

Why a Nutritarian Diet is Superior to the Ketogenic Diet in the Fight Against Cancer

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Comparing the ketogenic diet with the Nutritarian diet to combat cancer, the Nutritarian diet is in the winner's corner. There are two types of ketogenic diets: one consists of high-fat and low carbohydrate; the other is high protein with low carbohydrate. The high fat, low carb diet has been used for decades to treat drug-resistant epilepsy in children. Currently it is being touted as a potential cancer treatment, without significant evidence for its effectiveness. Regardless, these types of diets are not appropriate or optimal for promoting long-term health in the general population and have too many significant drawbacks.

Under normal circumstances, the brain uses glucose exclusively to produce energy. However, when carbohydrates, the supplier of glucose, is insufficient, the body goes into an emergency state, known as ketosis, whereby the brain uses ketones (derived from fat) as an alternative or emergency fuel source. These diets aim to keep the body in chronic ketosis.

Ketogenic diet for specific medical conditions

Although a ketogenic diet does appear helpful for treating drug-resistant epilepsy in children, the anticonvulsant pathway of this high-fat, low-carbohydrate diet remains unclear. Ketones are thought to affect neurotransmitter levels and ion channels in the brain, which could lead to a reduced likelihood of seizures. The reduction in glucose metabolism by neurons may also have an anticonvulsant effect.[1,2](#)

Newer studies are testing a ketogenic diet in patients with cancers, brain tumors in particular. This method takes advantage of a metabolic difference between cancerous cells and healthy cells. Most cancerous cells exclusively use glucose to produce energy, and they do not have the metabolic flexibility to use ketones when glucose is unavailable. The strategy is to feed the patient, but starve the tumor.[3,4](#)

Also, keeping blood glucose lower would help to limit insulin and [IGF-1 signaling](#), factors which drive cancer cell proliferation. A ketogenic diet has impeded tumor growth in some animal studies, but human studies are still preliminary, and have not yet shown a benefit. [5-7](#)

Proposed benefits of a ketogenic diet for general health:

1. Reduced glucose and insulin levels
2. An appetite-suppressing effect, which may help with weight loss[8](#)
3. Reduced production of reactive oxidative species; activation of Nrf2 leading to enhanced antioxidant defenses
4. Anti-inflammatory effects[9](#)
5. Inhibition of the mTOR pathway (reduced mTOR signaling is linked to longevity) and reduced IGF-1 to IGFBP-3 ratio[10-12](#)

These benefits are not specific to a state of ketosis; they are also associated with [whole plant food](#) consumption.

Nutritarian Diet offers more benefits:

A high-nutrient, low-glycemic diet, such as the Nutritarian diet whose foundation is vegetables rather than fat, produce these same benefits, while delivering a greater fiber, micronutrient, and phytochemical load, plus greater nutritional variety.

1. Using beans and nuts as major calorie sources keeps the overall glycemic load of the diet low while maintaining a high fiber intake.[13-14](#)
2. Consumption of salads, beans, and nuts have been associated with satiety and reduced appetite, leading to lower calorie intake.[15-17](#) Subjects on a Nutritarian diet reported a reduction in the [uncomfortable symptoms associated with hunger](#).[18](#)
3. Protection from oxidative damage has been observed following the consumption of whole plant foods, such as berries, nuts, and tomatoes.[19-21](#) Carotenoids from green and orange vegetables and tomatoes act primarily as free radical scavengers in the body, preventing DNA damage.[22-23](#)
4. Foods shown to activate the Nrf2 transcription factor include garlic, berries, cruciferous vegetables, pomegranate, and tomato.[24-25](#)
5. [Flavonoids](#) found in berries and other plant foods are one type out of many different phytochemicals with anti-inflammatory effects.[26-27](#)
6. Offers the same inhibition of mTOR (reduced mTOR signaling is linked to longevity), achieved by reducing protein intake (the amino acid leucine in particular) and insulin and IGF-1 signaling.[28-29](#)

Ketogenic diet restricts health-promoting foods and nutritional variety

“Ketogenic” refers to the body’s response to the low carbohydrate content; it does not define which foods are used to achieve this outcome. Of course, a ketogenic diet that included more leafy green vegetables, nuts, and avocado would be more healthful than one that included more butter, cheese, and oil. However, a diet of coconut oil, grass-fed butter, avocado, egg yolks and greens is still not in the same league as a Nutritarian diet for health promotion and longevity.

The very low carbohydrate content of a ketogenic diet restricts important fiber-rich, anti-cancer foods such as beans, berries, and orange vegetables, unnecessarily limiting nutritional variety and phytochemical richness – phytochemicals that have anti-infection, anti-cancer and cardioprotective effects and also build up our immune defenses. The protective phytochemicals and antioxidants in the rainbow of produce have more powerful longevity-promoting effects than simply being in ketosis.

The restriction of beans, a rich source of resistant starch and fiber, makes it more difficult to establish a favorable microbiome (the collection of microbes or microorganisms that inhabit an environment—here the human body.) In addition to their prebiotic effect, fermentation of fiber and resistant starch from beans produces short-chain fatty acids which help to prevent colon cancer.[30](#)[31](#)

Beans are a food with a broad spectrum of longevity-promoting benefits, including low glycemic load and cholesterol and blood pressure-lowering properties.[13](#)[32-34](#) The exclusion of beans in favor of nutrient-poor oils and dairy fat is indefensible. Chronic ketosis itself is stressful on the body, increasing acid production,[35](#) which can damage the kidneys and may even promote specific cancers.[36](#)

Higher-protein ketogenic diets –same risks as other high-protein diets

The traditional high-fat ketogenic diet does have the advantage of limiting animal protein, but it is almost impossible to live on oils, nuts and seeds and animal fat without consuming animal protein along with it. Even high-fat, ketogenic diets are still too high in animal protein. Remember plant proteins sources do not drive up IGF-1 into the danger zone as do animal proteins. This combination of animal protein, saturated fat and higher IGF-1 is strongly linked to cancer risk.[37-43](#)

In addition to excluding more healthful calorie sources, such as berries, squash, and beans, ketogenic diets create constipation and bad breath and raise the risk of kidney damage.[44](#) High-animal protein, low-carbohydrate diets have been linked to increased risk of death from cancer, cardiovascular disease, and all causes.[37](#)[45](#)[46](#) Plus this chronic mild acidosis, along with the induced potassium deficiency from this low plant-produce diet, can negatively affect insulin sensitivity, muscle mass, and bone density.[47-52](#)

There have been many large, prospective studies all coming to the same conclusion that high meat intake is linked to greater mortality risk.[53](#) Studies have shown pro-inflammatory effects of carnitine, choline and

arachidonic acid, pro-oxidant effects of heme iron, along with the other dangers from the IGF-raising effects of animal protein.[54-62](#)

A meat-heavy diet also exposes us to carcinogens such as heterocyclic amines in cooked meats.[63-66](#) Like other diets that rely on large consumption of animal products, a ketogenic diet is linked to elevated LDL and triglyceride levels.[67-68](#)

Ketogenic diets are just not supported by the evidence available and not shown to be safe long-term. This diet-style is lacking in the amount and variety of important anti-cancer phytochemicals. It contains too many empty calories from oil, and the more animal products the diet contains, the more unsafe it becomes. It may actually accelerate the risk of certain cancers and its acidity and lack of phytochemical diversity may shorten lifespan. In contrast, a Nutritarian diet is associated with dramatic improvements in cardiovascular risk factors[69](#) and contains a portfolio of plant foods, with broad-spectrum and documented anti-cancer benefits.

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