KETONE-GENERATING DIET

Many of your patients choose to go on a ketone-generating diet by radically reducing carbohydrate intake. They may do so because they have a Glucogenic or Parasympathetic Imbalance, for which a lower carb diet is ideal, or, they may choose the ketone-generating diet for the purpose of weight loss, irrespective of whatever Metabolic Imbalances they have. And of course, a lower carb diet minimizes the ubiquitous problem of Insulin Reactors becoming Insulin Resistant, then progressing into Metabolic Syndrome and ultimately into Type 2 Diabetes (although, while fructose sugar is a major culprit in the development of insulin resistance, intake of polyunsaturated oils and excessive fat intake of any type is an equally harmful contributor to the development of insulin resistance). Another reason why people go on a ketone-generating diet is to control seizures.

Virtually all your patients on a low carb diet will spend much of their time in a state of ketosis --- and will show ketones in their urine. Being in ketosis is not the same as having a Ketogenic Imbalance. But people who do tend to have a Ketogenic Imbalance will go into ketosis much easier than the average person.

On the low carb diet, patients will not only go into ketosis in the short term, and then stay in ketosis over the long term, but will experience a shift in their body chemistry toward a Ketogenic Imbalance. If the patient is Glucogenic to start with, this shift into ketosis and toward a Ketogenic Imbalance is beneficial, as long as the state of ketosis is not sustained for more than a few days. If the patient is neither Glucogenic nor Ketogenic to start with, going into ketosis, and even showing a bit of a Ketogenic Imbalance test pattern is still okay, and will definitely help with weight loss and energetics --- but only if continued of a maximum of 10 days. Beyond that point, liver and adipose tissue metabolism becomes impaired, mitochondrial energetics is inhibited rather than activated, fatty liver and a low mitochondrial energetics state ensues. If the patient has a Ketogenic Imbalance to start with, the Ketogenic Imbalance will be exacerbated by the low carb diet, and these individuals will suffer an immediate decline in mitochondrial energetics on a low carb diet.

Very quickly these Ketogenic Imbalance individuals will begin to show symptoms such as weakness, fatigue, emotional upset, and really almost any other symptom you can imagine. Typically, the body temperature will drop without a little glucose for fuel.

Getting back to the patients who do not have a Ketogenic Imbalance to begin with, but not only go into ketosis but show a Ketogenic test pattern

on the low carb diet --- one thing you want to be aware of is the possibility of needing to treat an Alkalosis. So, while you will not give these patients Oxygenic K to treat the Ketogenic Imbalance test pattern created by the low carb diet, you may need to use Phos Drops or Proton Plus (and sometimes also salt or Magnesium Chloride) to minimize the extreme Alkalosis shift.

[Important Note: We must clarify what may appear to be a confusing element of terminology. In the Literature, when you see the term "ketogenic diet", that means a ketone-generating ultra-low carb diet. In terms of NUTRI-SPEC Fundamental Imbalances, we use the term "Ketogenic Diet" as the ideal diet for someone with a Ketogenic Imbalance. That NUTRI-SPEC Ketogenic Imbalance Diet is a high-carb diet.]

Adverse Effects of Ketogentic Diets

The most restrictive ketogenic diets used for epilepsy can cause fatigue, headache, nausea, constipation, hypoglycemia, and acidosis, especially within the first few days to weeks of following the diet. Dehydration, hepatitis, pancreatitis, hypertriglyceridemia, hyperuricemia, hypercholesterolemia, hypomagnesemia, and hyponatremia can also occur.

Ketogenic diets may be accompanied by a temporary cluster of symptoms frequently termed "keto flu," which includes headache, fatigue, nausea, dizziness, "brain fog," gastrointestinal discomfort, decreased energy, feeling faint, and heartbeat alterations. In endurance athletes, 3.5 weeks on a ketogenic diet led to unfavorable effects on markers of bone modeling and remodeling.

Longer-term effects can include decreased bone mineral density, nephrolithiasis, cardiomyopathy, anemia, and neuropathy of the optic nerve. Ketogenic diets have low long-term tolerability, and are not sustainable for many individuals. Diets low in carbohydrate have also been associated with an increased risk of all-cause mortality.

The above comments come from Crosby, et al. Ketogenic Diets and Chronic Disease: Weighing the Benefits Against the Risks. Nutrition. 2021.

Following are comments from other studies highlighting the damage from ketogenic diets:

Keto diet causes liver insulin resistance, raises diabetes risk.

The ketone diet works for only a week, then it causes obesity and diabetes.

Keto diet causes heart fibrosis, blocks mitochondrial biogenesis.

Low carb diet linked to increased risk of atrial fibrillation.

Weight loss from low carb keto diets is mostly water and muscle: no lasting health benefits.

High fat-low carb diet causes systemic inflammation, impairs gut barrier, aggravates inflammatory bowel disease.