

## **Influences of the CDC-Recommended Dietary Guidelines in Relation to Mood**

Author Bethenny Frankel has stated, “Your diet is a bank account. Good food choices are good investments” (Sorensen 2014). Not only is healthy eating an investment towards a healthy body, but healthy eating also has a positive impact on an individual’s mood. The Centers for Disease Control and Prevention (CDC), advises individuals to consume foods such as fruits, vegetables, whole grains, and fish, while avoiding excessive amounts of refined sugar, calories, saturated fat, and sodium (CDC 2016). Disobeying the CDC-recommended dietary guidelines often results in the exhibition of negative moods, while obeying said guidelines usually increases subjective energy and does not result in negative moods.

Many individuals assume that refined sugar boosts energy (Haddock 2000, 28). When consuming large amounts of refined sugar, the body produces an excessive amount of insulin in response to the increase in blood sugar. This amount of insulin becomes disproportionately large, causing a sharp drop in blood sugar, which then causes the body to release adrenaline (Fishbein and Pease 1994). Adrenaline redirects blood towards the heart and lungs, resulting in an increase in oxygen levels, thus producing a temporary increase in subjective energy (Hormone Health Nation n.d.). While refined sugar can cause an individual to feel temporarily energized, a study by Breymeyer et al. indicates that refined sugar has long-term negative effects on an individual’s mood. For 28 days, Breymeyer et al. had one group of healthy individuals eat a high-sugar diet and another group of healthy individuals eat a low-sugar diet. Participants reported their mood each day (Breymeyer et al. 2016, 254). Those with the low-sugar diet reported a significant increase in subjective energy, while those with the high-sugar diet reported a significant decrease in subjective energy as well as an increase in negative moods such as fatigue and depression (Breymeyer et al. 2016, 256). The difference between short- and long-term results of ingesting refined sugar is further illustrated through a study by Hendy, which demonstrated that lasting, food-induced mood changes do not occur until two days after eating a specific food (Hendy 2012, 774).

Hendy’s study details additional food groups that can cause negative moods. Hendy had participants record their specific nutritional intake, while also recording the time of consumption. Participants then reported how negative their mood was at the end of each day (Hendy 2012, 772). Hendy found that eating excessive calories, saturated fat, and sodium led to having a significantly negative mood. She also found that CDC-recommended foods such as fruits and vegetables did not lead to negative moods (Hendy 2012, 774). Similarly, Breymeyer et al.’s study found that consumption of whole grains increased subjective energy and did not cause negative moods (Breymeyer et al. 2016, 255-256).

Polyunsaturated fatty acids, as found abundantly in fish, have been shown to decrease depressive moods. A study by Amminger et al. found that when youth with early signs or a genetic history of mood disorders were supplemented with fish oil, further development of their mood disorders were either delayed or prevented (Amminger et al. 2010). Carlezon et al. found

that fish oil supplements reduced depression-like symptoms in lab rats (Carlezon et al. 2005). An international survey by Hibbeln revealed that communities with higher per capita fish consumption had lower rates of depression than communities with a lower per capita fish consumption (Hibbeln 1998, 1213). Hibbeln's results may be confounded by cultural or genetic traits in the individual communities; however, fish oil's effect on lab rats and youth implies that Hibbeln's results are likely not coincidental.

If an individual is to maintain a positive mood by virtue of their nutritional choices, following the CDC-recommended dietary guidelines will help them in doing so. To maintain a positive mood, oversized portions of refined sugar, calories, saturated fat, and sodium must be avoided. Fruits, vegetables, and whole grains do not have significant negative emotional side effects and can increase subjective energy. Polyunsaturated fatty acids can reduce depressive moods. Based on these observations, one can assume that positive moods are directly correlated with healthy eating, or as actress Alexandra Paul states, "How you eat determines your mood and your outlook on life" (Paul 2002).

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