

Plant Based Diets for the Brain

Given all the health benefits of a vegetarian diet, it may come as a surprise multiple studies have linked it to depression. It seems there are a few vitamins and minerals that are difficult to get from plant sources, which is why the antidepressant diet included a small amount of meat each week.

Those nutrients are listed below. Some may be obtainable from a pure vegetarian diet, but most will require supplementation with capsules or fortified foods.

Nutrient	Role	Vegetarian sources
Omega-3 fatty acids	Brain, bones, skin, heart health	Oily fish. Fortified products include eggs, milk, and peanut butters. Vegetarian sources provide enough for the body but not for the brain (e.g. canola oil, soy oil, walnuts, flaxseed, soybeans) so supplementation may be necessary. Vegetarian supplements are available from microalgae, but it is controversial if these will fully treat depression (see chapter X).
Vitamin B-12	Energy, blood cell production	Vitamin-fortified cereals and soy products, nutritional yeast such as Red Star Vegetarian Support Formula, eggs, cheese. Supplementation may be necessary, and the National Institutes of Health recommends B12 supplements for everyone over age 50 (even meat eaters). The recommended intake is only 2.4 micrograms (2.8 micrograms if you're breast-feeding).
Vitamin D	Brain and bone health, anti-cancer	Few vegetarian options are available, although mushrooms labeled UV-treated or Vitamin-D enhanced provide some. Fortified options include milk and cereals.
Iron	Energy, blood cell production	Dried beans and peas, lentils, enriched cereals, whole-grain products, dark leafy green vegetables, and dried fruit. Eating those foods along with good sources of vitamin C will help absorb iron (e.g. citrus fruits, strawberries, tomatoes, cabbage and broccoli). Otherwise the body only absorbs half as much iron from plant sources as it does from meat.
Zinc	Prevents depression, aids sleep	Cheese, whole grains, soy products, beans, nuts, and wheat germ.
Calcium	Brain signaling, bones, teeth	Broccoli, kale, turnips, collards, mustard greens, bok choy. Some foods are fortified with extra calcium, such as juices, cereals, soy milk, soy yogurt and tofu.
Iodine	Thyroid health	Iodized salt (1/4 teaspoon daily will prevent deficiency).
Protein	healthy skin, bones, muscles and	Beans, nuts, seeds, soy products, whole grains, eggs, dairy products.

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Supplements

It's difficult to get the nutrients above from plant-based sources. Some are available in fortified foods, such as iodized salt and vitamin-enriched milk, juice, and cereal. A multivitamin will often contain the recommended daily amounts, and there are special vitamin formulations for vegetarians. It's important not to go overboard unless recommended by a doctor – too much of a vitamin can be harmful as well.

A multivitamin is a convenient way to add overall insurance to your diet. In addition to calcium and vitamins D and B12, it often contains essential nutrients such as zinc, iodine, and iron that you may be missing.

Vitamin and mineral supplements for vegetarians

Nutrient	Typical daily dose
Vitamin B12	25-100 mcg
Vitamin D3	600-1,000 International Units
Calcium	1,000mg (the safe upper limit is 2,500mg/day for younger adults and 2,000mg/day after age 50).
Zinc	11 mg
Iodine	150mcg (or ¼ tablespoon iodized salt daily)
Iron	Talk to your doctor before adding an iron supplement to your diet. There's a fine line between too little (e.g., anemia) and too much.