

How the food you eat affects your brain – Mia Nacamulli

If you sucked all of the **moisture** out of your brain and broke it down to its **constituent** nutritional content, what would it look like? Most of the weight of your **dehydrated** brain would come from fats, also known as lipids. In the remaining brain matter, you would find proteins and amino acids, traces of micronutrients, and glucose.

The brain is, of course, more than just the sum of its nutritional parts, but each **component** does have a distinct impact on functioning, development, mood, and energy. So that post-lunch **apathy**, or late-night alertness you might be feeling, well, that could simply be the effects of food on your brain.

Of the fats in your brain, the superstars are omegas 3 and 6. These essential fatty acids, which have been linked to preventing **degenerative** brain conditions, must come from our diets. So, eating omega-rich foods, like nuts, seeds, and fatty fish, is **crucial** to the creation and maintenance of cell membranes. And while omegas are good fats for your brain, long-term consumption of other fats, like trans and saturated fats, may **compromise** brain health.

Meanwhile, proteins and amino acids, the building block nutrients of growth and development, **manipulate** how we feel and behave. Amino acids contain the **precursors** to neurotransmitters, the chemical messengers that carry signals between neurons, affecting things like mood, sleep, attentiveness, and weight.

They're one of the reasons we might feel calm after eating a large plate of pasta, or more alert after a protein-rich meal. The complex combinations of compounds in food can **stimulate** brain cells to release mood-altering norepinephrine, dopamine, and serotonin.

But getting to your brain cells is **tricky**, and amino acids have to compete for limited **access**. A diet with a range of foods helps maintain a balanced combination of brain messengers and keeps your mood from getting **skewed** in one direction or the other.

Like the other organs in our bodies, our brains also **benefit** from a steady supply of micronutrients. Antioxidants in fruits and vegetables strengthen the brain to fight off free radicals that destroy brain cells, **enabling** your brain to work well for a longer period of time. And without powerful micronutrients, like the vitamins B6, B12, and folic acid, our brains would be **susceptible** to brain disease and mental **decline**.

Trace amounts of the minerals iron, copper, zinc, and sodium are also fundamental to brain health and early cognitive development. In order for the brain to **efficiently transform** and **synthesize** these valuable nutrients, it needs fuel, and lots of it. While the human brain only makes up about 2% of our body weight, it uses up to 20% of our energy resources.

Most of this energy comes from carbohydrates that our body digests into glucose, or blood sugar. The frontal lobes are so **sensitive** to drops in glucose, in fact, that a change in mental function is one of the primary signals of nutrient **deficiency**. Assuming that we are getting glucose regularly, how does the specific type of carbohydrates we eat affect our brains?

Carbs come in three forms: starch, sugar, and fiber. While on most nutrition labels, they are all **lumped** into one total carb count, the ratio of the sugar and fiber subgroups to the whole amount affect how the body and brain respond. A high glycemic food, like white bread, causes a rapid release of glucose into the blood, and then comes the **dip**. Blood sugar **shoots down**, and with it, our **attention span** and mood.

On the other hand, oats, grains, and legumes have slower glucose release, enabling a **steadier** level of attentiveness. For **sustained** brain power, **opting** for a varied diet of nutrient-rich foods is critical. When it comes to what you bite, chew, and swallow, your choices have a direct and long-lasting effect on the most powerful organ in your body.