

This is a basic overview. For more info. check out this excellent book about the nutrients we need and how they work in our bodies.

**The Mood Cure - by Julia Ross**

<http://www.amazon.com/The-Mood-Cure-Program-Emotions-Today/dp/0142003646>

**Magnesium:** Magnesium is needed on a daily basis. It also supports serotonin production.

From Green Med Info:

Persons only slightly deficient in magnesium become irritable, highly-strung, and sensitive to noise, hyper-excitabile, apprehensive and belligerent. If the deficiency is more severe or prolonged, they may develop twitching, tremors, irregular pulse, insomnia, muscle weakness, jerkiness and leg and foot cramps.

If magnesium is severely deficient, the brain is particularly affected. Clouded thinking, confusion, disorientation, marked depression and even the terrifying hallucinations of delirium tremens are largely brought on by a lack of this nutrient and remedied when magnesium is given.

Read more here:

Deficiency Symptoms

<http://www.greenmedinfo.com/blog/magnesium-deficiency-symptoms-and-diagnosis>

Magnesium and Serotonin

<http://www.livestrong.com/article/284652-magnesium-serotonin/>

**B vitamins:**

(From the Mayo Clinic)

Vitamin B-12 and other B vitamins play a role in producing brain chemicals that affect mood and other brain functions. Low levels of B-12 and other B vitamins such as vitamin B-6 and folate may be linked to depression.

Low levels of a vitamin can result from eating a poor diet or not being able to absorb the vitamins you consume. Older adults, vegetarians and people with digestive disorders such as celiac disease or Crohn's disease may have trouble getting enough B-12. Sometimes a vitamin B-12 deficiency occurs for unknown reasons. Your doctor may order a blood test to check levels of B-12 or other vitamins if a deficiency is suspected.

The best way to make sure you're getting enough B-12 and other vitamins is to eat a healthy diet that includes sources of essential nutrients. Vitamin B-12 is plentiful in animal products such as fish, lean meat, poultry, eggs, and low-fat and fat-free milk. Fortified breakfast cereals also are a good source of B-12 and other B vitamins.

**Omega 3's:** Our body uses endo-cannabinoids to regulate many functions from digestion to sexual activity. Cannabinoids our mostly known from their presence in Cannabis or Marijuana.

As it, turns out our body makes its own cannabinoids too, but in order to do it we need omega 3's and 6's. These are also especially high in shelled hemp seeds and hemp oil. I also like Chia seeds, and hemp tofu!!

Fish oil supplements also have the omegas. The fish get the omegas from the algae. You can also skip the middle man (the fish) and get them from omega algae supplements like Ovega. Get enough of your omegas and you can get that mellow vibe without the munchies :)

article on hemp seeds:

<http://www.riseearth.com/2014/07/hemp-seed-eating-village-in-china-holds.html#.VCTfxzUYugk.facebook>

Get hemp seeds here in bulk:

<http://www.nuts.com/cookingbaking/seeds/hemp/organic.html>

**Protein:** Our body needs the amino acids in protein to make many of the brain chemicals we need. Protein contains the amino acid tryptophan which is converted to serotonin. I recently read that Pumpkin seeds contain high levels of tryptophan. I am a vegetarian, so I was looking for ways to get more protein, with high levels of tryptophan. I found pumpkin seed powder here at nuts.com and I use it in my smoothies. It's also anti-fungal and anti-parasitic. I can definitely tell a huge difference. It's also great to add to yogurt before bedtime as the tryptophan will help you get to sleep too! (Chick Peas, Lentils and Mung Beans are a great source of vegetarian protein, they also have a high tryptophan ratio, and anti fungal qualities.)

### **Zinc:**

From Psychology Today:

"Zinc as an antidepressant"

300 or more enzymes in our bodies use zinc as a buddy to help them do their thing, making DNA, protein synthesis, cell division, all hugely important stuff. Zinc is also critical to cell signaling (a major receptor motif, the "zinc finger" is as famous as the G protein in cell biology circles). The highest amount of zinc in the body is found in our brains, particularly in a part of our brains called the hippocampus. Zinc deficiency can lead to symptoms of depression, ADHD, difficulties with learning and memory, seizures (2), aggression, and violence (3).

