

**PREVIEW\_ Dr. Stephen Phinney –**

**Low-Carb Living (SA 2015)\_RE\_EDITED**

Individuals vary in their tolerances of carbohydrates  
and when they go into nutritional ketosis.

But typically if you eat a moderate protein and small amounts of carbohydrates,  
you are in the 1-3 range here,  
and in this range of 1-3, which we call the optimum ketone zone,  
ketones become a major source of fuel for your brain.

I was taught to in the medical school the brain has to have glucose.  
You need 600 cal of glucose.

Think about it - the brain weights 3 pounds and then burns 600 cal a day...  
It's a quarter or more of your daily energy use  
in that one little 3 pound thing the size of a small melon.

And I have been taught that you have to have glucose to feed the brain.  
But it turns out when you get in this range of beta hydroxybutyrate,  
more than half of the brain's fuel supply can come from ketones.

You are not dependent on all that sugar to keep your brain alive.  
And so when you look at those ultra runners I showed you,  
when they're crossing the finish line, they're not disoriented,  
they're not confused.

They're not crawling across the finish line.

Their brains are functioning beautifully on ketones,  
even if their bodies are running very, very short of carbohydrate.

It's an excellent, I won't say an alternative fuel...

It's probably the primordial fuel that most of our distant ancestors lived on  
when they were hunters or hunting gatherers.

It's something that humans have dealt with for, if you believe in evolution,  
for a couple of million years, as an excellent fuel source.