



# Food Choices That Can Fight MCI and Dementia

## Dietary Components for Optimal Brain Function

### Nutritional Building Blocks for Optimal Brain Function:

1. Glucose
2. Fiber
3. Healthy fats
4. Antioxidants
5. Water

Let's translate these into real foods:

### Glucose

There are many kinds of sugars found in nature, and all kinds of sweeteners made in the lab. Sucrose is table sugar. Lactose is milk sugar. Your brain uses glucose - **and only glucose** - to function. If you have ever experienced low blood sugar (hypoglycemia) you know that it is hard to think straight when blood glucose is low. Fruits, vegetables, beans, lentils, peas and whole grains – foods known as **complex carbohydrates** – break down into glucose in the digestive tract and fuel our brains.

### Craving something sweet? Eat some fruit.

- Fruit contains fiber, vitamins, and antioxidants. Fruit is best when fresh or frozen. Canned fruits should be packed in water, not syrup.
- Limit dried fruits (e.g., raisins, prunes, dates, etc.) to two tablespoons per day because dried fruit is high in sugar
- Fruit juice is NOT recommended because of the high sugar content. Even if it is natural sugar from freshly squeezed juice, it is not good for the brain to consume excess sugar.
- Instead of orange juice with breakfast, it is healthier to eat an orange and drink water or unsweetened coffee or tea

### The following artificial sweeteners are not recommended:

- Aspartame (NutraSweet, Equal)
- Saccharin (Sweet 'N Low)
- Sucralose (Splenda)
- Acesulfame potassium (Sweet One, Sunett)



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Safe sweeteners to use in place of sugar and artificial sweeteners are:

- Erythritol
- Allulose
- Stevia

### Fiber

Complex carbohydrates contain fiber and health-promoting compounds called phytonutrients that are needed for optimal brain function. The same foods that provide glucose - fruits, vegetables, beans, lentils, peas, and whole grains - are the healthiest foods for the brain because of their high-fiber content. Complex carbohydrates are the primary foods consumed on the MIND diet.

Animal foods – meat, fish, dairy, and eggs – do not contain any fiber.

### How much fiber do we need?

- Women: 21-25 grams per day
- Men: 30-38 grams per day
- Optimal: 40-50 grams per day

Consuming fiber is not only good for the brain. Other health benefits include:

- Prevention of type 2 diabetes
- Lower blood glucose in those with type 2 diabetes
- Lower cholesterol
- Lower blood pressure
  - Maintaining a healthy blood pressure is one of the most important things you can do for a healthy brain and heart
  - Your systolic blood pressure should be 130 mmHg or below to lower the risk of dementia and stroke

### Healthy fats

The brain needs healthy fat to function optimally. Fat carries vitamins and helps rebuild cell walls. Fat gives us energy, and helps us feel full, so we eat fewer unhealthy “quick fixes.” But the fats we eat must be healthy fats.



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### There are two types of healthy fats:

- I. **Monounsaturated fats (MUFAs)**. MUFAs lower cholesterol and blood sugar. This is important because high cholesterol and high blood glucose cause damage to our brains. Examples of MUFAs:
  - Extra virgin olive oil, avocado oil, sesame oil, canola oil, and safflower oil
  - Macadamia nuts, hazelnuts, cashews, peanuts, almonds, pistachios, and Brazil nuts
  - Sesame seeds and sunflower seeds
  - Tahini
  - Avocados
- II. **Polyunsaturated fats (PUFAs)**. Omega-3 fats are a type of PUFA and are especially good for the brain. Omega-3 fats decrease inflammation and oxidative stress, and they reduce brain atrophy (shrinkage of the brain) by assisting in the production of new brain cells and by acting as building blocks of cell membranes. Examples of Omega-3 fats are:
  - Walnuts
  - Chia seeds, flaxseeds, and hemp seeds
  - Walnut oil and flaxseed oil
  - Kale, Brussel sprouts, and spinach
  - Marine algae such as spirulina
  - Fatty fish (salmon, ocean trout, sardines, anchovies, herring, halibut)

**A word on fish:** Fatty fish contain Omega 3s, but some fish have a high mercury content like mackerel, marlin, swordfish, and certain tunas. Mercury is a brain toxin. Wild fish is typically a healthier choice than farmed fish because pollutants have been found in farmed fish. For example, choose wild salmon over farmed salmon when possible.

### Antioxidants

You read at the beginning of this guide about antioxidants and free radicals. Free radicals cause inflammation and oxidative damage that contribute to the development of diseases like Alzheimer's. Antioxidants stabilize free radicals, stopping them from doing cell damage.



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Antioxidants are produced naturally in our bodies. Unfortunately, we produce fewer antioxidants with age. The good news is we get antioxidants from our diet, specifically from colorful plant foods like fruits, vegetables, legumes, herbs, and spices. Therefore, we need to consume plenty of antioxidants each day to protect the brain from diseases including Alzheimer's.

In a study evaluating the intake of dietary flavonoids (a type of antioxidant) on the risk of developing Alzheimer's disease and dementia, those participants who consumed the most flavonoids were approximately 40% less likely to develop Alzheimer's disease and dementia compared to those with the lowest intakes. This association was even stronger in participants 80 years and older.

Shishtar E, Rogers GT, Blumberg JB, Au R, Jacques PF. Long-term dietary flavonoid intake and risk of Alzheimer disease and related dementias in the Framingham Offspring Cohort. *Am J Clin Nutr.* 2020;112(2):343-353. doi:10.1093/ajcn/nqaa079

### Best sources of antioxidants:

- Dark leafy greens
- Sweet potatoes
- Broccoli
- Onions
- Citrus fruits
- Berries
- Apples with the skin
- Dark, unprocessed cocoa
- All types of beans
- Flaxseeds
- Herbs and spices (fresh and dried)
- Soy foods: edamame (soybeans), tofu, tempeh, soymilk, soy nuts, and miso
- Black coffee
- Teas: green, mint, lemon balm, hibiscus, turmeric, chamomile, and ginger

### Water

Drinking water is one of the most healthful habits you can make in your journey to better health. Our bodies are 90% water, and every cellular process and chemical reaction in our bodies needs fresh water in order to happen.

### How much water do we need each day?

- Men: 3-4 liters per day
- Women: 2-3 liters per day