COMPREHENSIVE GUIDE

Mito Food Plan

Anti-inflammatory nutrition for energy, brain & healthy aging

Functional & Integrative Medicine · Justen Watkins, DO

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SECTION ONE

Why the Mito Food Plan?

The Mito Food Plan is an anti-inflammatory, low-carbohydrate, high-quality-fats approach designed to support energy production, overall vitality, and healthy aging. It focuses on supporting healthy **mitochondria**—the structures in every cell that make energy. When mitochondria work well, people are less likely to experience fatigue, pain, and brain fog. Mitochondrial dysfunction is also associated with diabetes and neurological conditions such as Parkinson's, Alzheimer's, MS, and ALS.

The brain, heart, nerves, and muscles have the highest concentrations of mitochondria. Poor nutrition, stress, inflammation, and toxins decrease their function. Eating adequate protein and high-quality fats, maintaining stable blood sugar, reducing toxins, and choosing more plant foods can prevent or reverse mitochondrial dysfunction.

Brain-derived neurotrophic factor (BDNF) is a protein that helps create and protect neurons and is important for thinking and learning. A sedentary lifestyle, poor sleep, chronic stress, the standard American diet, obesity, and high blood sugar all lower BDNF. Things that raise it include exercise, DHA (an omega-3 fat), mental stimulation, curcumin, sunlight, meditation, intermittent fasting, and calorie restriction.

SECTION TWO

Features of the Mito Food Plan

Therapeutic foods for energy

Energy production requires quality proteins, fats, and carbohydrates, plus B vitamins, CoQ10, and antioxidants. Phytonutrient-rich vegetables and fruits supply many of these. Some nutrients like CoQ10 and carnitine are harder to get through diet alone—your practitioner may recommend supplements.

Protective antioxidants

Energy production creates reactive oxygen species (ROS), causing oxidative stress that damages cells and increases inflammation. Nutrient-dense, antioxidant-rich foods help offset this. Vegetables, spices, and proteins enable the body to produce antioxidants like glutathione, vitamin C, and N-acetyl cysteine.

Anti-inflammatory nutrients

Parkinson’s and Alzheimer’s are observed less often in those who regularly eat anti-inflammatory, antioxidant-rich foods. Aim for at least 9 servings of colorful vegetables and fruits daily, with vegetables—especially cruciferous—as the primary focus. Polyphenols in blueberries, EVOO, and green tea support brain function and decrease inflammation.

High-quality dietary fats

Mitochondria and the brain thrive on quality fats like DHA (cold-water fish, seaweed, free-range egg yolks), which aids neuron communication and decreases inflammation. Use EVOO (not at high heat) for its polyphenols; coconut oil’s MCTs tolerate higher heat but should be used in small amounts. Avocados supply monounsaturated fats and about 20 minerals, vitamins, and phytonutrients.

Features (continued)

Low glycemic impact

A lower, consistent insulin level is key to mitochondrial health. Match carbohydrates to your activity level, using low-glycemic vegetables and fruits as the main carbohydrate source. Sustained high blood sugar increases dementia risk—“type 3 diabetes” describes insulin resistance in the brain.

Reduced carbohydrates with ketogenic option

A ketogenic diet—lower carbohydrate and protein, higher fat—shifts the body into **ketosis**, using ketones instead of carbohydrates for fuel. Ketones are made in the liver and used for energy in mitochondria; ketosis may protect neurons and release BDNF. The ketogenic diet was first used to treat epilepsy, and research is exploring it for Alzheimer’s and other dementias.

Intermittent fasting

May positively affect brain function, longevity, and healthy aging. Options include alternate-day fasting, modified fasting, and time-restricted feeding (extending the nightly fast to at least 12 hours). Calorie restriction may improve inflammation and blood sugar and help the brain make new neurons.

Low-grain & gluten-free option

Grains are minimized or avoided to achieve mild ketosis and low glycemic impact, replaced by nutrient-dense vegetables. A gluten-free option is included; those with celiac disease or non-celiac gluten sensitivity should avoid gluten-containing grains.

SECTION THREE

Touring Through the Food Plan

Protein

Protein stabilizes blood sugar (important for brain health) and minimizes cravings; include some in every meal. Choose grass-fed, organic, non-GMO sources, and wild-caught or sustainably farmed fish. Keep animal portions modest—around 2–3 oz—as a complement to a primarily plant-based meal.

Therapeutic foods: omega-3-rich fish (wild salmon, mackerel, sardines, cod).

Legumes

An important source of folate and quality vegetable protein, and a complex carbohydrate that keeps blood sugar stable. Factor them into your daily carbohydrate allowance.

Dairy & Alternatives

Organic Greek yogurt and kefir are good protein sources, but many avoid dairy due to allergies or sensitivities, and research is mixed (protective for Alzheimer's, possibly negative for Parkinson's). Discuss with your practitioner. Alternatives include almond, hemp, oat, coconut, or soy milk (rice milk is excluded for its high glycemic impact). Choose unsweetened; soy milk is the only alternative with protein similar to cow's milk. (Boxed coconut milk is here; canned is with fats.)

Therapeutic foods: unsweetened yogurt and kefir.

Nuts & Seeds

All are brain-healthy; this plan highlights those rich in omega-3 oils. Buy unsalted nuts not roasted in oil. Hemp and flax become rancid easily—refrigerate them; chia is stable at room temperature.

Therapeutic foods: almonds, walnuts, flaxseeds, chia seeds, hemp seeds, pumpkin seeds, and their butters.

Touring (continued)

Fats & Oils

Good quality fats are a cornerstone of this plan. Use minimally refined, cold-pressed, organic oils—EVOO for salads and vegetables, and small amounts of coconut oil or butter for medium-to-high heat. Canned (BPA-free) coconut milk adds flavor to casseroles and stir-fries. Store oils in dark glass; discard if rancid.

