

# BRAIN HEALTH: Food and Mood - What's the Link?

Whether it's a magazine ad, television commercial or advice from a registered dietitian, messages that guide us toward making sensible food choices that influence many aspects of our health – heart, eyes, skin, gastrointestinal tract and immune system – are all around us. But growing scientific evidence suggests that food can also influence other, less visible, yet equally important aspects of wellness: energy level, stress level, mood, memory and sleep-wake cycles.

## Mood:

- **Selenium:** Lack of selenium may have a negative impact on your mood. Individuals suffering from a selenium deficiency have been shown to be more anxious, irritable, hostile, and depressed than their non-lacking counterparts. Selenium-rich foods include Brazil nuts, tuna, swordfish, sunflower seeds and whole grain cereals.
- **Folic Acid:** Deficiencies in folic acid have been linked to depression. Include good sources in your diet, such as leafy greens, orange juice, sunflower seeds, beets and whole grains.
- **Omega-3s:** Omega-3 fats are present in the brain in a greater quantity than anywhere else in body the and may help alleviate depression. Good sources include wild salmon, sardines, Atlantic mackerel, ground flaxseeds, walnuts, and omega-3 enriched eggs.
- **Vitamin D:** There are vitamin D receptors in the area of the brain that affects depression. A vitamin D deficiency can make you prone to depression and other mood disorders. Fortified milk and milk alternatives and salmon are two great food sources.
- **Magnesium:** Magnesium regulates emotions and balances mood. A deficiency can lead to irritability, fatigue and predisposition to stress. It also plays a large role in the production of serotonin. Fill up on almonds, spinach, cashews, peanuts, edamame, pumpkin seeds, quinoa and sesame seeds.

## Memory and Concentration:

- **Choline**, a vitamin B-like compound, is a precursor to the brain neurotransmitter acetylcholine, which is linked to memory. People given drugs that block acetylcholine flunk memory tests and low levels of acetylcholine have been linked to Alzheimer's disease and poor memory. Choline-rich foods include eggs, liver, lean beef and poultry.
- **Stress** can have a negative impact on memory. Find ways to manage stress in everyday life.

## Energy Level:

- **B vitamins** help the body convert food into energy, but do not provide energy on their own. Suboptimal intake of B vitamins can interfere with the body's ability to convert carbohydrates and fats into energy. Make sure you get enough B vitamins by including fortified cereals, whole grains, beans and peas.
- **Overeating** at any one meal can zap your energy level. Eat your biggest meal at breakfast, a moderate-sized lunch and a light meal at dinner. Aim to eat a meal or a snack every 3-4 hours.

## Sleep:

- Eating carbohydrates will trigger the release of insulin into the blood stream, allowing tryptophan, a precursor to the brain neurotransmitter serotonin, to enter the brain.
- Elevated serotonin levels produce a sense of calm and may induce sleep.
- Tryptophan-rich foods include turkey, chicken, fish, bananas milk, cheese, beans and soy.
- A *small* bedtime snack can consist of healthful carbs plus a small amount of tryptophan-rich food like whole grain cereal + milk, sliced half banana topped with yogurt, a few whole grain crackers + low fat cheese, ½ turkey sandwich on whole grain bread.

- Lighter dinners are more likely to give you a restful night's sleep than large, heavy high-fat ones.
- Avoid caffeine-containing foods, beverages and medications several hours before bedtime.

### Red Flag Food Behaviors:

**Excessive coffee drinking:** Drinking coffee may offer a temporary burst of energy, but for most people, the spurt is short-lived. In fact, for some, caffeine may worsen depression. Studies have found that in people with caffeine sensitivity, eliminating caffeine may actually improve mood and boost energy.

**Overdoing sugar:** Eating sweet foods triggers a release of endogenous opiates – opium-like compounds made in the body, which lead to a temporary feeling of pleasure. Constantly seeking comfort in sweet carbs and sugar-rich foods can lead to a never-ending cycle of excessive calorie intake, according to one researcher.

**Skiping meals, especially breakfast:** Eating a healthy breakfast provides the fuel your body and brain need to start the day. Breakfast provides energy for mental and physical activity and improves productivity. It also increases the rate at which you burn calories throughout the day. Skipping breakfast is likely to leave you feeling sluggish, tired and hungry.

**Overeating at lunch:** Beware of lunch buffets or business lunches where there is a tendency to overeat. Try to steer away from heavy lunches that include fried or fatty foods. These energy-zapping lunches leave you feeling stuffed, sluggish and ready for a nap.

### 5 Steps to a “Good Mood” Eating Plan:

1. Try to eat several times a day: three meals and one or two snacks. Following a regular eating schedule provides your body—especially your brain—with a steady supply of energy throughout the day. The best diet is rich in complex carbohydrates (whole grains, beans, fruits and vegetables), with ample lean protein and unsaturated fats.
2. Include breakfast every day. The benefits are many, including improved attention span and productivity. Breakfast helps “jumpstart” calorie burning that will last throughout the day.
3. Limit sweet and sugar-containing foods to one or two per day. Replace refined sweets with more nutritious sources of carbohydrates like fruit, yogurt mixed with fruit, popcorn, whole grain crackers or veggies with salsa.
4. Limit caffeine-containing beverages including coffee, tea and colas, to two per day. The “kick” is typically short-lived and can leave some people feeling depressed. Caffeine, a known diuretic, can increase the body’s need for water. Most importantly, too much caffeine can disrupt the delicate balance between sleep and wakefulness.
5. Drink plenty of water; aim for six to eight glasses per day. Shorting your body on water can lead to fatigue. Individual fluid needs can vary widely, depending on activity level, environmental conditions at home and work and whether or not a person sweats profusely. A good rule of thumb to help know whether you are drinking enough is to check the color of your urine. If it is pale, like the color of lemonade, you are probably drinking enough. If it is dark, resembling the color of apple juice, then you need to up your fluids. Water should fulfill at least half of your daily fluid needs. Other good choices include decaffeinated tea, flavored seltzer, diluted fruit juice and other calorie-free beverages.

References: *Food & Mood, The Complete Guide to Eating Well and Feeling Your Best* by Elizabeth Somer, M.A., R.D. and *Environmental Nutrition Newsletter*.