

How to prevent deficiencies as a vegan:

1. SUPPLEMENTS NEEDED

- **Vitamin B12** can only be found in animal products. Supplements for that are necessary as the vitamin plays an important role in the functioning of the nervous system, the brain and in the formation of red blood cells.
- In plant sources, **iodine** can't be found consistently because the amount depends on the content of the soil. Iodine is crucial because it is needed for healthy thyroid function (which regulates metabolism). However, too much iodine is also bad.
- **Vitamin D** (but that's a supplement most people need).

2. PROTEIN

It's fairly easy to get enough protein as a vegan or vegetarian. The recommended intake is of around 0.8 or 0.9 g/kg of body weight per day. For me that amounts to about 48g of protein per day. You could potentially eat more, if you exercise a lot and want to build muscle.

As most people know, protein is made up of chains of amino acids. The body can produce some amino acids by itself but, not all of them. The ones that must be obtained through food are called the essential amino acids.

All essential amino acids can be found in vegetables/fruits/grains. However, one of them, known as lysine, is less abundant in these products. It's thus important to make sure that you get enough of that particular amino acid when you eat. Lysine can be found in soy-foods, lentils, quinoa, pumpkin seeds, peanuts (more info in the links).

- [Protein Recommendations for Vegans](#)

- [Protein and Amino Acid Content of Selected Plant Foods](#)

3. OMEGA-3 ACIDS

There are 3 types of omega-3 fatty acids involved in human physiology:

- **ALA** (found in chia seeds, walnuts, hemp seeds, flaxseeds, rapeseeds - and their respective oils) - it must be obtained through food.
- **EPA** (found in fatty fish, algae) - the body can produce EPA out of ALA and out of DHA.
- **DHA** (found in fatty fish, algae) - the body can convert EPA into DHA.

Basically, vegans who don't take supplements have an intake of essentially no EPA and DHA. It's thus important to get enough ALA from plant sources. You should also consider taking an **algae-based DHA supplement** a few times per week. (For people that eat fish, but not regularly, get your supplements too).

[Daily requirement of DHA \(300g\): 6 tbsp of chia seeds.](#)

- [The importance of omega-3 and omega-6 fatty acids](#)

4. IRON

Iron is a central part of hemoglobin, which carries oxygen in the blood. It's found in food in two forms: **heme** and **non-heme**. Non-heme iron is the iron found in plants (fruits, vegetables, grains, nuts). This type of iron isn't absorbed as well as the other type, heme, found in animal products. Because of that, **vegans and vegetarians should eat about 1,8 times more iron than non-vegans/vegetarians.**

[A trick for better iron absorption is pairing iron rich food with food rich in vitamin C.](#) It can increase absorption up to six-fold. This then makes the absorption of non-heme iron as good or better than that of heme iron. Consequently, vegetables high in both iron and vitamin C, such as broccoli and bok choy, are easy to absorb. Coffee, tea and wine can reduce iron absorption.

Women require 18 mg/day of iron (owing to loss of blood during menstruation). Males need about 8 mg/day.

Food rich in iron:

SOY	8.5 mg/cup
WHITE BEANS	6.5 mg/cup
GREEN LENTILS	6 mg/cup
TOFU	5.4 mg/cup
CHICKPEAS	4.5 mg/cup
SPINACH	4 mg/cup
QUINOA	2.5 mg/cup
CHIA SEEDS	1 mg/tbsp (that's a lot)

It is important to realize that **the amount of iron found in food depends on the way that it has been prepared.** I found this information about spinach, for example:

Spinach	boiled, drained, cooked, unsalted	6.43 mg/cup
Spinach	canned, with solids drained	4.92 mg/cup
Spinach	frozen, boiled, drained, cooked, unsalted	3.72 mg/cup
Spinach	raw	0.81 mg/cup

Because I haven't found more information online on how to cook food to maximize iron intake, ie. 'how should you cook lentils in order to get the 6mg/cup of iron?', I am asking my doctor about it next time I see her. This part of the post will then be updated.

5. ZINC

"Zinc deficiencies can result in: loss of hair, more susceptibility to colds and the flu, hormone imbalances, acne, and even change how the body uses and handles insulin in

the body." ([source](#))

[Phytates](#), common in plant foods, decrease the absorption of zinc. It's therefore recommended to eat more zinc on a vegan diet: about 16mg/day for men and 12mg/day for women.

[A little life-hack: pumpkin seeds are low in phytates and high in zinc. Adding them to your diet, as a snack maybe, is a good way to get your zinc!](#)

Food rich in zinc:

Chickpeas	Lentils	Pumpkin seeds	Sunflower seeds
Chia seeds	Tofu	Tempeh	Almonds

6. CHOLESTEROL:

Nowadays, most people want to keep their level of cholesterol low. For some reason, mine doesn't want to increase and has always been too low. A normal level of cholesterol isn't bad and is actually essential to life: "it has several functions including helping to build cell membranes, bile acids, insulating nerve fibers, and it is an essential building block for hormones, such as sex hormones and adrenal gland hormones."

Apparently, vegans tend to have low levels of cholesterol – which isn't great news for me. Because most people want to decrease their level of cholesterol, I can't seem to find a lot of information on how to increase it on a vegan diet.

The only thing I know so far is that I should eat **saturated fats** (coconut products, cacao butter) because they stimulate cholesterol production.

7. VITAMIN A:

Pre-formed vitamin A can only be found in animal products. However, the body can convert carotenoids into vitamin A.

Food rich in carotenoids: carrot, sweet potato, pumpkin, butternut, spinach, cantaloupe, mango.

[More info here.](#)

8. VITAMIN K:

This vitamin is essential for bone health and proper blood clotting. It's found in leafy green vegetables (broccoli, kale, spinach...).