Avoiding Foods That Are Harmful to the Brain

For a Healthy Brain, Check Your Food Labels

The easiest way to know what's in the food you buy at the store is to **read food labels**. Reading food labels is the key to learning which contain the nutritious ingredients listed above, and those that are harmful to your brain.

Check the Nutrition Facts on labels for the amount of **added sugars, sodium, and saturated fats** in everything you will consume. Added sugar is in 80% of the foods we buy in stores – like processed foods, sweet beverages (soda and sports drinks), condiments, seasonings, and supplements. Chewable, liquid, and gummy supplements often contain sweeteners.

Total sugars are the amount of **natural sugar plus the added sugar** in a food or beverage.

- An example of a natural sugar is lactose found in milk, yogurt, and other dairy products
- Added sugars are sweeteners added to foods and beverages such as corn syrup, agave syrup, and honey
  These sweeteners are listed in the ingredients

The healthiest choices have NO added sweeteners = 0 grams of added sugars.

The FDA now requires food manufacturers to list added sugars in the Nutrition Facts. See this example of a food label with regard to added sugars. The label on the left only shows a total of **12 g of sugar**. The new label on the right breaks down the 12 g of total sugars into **10 g of added sugars** and 2 g of natural sugar (12 g – 10 g = 2 g). What matters most is the **added sugar**.

Original Label

Nutrition Facts

Serving Size 2/3 cup (55g)
Servings Per Container 8

Amount Per Serving

Calories 230	Calories from Fat 72
	% Daily Value*
Total Fat 8g	**12%**
Saturated Fat 1g	**5%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 160mg	**7%**
Total Carbohydrate 37g	**12%**
Dietary Fiber 4g	**16%**
Sugars 12g	
Protein 3g	
Vitamin A	10%
Vitamin C	8%
Calcium	20%
Iron	45%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily value may be higher or lower depending on your calorie needs.

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

New Label

Nutrition Facts

8 servings per container
Serving size **2/3 cup (55g)**

Amount per serving
Calories **230**

	% Daily Value*
Total Fat 8g	**10%**
Saturated Fat 1g	**5%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 160mg	**7%**
Total Carbohydrate 37g	**13%**
Dietary Fiber 4g	**14%**
Total Sugars 12g	
Includes 10g Added Sugars	**20%**
Protein 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 235mg	6%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

1. The serving size now appears in larger, bold font and some serving sizes have been updated.
2. Calories are now displayed in larger, bolder font.
3. Daily Values have been updated.
4. Added sugars, vitamin D, and potassium are now listed. Manufacturers must declare the amount in addition to percent Daily Value for vitamins and minerals.

How much added sugar is safe?

The World Health Organization (WHO) and American Heart Association have published the following daily limits for added sugars:

- Men: maximum 9 teaspoons or 36 grams of added sugars per day
- Women: maximum 6 teaspoons or 25 grams of added sugars per day

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Dietary Components That Are Harmful to the Brain

1. Unhealthy (Saturated and Trans) Fats
2. Added Sugar
3. Added Sodium
4. Excess Alcohol

Saturated Fat

A diet high in saturated fat increases the risk of Alzheimer's disease and other types of dementia, heart disease, heart attack, and stroke. **Saturated fat** is inflammatory and causes damage to the arteries that feed the brain.

- This unhealthy fat increases cholesterol and clogs the arteries with plaque
- Clogged arteries decrease blood flow to the brain, heart, and elsewhere in the body
- Symptoms of decreased blood flow include angina (chest pain and tightness), calf pain with walking, and erectile dysfunction

Foods that are high in saturated fat:

- Red meat: beef, pork, lamb, venison, veal, bison
- Processed meats: bacon, sausage, salami, pepperoni, pastrami, cold cuts, hotdogs, ham
- Full-fat dairy products, especially cheese and butter
- Coconut oil and palm oil
- Fried foods such as fried chicken, fried fish, French fries, onion rings, tortilla chips, and potato chips

Trans-fats

Trans-fat has been linked to heart disease and was banned by the FDA. Trans-fat has been mostly eliminated from the food supply. Nonetheless, check the list of ingredients on all foods and beverages for the words "partially hydrogenated oil", which indicates trans-fat. **No amount of trans-fat is safe.**

Simple and Added Sugars

Any food ingredient that ends in **–ose** is a sugar, like glucose, dextrose, lactose, fructose, sucrose, cellulose, etc. As we learned earlier, **glucose** is the only sugar that can be used by our brains as fuel. **Fructose** is the most widely used **added sugar** in store-bought foods, and is the sweetness in agave syrup, coconut sugar, corn syrup, fructose, high fructose corn syrup, honey, invert sugar, molasses, palm sugar, and sorghum syrup.

