



## Diet and Mental Health

There is no doubt that our diets impact our health, especially as it relates to physical health and chronic diseases such as heart disease and diabetes. Yet, diet is just as important for another aspect of our health: mental health. In honor of Mental Health Awareness Month, let's explore how what we eat can affect our minds!

### Brain-Friendly Eating Patterns

Over the years, evidence of the link between diet and mental health has grown. A recent study made a strong case that the Mediterranean diet may be a useful treatment for moderate to severe depression. The study found that those who were on a Mediterranean nutrition program and received nutritional counselling saw a large improvement in their symptoms. In fact, about 32% had remission of their disease, compared to only 8% of those who received only social support, without a focus on nutrition.

The Mediterranean diet is one example of a “traditional diet”. Traditional diets are time-honored eating patterns that vary depending on what part of the world they are from, but they all include fresh, seasonal, whole foods, rather than the very processed foods that make up a hefty part of many modern diets. The Mediterranean diet is the most studied traditional diet, but others include the Latin American, African Heritage, and Asian diets.

Traditional diets may hold a key to good mental health. Studies of traditional Norwegian and traditional Japanese diets show that they, too, are associated with lower rates of diseases such as depression. What is it about traditional diets that might explain this? Let’s look at two major factors that may answer this question.

### **Nutrients Fuel Mental Health**

One reason why food is so important to mental health is that our brains need a variety of nutrients to function. Just like our bones need calcium, our minds need things such as B vitamins, zinc, omega-3 fatty acids, antioxidants, vitamin D, and protein. The modern American diet is low in many of the nutrients that are associated with good mental health.

Traditional diets contain whole foods that are more nutrient-dense than the processed foods we often eat today. For example, there are a lot more nutrients in a snack of hummus and olives than in a snack of potato chips and a sugary snack bar. Traditional diets help our brains get the nutrients they need! These diets are also less inflammatory than modern diets, which also has a big impact on mental health.

### **Inflammation Affects the Brain**

Inflammation is central to the workings of our immune systems. Normally the inflammatory process is helpful, and helps us deal with threats such as infection. However, when the body is under constant stress, the result is constant inflammation, which is harmful and may lead to disease. In addition to its influence on heart disease, cancer, and diabetes, the evidence that chronic inflammation also affects mental health is strong.

Signs of inflammation are high in people with mental disorders such as depression, anxiety, and schizophrenia; and lowering inflammation can improve symptoms. Inflammation affects mental health in complex ways. Inflammatory signals sent throughout the body can lead to changes in the brain, such as decreased activity in certain parts of the brain and altered neurotransmitter function. Increased inflammation can be caused by a variety of factors including stress, trauma, and even our diets.

A diet high in added sugar and refined foods promotes inflammation, and studies suggest this may lead to worse mental health. On the other hand, a diet high in vegetables, fiber, and omega-3 fats reduces inflammation, and may lead to improved mental health.

### Keep your Mind Happy and Healthy with Food

- Eat a rainbow of colorful vegetables for a variety of brain nutrients and antioxidants. Don't forget folate-rich [leafy greens](#)! Find out what is in season in your area; fresh, seasonal produce is a key part of traditional dietary patterns.
- Add more sources of healthy omega-3 fats to your meals. Walnuts, eggs, olive oil, and fatty fish such as salmon and sardines provide healthy fats and many other brain nutrients.
- Limit your added sugar intake. It may go a long way towards improving mental health. If you are ready for a challenge, try going 2 or 3 weeks without foods with added sugars, and see how it makes you feel.
- Choose a variety of protein. Include sources such as fish, poultry, lean meat, legumes, nuts, and seeds. In addition to brain-healthy protein, these whole foods provide a variety of other important nutrients as well!

Keep your mind sharp, happy, and healthy! When deciding what to eat for brain health, focus on the overall diet, rather than specific nutrients. In other words, eat more whole foods and less processed, packaged, and sugary foods. Use a traditional diet such as the Mediterranean diet as your guide! Check out the CSU Extension's [Live Eat Play website](#) for more information about the Mediterranean diet.

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### Sustainability of the Mediterranean Diet

Olive oil is widely recognized as the main added fat consumed as part of the Mediterranean diet. With the growing body of research on the health benefits from following the Mediterranean diet pattern, demand for olive oil has increased globally. Global demands have placed a burden for growth on Mediterranean region olive oil producers, to meet the needs of consumers less able to locally source olive oil. This economic drive has affected the sustainability of the dietary pattern on the Mediterranean region. According to the 2016 Food and Agriculture Organization of the United Nations (FAO) report,

Mediterra, risks to Mediterranean region producers include degradation of cultivable land, food security, healthful diet, cultural identity, and knowledge of traditional practices. These risks come across in increased cost of olive oil production, which may affect the quality of these exported goods.

### Olive Oil

Olive oil authenticity has come under investigation, with discovery of some mis-labeled olive oil sold in the United States. In a publication from the UC Davis Olive Center reporting on tests from the International Olive Council (IOC) and United States Department of Agriculture (USDA), greater than half of popular imported brands of extra virgin olive oil were adulterated with virgin olive oil. “Extra virgin” olive oil is the highest grade making it suitable for raw dips or dressings, and is made from the initial cold press of the olive. In comparison, “virgin” olive oil is slightly more acidic and works better for cooking. Country of origin was also often mislabeled, meaning that the Italian imported oil may have actually been produced in another country. Nationally produced extra virgin olive oils were less likely to fail tests and sensory standards, some simply because of improved freshness from closer transportation. Regardless of label, sensory characteristics of any olive oil will depend on factors from soil and orchard quality, olive variety, oil freshness, as well as harvesting, processing and handling practices. Also storing oil away from heat at home, in a cool, dark cupboard, will minimize oxygen and light exposure, limiting the deterioration of nutrients and flavor.



Despite myths about olive oil and heat, olive oil can be used in raw and heat-prepared recipes, especially with plant-based meal patterns to enhance flavors and nutrient absorption of vegetables. Olive oil is actually quite resilient compared to many other oils when heated. Extra virgin olive oil can be heated safely to 406°F before it begins to smoke and break apart into less healthy compounds, while virgin olive oil has a slightly higher smoke point of 420°F. Olive oil can be safely - and delectably - used in most recipes calling for oil. Keep in mind that just like anything we eat or drink, temperature will affect flavor and texture properties. Cold olive oil drizzled over raw broccoli will taste and even have a different mouth-feel than olive oil used to sauté broccoli on the stove-top. Try it both ways and enjoy!

Research done by journalist Tom Mueller, led to his book, *Extra Virginity*, and website, [Truth in Olive Oil](http://www.truthinoliveoil.com/), to educate consumers on olive oil production. For Mueller’s opinion on finding quality oils, check-out his [supermarket picks](#).

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