<http://www.psychologytoday.com/blog/evolutionary-psychiatry/201309/zinc-antidepressant>

**Probiotics:** Probiotics not only work to maintain digestive health, but they also support mental health too. L-rhamnosus for example is known to relieve anxiety.

From Psychology Today:

90 percent of the cells in our bodies are the commensal bacteria who live on and within us. Knowledge of these colonies of bacteria could lead us to amazing insights and new treatments for common and devastating diseases.

While the brain, doubly protected from the outside by our skin and guts first, then our blood brain barrier, may seem far removed from the human microbiome, there is growing evidence that the trillions of beasties in our guts could communicate with our brains, and that some psychopathology could result from disturbances in the gut microbiome.

Also:

Lactobacillus and Bifidobacterium species are known to produce GABA. Escherichia, Bacillus, and Saccharomyces produce norepinephrine. Candida, Streptococcus, Escherichia, and Enterococcus produce serotonin. Bacillus and Serratia produce dopamine, and Lactobacillus species produce acetylcholine. That's pretty much the entire hit parade of major neurotransmitters...

(So, our gut bacteria are supporting and producing our neurotransmitter chemicals!)

Read more:

<http://www.psychologytoday.com/blog/evolutionary-psychiatry/201206/do-probiotics-help-anxiety>

<http://www.psychologytoday.com/blog/evolutionary-psychiatry/201206/groovy-probiotics>

Did, you read and process the underlined part in bold in the first quote above??? WE ARE 90% BACTERIA. The good bacteria can also help us to get rid of bad bacteria, which can grow out of control due to high sugar and high carb and low fiber diets. Also, the use of antibiotics may have also killed off the good bacteria which we need, allowing the bad guys to grow out of control. According to my experience, the bad bacteria (which function as parasites) can also affect our consciousness, mental clarity, food cravings and more.

Based on general diet habits and the widespread use of antibiotics, my guess is that most people have some overgrowth in bad bacteria. For more info. on changing diet habits, cleansing and reestablishing your good bacteria, I highly recommend this book. (The Body Ecology Diet) Here are some other posts I have done on this.

**Vitamin D:** Ideally, we'd spend more time outside and get most of our D from the Sun, but due to geography or work schedules most of us don't.

From Psychology Today:

"Psychological consequences of Vitamin D Deficiency"

Regardless of cause, deficiency of vitamin D has significant medical and psychological consequences. Every tissue in the body has vitamin D receptors, including the brain, heart, muscles, and immune system, which means vitamin D is needed at every level for the body to function.

Vitamin D is also the only vitamin that is a hormone. After it is consumed in the diet or absorbed (synthesized) in the skin, vitamin D is then transported to the liver and kidneys where it is converted to its active hormone form. Vitamin D as a hormone assists with the absorption of calcium, helping to build strong bones, teeth and muscles.

In addition to its well-known role in calcium absorption, vitamin D activates genes that regulate the immune system and release neurotransmitters (e.g., dopamine, serotonin) that affect brain function and development. Researchers have found vitamin D receptors on a handful of cells located in regions in the brain-the same regions that are linked with depression.

Seasonal Affective Disorder (SAD), a mood disorder featuring depressive symptoms, occurs during the dark times of the year when there is relatively little sunshine, coinciding with the

sudden drop in vitamin D levels in the body. Several studies have suggested that the symptoms of SAD may be due to changing levels of vitamin D3, which may affect serotonin levels in the brain.

So, just to recap, these are some of the basic supplements for mental (and physical) health..  
Add them to your grocery list :)

Magnesium

B Vitamins - B complex and sublingual B12

Omega 3's and 6's - Hemp Seeds, Hemp Oil, Omega or Fish Oil

Protein - Lean Protein, there are also many vegetarian sources of high protein.

Zinc

Probiotics - Theralac and Natren are my favorite brands.

Vitamin D