

## How to Stay in a Good Mood and Ward off Depression

Depression is a disorder associated with major symptoms such as increased sadness and anxiety, loss of appetite, depressed mood, and a loss of interest in pleasurable activities. Depression is rated by the World Health Organization as the leading cause of disease burden amongst high-income countries. There are many factors that can contribute to the development of depression such as psychological issues or biochemical imbalances, and triggers such as major stress or trauma.

A notable feature of the diets of people suffering from mental disorders is the severity of deficiency in many nutrients, especially essential vitamins, minerals and omega-3 fatty acids. Simply restoring these vital nutrients and eliminating foods that may cause depressive symptoms can improve symptoms and may eliminate the need for antidepressant medications. Many of these prescription drugs have side effects, such as low libido and may have effects on pregnancy or preclude a woman from breastfeeding her newborn.

### What are these nutritional deficiencies?

- *Essential fats*, do you need more Omega 3?
- *Homocysteine*, is it too high?
- *Serotonin levels*, do they need boosting with amino acids?
- *Blood sugar balance*
- *Levels of the nutrients Vitamin D, iron, magnesium, zinc and B complex*
- *Food intolerances*, could they be making you sad?

### Testing for nutritional deficiencies that may increase risk of depression

- ☐ vitamin D levels
- ☐ B12 and folate levels
- ☐ homocysteine levels
- ☐ magnesium levels
- ☐ hemoglobin A1C
- ☐ complete blood count, iron studies
- ☐ thyroid function

## Starting with diet and nutrition

### 1. Start with your diet and eliminate sugary processed foods

Balance your blood sugar and avoid or reduce caffeine, sugar, refined carbohydrates and alcohol. There is a direct link between mood and blood sugar balance. All carbohydrate foods are broken down into glucose. Eating lots of sugar is going to give you sudden peaks and troughs in the amount of glucose in your blood; symptoms that this is going on include fatigue, irritability, dizziness, insomnia, excessive sweating (especially at night), poor concentration and forgetfulness, excessive thirst, depression and crying spells, digestive disturbances and blurred vision. Since the brain depends on an even supply of glucose it is no surprise to find that sugar has been implicated in aggressive behavior, anxiety, and depression, and fatigue. The more uneven your blood sugar supply the more uneven your mood. Poor blood sugar balance is a very common factor in mood.

Lots of refined sugar and refined carbohydrates (meaning white bread, pasta, rice and most processed foods,) is also linked with depression because these foods not only supply very little in the way of nutrients but they also use up the mood enhancing B vitamins; turning each teaspoon of sugar into energy needs B vitamins. In fact, a study of 3,456 middle-aged civil servants, published in British Journal of Psychiatry found that those who had a diet which contained a lot of processed foods had a 58% increased risk for depression, whereas those whose diet could be described as containing more whole foods had a 26% reduced risk for depression.

Sugar also diverts the supply of another nutrient involved in mood – chromium. This mineral is vital for keeping your blood sugar level stable because insulin, which clears glucose from the blood, can't work properly without it. There is more on chromium below. The best way to keep your blood sugar level even is to eat what is called a low Glycemic Load (GL) diet and avoid, as much as you can, refined sugar and refined foods, eating instead whole foods, fruits, vegetables, and regular meals. Caffeine also has a direct effect on your blood sugar and your mood and is best kept to a minimum, as is alcohol.

Eat a diet that will stabilize your blood sugar known as the Low Glycemic diet:

Only eat low glycemic carbohydrates (dark leafy green vegetables, etc.)

- Always combine your low glycemic carbohydrates with protein in a ratio of 1:1
- Eat at regular intervals, including snacks that include low glycemic carbohydrate and protein such as fresh fruit with a handful of nuts, oatcakes with hummus or celery and cottage cheese
- Only eat sweet foods as a very occasional treat and only after a meal or healthy snack

## 2. Increase your intake of essential omega 3 fats

Omega-3 fats reduce inflammation and play a critical role in brain function, especially memory and mood. But they are called essential fats, because the body can't make them. ***You must get from your diet.*** These fatty acids are great for your brain. The richest dietary source is from oily fish. Surveys have shown that the **more fish** the population of a country eats the **lower** is their incidence of **depression**.