The fructose we eat is processed in the liver which will store excessive fructose as fat. Also, because fructose can't be transported into cells like glucose, its regular consumption leads to insulin resistance. If **brain** cells become resistant to insulin, glucose can't get in and the brain is starved of fuel. Without a proper fuel supply, brain function deteriorates.

Fructose is much sweeter than glucose, and cheap to make, which is the reason it is used so often by food and soft drink manufacturers. Fructose is found naturally in some fruits and vegetables - along with glucose - but the **fiber** in these foods slows down the absorption of fructose into the bloodstream, allowing the body to process it properly and reducing the risk of insulin resistance.

Sucrose is cane (or table) sugar and is made up of glucose and fructose. Our bodies will split sucrose in order to use the glucose, but sucrose has no fiber to slow the absorption of the fructose. Plus sucrose has lots of calories and zero nutrition - so it is a poor choice for getting the glucose your brain needs.

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Dietary Components That Are Harmful to the Brain

Sugary beverages: soda, fruit drinks, and 100% fruit juice

One or more sugary beverages per day are associated with decreased total brain volume and lower memory scores. One or more servings per day of 100% fruit juice was associated with decreased total brain volume - including in the hippocampus - and lower memory scores.

Pase MP, Himali JJ, Jacques PF, DeCarli C, Satizabal CL, Aparicio H, Vasan RS, Beiser AS, Seshadri S. Sugary beverage intake and preclinical Alzheimer's disease in the community. *Alzheimers Dement.* 2017 Sep;13(9):955-964. doi: 10.1016/j.jalz.2017.01.024. Epub 2017 Mar 6. PMID: 28274718; PMCID: PMC6820519.

Low-fat and fat-free items

Low-fat and fat-free foods often contain a lot of sugar to improve the taste. Examples include low-fat or fat-free canned fruit in syrup, salad dressings, granola bars, energy bars, yogurt, and peanut butter. Low-fat or fat-free is not necessarily a healthy choice. Always check the amount of added sugars on the label.

Artificial sweeteners

Same with those sweeteners in the pink, yellow, and blue packets we typically see on coffee shop counters are extremely unhealthy. Studies have shown that artificial sweeteners are linked to insulin resistance which robs the brain of its fuel. If the label says sugar-free, check the ingredients for **aspartame, saccharin, or sucralose**, which are all artificial sweeteners. Artificial sweeteners are not a safe substitute for sugar.

Added Sodium

Excess sodium in the diet is harmful because it can cause elevated blood pressure (hypertension) and heart disease, thus increasing the risk of heart attack and stroke.

- High blood pressure constricts the blood vessels and decreases blood flow to the brain
- Decreased blood flow delivers less oxygen to the brain

The brain requires a lot of oxygen to perform its complex functions day in and day out. It is important to maintain normal blood pressure for optimal brain health.

We need to limit sodium to **2,300 mg per day.** This is the amount in 1 teaspoon of salt. For optimal brain health, limit sodium to 1,500 mg per day. This amount of sodium can generally be obtained from healthy, whole foods, with maybe a modest shake from the salt shaker.

More than 70% of excess sodium in our diets comes from ultra-processed foods, prepared foods, frozen entrees, and restaurant meals.

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Excess alcohol

In the short-term, excessive alcohol consumption can cause mild cognitive impairment, impaired motor function, confusion, nausea, vomiting, and seizures. These conditions can, at any time, cause the brain to be deprived of oxygen, causing severe damage.

In the long-term, heavy drinking causes brain atrophy, primarily to the hippocampus and frontal lobes of the brain. The hippocampus is where our memories are formed, and the frontal lobes are involved in memory, attention, movement, language, mood, personality, impulse control, and executive functions such as problem solving, planning, and organizing. Damage to the brain can occur even in social drinkers who do not have a problem with alcohol dependence, but frequently drink excess alcohol or "binge."

What is considered heavy drinking?

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) defines heavy drinking as:

- Men: more than 4 drinks on any day or more than 14 drinks per week
- Women: more than 3 drinks on any day or more than 7 drinks per week

How much alcohol is safe?

From the Dietary Guidelines for Americans 2020-2025, United States Department of Agriculture (USDA), adults should limit alcohol to:

- Men: 0-2 alcoholic drinks per day
- Women: 0-1 alcoholic drink per day

One standard drink is equivalent to:

- One 12-ounce beer
- One 5-ounce glass of wine
- 1.5 ounces of distilled spirits