over several months. We are very thankful that Steve is among those who have improved and wish with all of our hearts that this would be the case for everyone.