There are two key types of omega-3 fats, EPA and DHA and the evidence suggests that it's the EPA, which seems to be the most potent natural anti-depressant.

This means eating oily fish at least twice a week, seeds on most days and supplementing with omega 3 fish oils. The best fish for EPA, the type of omega 3 fat that's linked with improving mood, are: mackerel, herring/kipper, sardines, fresh tuna, anchovy, salmon, and trout. Tuna, being high in mercury is best eaten not more than three times a month.

The best seeds are flax seeds and pumpkin seeds. Flax seeds are so small they are best ground and sprinkled on yogurt (full fat, plain Greek-type yogurt). Alternatively, use flax seed oil, for example in salad dressings. While technically providing omega 3 only about 5% of the type of omega 3 (alpha linolenic acid) in these seeds is converted in your body into EPA. Omega-3 seeds and seed oil should not be cooked.

When supplementing omega 3 fish oils you are aiming for about 1,000mg of EPA a day for a mood boosting effect. That means supplementing a concentrated Omega 3 Fish Oil capsule providing 500mg, once or twice a day and eating a serving of any of the above fish three times a week.

## 3. Maintain adequate vitamin D levels

Known as the "sunshine vitamin", around 90% of our vitamin D is synthesized in our skin by the action of sunlight but is blocked by the use of sun-block. Dietary sources of vitamin D include oily fish and organ meats (such as liver), which are not very popular. For these 2 reasons, about 80% of the population is deficient in vitamin D. This deficiency has been linked to depression, dementia, and autism. Most of our levels drop off during the fall and winter months, since sunlight is the richest source. Vitamin D deficiency is increasingly being recognized as a common problem around the globe and may be implicated in depression, particularly if you feel worse in winter.

You can have your vitamin D level checked. If your level is below 75 nmol/litre, supplement 2,000 IU per day for 12 weeks, and then get a retest. Get some sensible sun exposure, without sunblock, but don't risk your skin health by allowing yourself to get sunburned!

## 4. Increase your intake of B vitamins

B vitamins like vitamin B<sub>6</sub> and vitamin B<sub>12</sub> can provide some incredible health benefits, including reduced stroke risk and healthy skin and nails. On the other hand, a vitamin B deficiency may impact your mental health. More than a quarter of severely depressed older women were deficient in B<sub>12</sub>, according to one 2009 study.

Dietary sources of vitamin B<sub>6</sub> are poultry, seafood, bananas, and dark leafy green vegetables. Women should ingest 1.5mg daily. Vitamin B<sub>12</sub> is found in animal foods (meat, fish, poultry, eggs and milk), shellfish, such as clams, mussels, and crab. Most adults need 2.4 mcg daily.

## 5. Get enough folate

People with either low blood levels of folic acid, or high blood levels of the amino acid homocysteine (a sign that you are not getting enough B<sub>6</sub>, B<sub>12</sub> or folic acid), are both more likely to be depressed and less likely to get a positive result from anti-depressant drugs. In a study comparing the effects of giving an SSRI with either a placebo or with folic acid, 61% of patients improved on the placebo combination but 93% improved with the addition of folic acid. Folic acid is a cheap vitamin with no side effects compared to anti-depressants.

You could just start taking a folate supplement and see if you get any results. Your daily recommended folate intake depends on your gender, whether you're pregnant or breastfeeding, and age. However, most adults need at least 400 mcg daily. You can also get your daily folate requirements by consuming foods high in folate, such as dark leafy greens, beans and legumes, and citrus fruits and juices.

Your homocysteine level is an indicator of your B vitamin needs. You can be tested with a simple blood test. You can also have your folic acid level checked.

## 6. Boost your serotonin levels

Serotonin is a chemical messenger that's believed to act as a mood stabilizer. It's said to help produce healthy sleeping patterns as well as boost your mood. It's even been looked at as a treatment for depression. This is because people who have depression often have a low serotonin level. Studies show that serotonin levels can have an effect on mood and behavior, and the chemical is commonly linked to feeling good and living longer.