Therapeutic foods: avocado, olives, extra-virgin cold-pressed olive oil, flaxseed oil.

Non-Starchy Vegetables

The largest category—vegetables should make up the bulk of each meal. Aim for at least 9 servings of phytonutrient-rich foods daily (½ cup most vegetables, 1 cup raw leafy greens). All greens, chard, spinach, sea vegetables, and the cruciferous family support brain mitochondria. Fermented vegetables (sauerkraut, kimchi) and prebiotic-fiber vegetables support a healthy microbiome. Eat a “rainbow of colors” daily.

> **QUICK TIP**
> *Cruciferous vegetables (broccoli, cabbage, arugula) help the body make glutathione, one of its most powerful antioxidants. Try to include some every day.*

SECTION FOUR

Personalizing the Plan: The Gut-Brain Approach

Beneficial gut bacteria matter for brain health. A diet of highly processed foods is associated with a less diverse microbiome, and microbiome changes have been observed in Parkinson’s, ALS, and Alzheimer’s. Probiotic and fermented foods (sauerkraut, kimchi, yogurt), prebiotic foods (jicama, artichokes, asparagus, onions), and other vegetables, fruits, nuts, and legumes help balance good bacteria, which produce neurotransmitters that influence mood and brain function. Include fermented foods as often as possible.

General advice for intermittent fasting

- Drink plenty of filtered water on fasting days; electrolytes may be recommended.
- Avoid high-intensity exercise while fasting—light-to-moderate activity is fine.
- Be aware of balance; you may feel lightheaded when first starting a fast.
- Stop fasting if you feel unwell, and call your provider.

SECTION FIVE

Frequently Asked Questions

Can you explain more about mitochondria?

Mitochondria are like tiny power plants in every cell, converting food and oxygen into energy. Free radicals are produced as a byproduct—like engine exhaust—and must be neutralized or they create oxidative stress. Excess free radicals can damage the brain and contribute to Parkinson’s and dementia.

Tell me more about high-antioxidant foods.

Vegetables and fruits contain phytonutrients that decrease inflammation and neutralize oxidative stress. Grapes, red wine, and dark chocolate contain resveratrol; the broccoli family helps the body make glutathione; herbs, spices, green tea, and berries minimize oxidative stress.

How will I know if I am in mild ketosis?

It can take up to 72 hours to enter ketosis, so start testing on day three. Urinary strips are easiest but may give false negatives; blood testing via finger stick is most accurate. Test daily; the goal for most is mild to moderate ketosis. Ask your practitioner for guidance.

If I want a stricter ketogenic approach?

This should be directed by an experienced practitioner. Healthy fats can make up 80–90% of the diet (MCT oils, nuts, olives, avocados); carbohydrates should not fall below 20 g/day. Test for ketones often, aiming for trace to moderate. Sometimes strips won’t reflect ketosis even with high compliance—that’s fine if other markers (glucose, triglycerides, body composition) are improving.

FAQs (continued)

How can I cook in a way that supports brain health?

High-heat cooking forms advanced-glycation end products (AGEs), which inhibit mitochondrial function and increase inflammation—the higher the heat and browner the food, the more AGEs. Prefer moist, low-heat methods (slow cooking, poaching, steaming, stewing). Eat grilled or charred foods with leafy greens or salad. Spices like black pepper, cumin, chili, curry, onion, and garlic bind to AGEs.

Why are herbs and spices important?

Spices and herbs have anti-inflammatory and antioxidant effects. The curcumin in turmeric can activate genes that increase glutathione production. Use basil, black pepper, cayenne, cilantro, cinnamon, cloves, curry, fennel, garlic, ginger, marjoram, oregano, paprika, parsley, rosemary, sage, and turmeric generously.

What can I drink besides green tea?

If green tea tastes bitter, try it as a smoothie base, add lemon, brew at a lower temperature, or use a higher-quality brand. Herbal teas, black tea, and coffee also offer antioxidants. Caffeine-sensitive people can choose Swiss water decaf. Avoid added sugars, including diet soda. Prioritize plenty of filtered water.

What about alcohol?

Complex for brain health. Red wine contains resveratrol, but alcohol is a known brain toxin and often contains sugar. Your practitioner can advise; for a generally healthy person, one glass of red wine at meals may be acceptable. If avoiding alcohol, choose resveratrol-rich foods (red grapes, dark chocolate, peanuts, small amounts of purple grape juice).

FAQs (continued)

What sweeteners can I use?

Avoid all added sweeteners as much as possible—high-intensity sweeteners cause blood sugar imbalances and cravings. When craving something sweet, choose fruits from the food list. Avoid artificial sweeteners entirely (aspartame, sucralose, acesulfame-K, saccharin), some of which may act as brain toxins.

Can I exercise on this plan?

Yes—exercise is important for brain health. Aim for at least 150 minutes of moderate aerobic activity weekly, plus weight training twice weekly. Exercise oxygenates the brain and activates the BDNF gene. Avoid high-intensity exercise while fasting.

I started keto and feel terrible—what's going on?

The "keto flu" (headaches, constipation, nausea, fatigue, brain fog, insomnia) can begin shortly after starting. Transition slowly under guidance, drink plenty of water, eat colorful vegetables, and rest. Symptoms usually improve after a few days; if not, talk to your provider.

Why is sleep so important for brain health?

During sleep, the "glymphatic flush" clears toxins and harmful proteins (tau and amyloid beta) linked to dementia. Most adults need 7–9 hours nightly for optimal brain function.

> **QUICK TIP**
> *This guide is for general education and does not replace individualized medical advice. A ketogenic version in particular should be supervised by an experienced practitioner.*