Serotonin is made in the body and brain from an amino acid called tryptophan. Tryptophan can be found in the diet; it's in many protein rich foods such as meat, fish, cheese, nuts, eggs and turkey. Just not getting enough tryptophan is likely to make you depressed; people fed food deficient in tryptophan became rapidly depressed within hours.

The tryptophan found in food has to compete with other amino acids to be absorbed into the brain, so it's unlikely to have much of an effect on your serotonin levels. This differs from tryptophan supplements, which contain purified tryptophan and do have an effect on serotonin levels.

While high-tryptophan foods won't boost serotonin on their own, there is one possible cheat to this system: carbs. It's possible that eating foods high in tryptophan with a healthy serving of carbohydrates can have an effect on your serotonin levels. When you eat carbs, more insulin is released into your system. Insulin promotes the absorption of amino acids into the heart, muscles, and organs. The tryptophan left behind now makes up a larger portion of the blood's amino acid "pool," meaning that it's more likely that it will be absorbed through the brain barrier. Tryptophan is best absorbed either on an empty stomach or, ideally, with a carbohydrate snack such as a piece of fruit or an oatcake.

## 7. Iron deficiency

Iron deficiency is fairly common in women. About 20 percent of women, and 50 percent of pregnant women, are anemic. The most common form of anemia — an insufficient number of red blood cells — is caused by iron deficiency. Its symptoms are similar to depression: fatigue, irritability, brain fog. Most adults should consume 8 to 18 mg of iron daily, depending on age, gender, and diet, according to the NIH. Good sources of iron include red meat, fish, and poultry. Non-animal sources include spinach, bootstrap molasses.

## 8. Consider supplementing chromium

This mineral is vital for keeping your blood sugar level stable because insulin, which clears glucose from the blood, can't work properly without it. In fact, it turns out that just supplying proper levels of chromium to people with atypical depression can make a big difference.

If you suffer from ‘atypical depression’ (see above) studies show that 600mcg of chromium a day is effective. Supplements generally come in 200mcg pills. Take two with breakfast and one with lunch. If this works, after a month reduce to one with breakfast and one with lunch. If this works, reduce to one with breakfast after a further month. Don’t take chromium in the evening as it can be stimulating. In addition to supplementing chromium, you should adopt the low glycemic diet style of eating as outlined above.

## **9. Investigate food intolerances**

Some foods are associated with mood problems. For example, in a huge population study, Celiac Disease (a severe intolerance to gluten – the protein found in wheat, rye and barley) was associated with an 80% increased risk for depression. It is thought that Celiac Disease is vastly underdiagnosed. Your GP can test for it, and should test you if you have fluctuating digestive symptoms including diarrhea, constipation or bloating, and especially if you have unexplained anemia. In fact, you can have mood symptoms relating to gluten, even without Celiac Disease.

You may suspect some foods, which may or may not be one of the usual suspects – such as gluten (wheat, rye, barley), dairy (all types – cow, sheep, goat, milk, cheese, cream etc.), soy, yeast and eggs. If this is the case, you could try an exclusion of the food or foods for a brief trial period.

Alternatively, you could undertake an IgG ELISA blood test to determine whether you have raised antibody levels to specific foods in your blood, which is a good indication. Either way, don’t make dramatic changes to your diet or cut out whole food groups without professional guidance to ensure your diet remains healthy and balanced – this is especially important for the frail and for children.

## **Top BRAIN foods**

**(B12 + B9 + EPA + DHA + Iron + zinc + magnesium + fiber)**

### **Top animal sources**

oysters  
clams  
spleen  
liver  
mussels  
poultry giblets  
crab  
octopus  
fish eggs  
kidney  
elk  
herring

### **Top plant sources**

mustard greens  
spinach  
red cabbage  
cauliflower  
red pepper  
broccoli  
lemon  
strawberry  
Brussels sprouts  
asparagus  
dandelion greens  
kale