



Lacto-ovo versus Vegetarian Vegan

Dr Ross Grant

Given that a block of chocolate contains a “glass-and-a-half” of milk, as the advertisers persuasively tempted us, there’s a problem for a growing number of people. Most chocolate contains both milk and sometimes eggs. And while this is OK for lacto-ovo vegetarians, it is definitely not acceptable for pure vegetarians.

definitions

Most of us think of a vegetarian as a person who eats food from only vegetable sources, which, of course, is true. But there are variations on this theme. A lacto-ovo vegetarian (*lacto* means “milk”; *ovo* means “eggs”) will not eat meat, but he or she will consume products that have been harvested from live animals, such as eggs, milk and cheese. Some even refuse honey, as it is a product of an animal. Vegans will not eat anything from an animal source.

There are many reasons as to why people choose to exclude meat from their diet. Some do it because of conscience or religious conviction. Some don’t feel right about having an animal killed for food when there are alternatives. Still others stop eating meat

to help protect the environment from commercial grazing and to reduce the methane output of the pastoral industries.

Increasingly, though, people are choosing a meat-free diet because of the evidence supporting its health benefits. It is well known that a vegetarian diet will reduce the risk of heart disease, diabetes, stroke and many forms of cancer. A recent study has also shown that 14- to 15-year-old children who eat a vegetable-rich diet also benefit from reduced body weight and lower risk factors for metabolic syndrome and cardiovascular disease. This is an important finding, considering the growing number of children who are overweight and are developing diabetes at a very early age.

Vegetarian and meat-based diets can both provide adequate basic nutrition. However, they differ in two very important ways. First, by weight, a meat-based meal provides more calories and saturated fat than a vegetable-based meal. This may be why meat eaters are fatter on average than vegetarians. However, while both meat and vegetarian diets can provide adequate levels of the basic vitamins and minerals, only plant foods provide significant quantities of adjunct nutrients

such as isoflavones and polyphenols. New research is discovering that these small plant molecules can have profound effects on a person’s health, particularly by acting on some cancers, improving heart health and reducing brain disease.

which is better?

Most people will probably agree that a vegetarian diet produces important health benefits. The debate occurs over whether a lacto-ovo vegetarian diet is better than a vegan diet. As is so often the case, there are pros and cons to both.

vegan pros and cons

Vegetarians have, on average, better health than the general public. Vegans tend to have slightly better scores for body mass index (BMI), cholesterol and blood pressure, suggesting a reduced risk of cardiovascular disease. At least one study has reported that vegans have a 19 per cent reduced risk of heart disease compared to those who regularly consume meat—a slight benefit over lacto-ovo vegetarians, who have an 18 per cent reduction in risk.

On the negative side, vegans tend to lower intakes of protein, omega-3 acids, vitamin B12, zinc and calcium.

Lower levels of these important nutrients put vegans at a greater risk for certain other disorders: inferior bone development and more fractures due to reduced calcium and zinc, and possibly cancer from reduced vitamin B12, and neurological problems through reduced vitamin B12 and omega-3 fatty acids.

It is well known that low B12 levels can result in neurological problems, including numbness or tingling in the hands and feet, insomnia, loss of memory and depression. Low B12 levels in a pregnant mother can also result in serious neurological symptoms in the baby, including irritability and developmental regression.

Of equal concern is a link between low B12 levels and cancer. Though more research is still needed, one study observed an association between low vitamin B12 levels and an increased risk of breast cancer in postmenopausal women, while another reported that vegans had an overall 14 per cent increased risk of dying of cancer compared to their meat-eating peers, whereas the lacto-ovo vegetarians actually had a 22 per cent reduced risk.

This same study, however, observed

that vegans still had the lowest risk of death from any cause—26 per cent lower than the meat-eating population, while lacto-ovo vegetarians had a 23 per cent reduced risk of death.

lacto-ovo pros and cons

But are there any problems with a vegetarian diet that includes milk and eggs? The answer is Yes, though the problem seems to be more with milk than eggs.

The case for including milk in one's diet centres on what most nutritionists and the media tell us—that the value of milk is in providing high levels of calcium, thereby reducing the risk of bone diseases such as osteoporosis. On the other hand, some have argued that osteoporotic bone fracture rates are actually highest in countries that consume the most dairy calcium, with little evidence that milk or other dairy products benefit bone health. Some evidence also suggests that consuming high amounts of protein from milk or dairy products may contribute to the risk of prostate and ovarian cancers and autoimmune diseases.

in conclusion

In summary, vegetarians are

generally healthier than those on a meat-based diet, and vegans have marginally better scores for avoiding cardiovascular disease than lacto-ovo vegetarians but are particularly at increased risk of low B12, calcium and zinc levels. On the other hand, consuming lots of dairy products is also linked to some health issues.

So the best recommendation for those who choose to exclude meat as part of their food intake may be a vegan diet that is careful to find ways to provide calcium and vitamin B12. A good example is to replace regular milk at breakfast time with soy milk that is fortified with calcium and vitamin B12. In this way, most of the risks identified for either vegetarian diet are minimised, with the added benefit of soy isoflavones thrown in.

Whatever your diet choices, it is essential that the foods you eat promote and sustain your health. Ultimately, a plant-based diet that includes variety and works toward balance, avoiding extremes, is the ideal. ↻

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Nutrients to monitor for a vegetarian

Some essential dietary requirements can be lacking in a poorly planned vegetarian diet. These include:

- ▶ **Protein.** Contrary to popular opinion, at least in the past, vegetarian diets generally provide adequate amounts of protein. The essential consideration is to get the full range of amino acids (proteins). It is important to eat proteins from a variety of plant sources, such as whole grains, lentils, beans, nuts and seeds. Soy protein is an amino acid source that is almost identical to meat.
- ▶ **Vitamin B12.** This important nutrient is available in eggs and dairy products, but for those following a vegan diet, eating foods fortified with B12 is essential, foods such as soy milks, vegetarian burgers and yeast extracts. Vegans who do not eat foods containing B12 should take a vitamin supplement.
- ▶ **Calcium.** Lacto-ovo vegetarians receive much of their calcium from dairy sources. However, plant sources can provide adequate calcium. These include tofu, vegetables (except spinach), molasses, beans, dried figs and sesame seeds (try tahini, a nut butter made from sesame seeds). Note that calcium is absorbed better if you limit salt and caffeine intake and ensure you are getting adequate vitamin D through safe exposure to sunlight.
- ▶ **Iron.** Maintaining adequate iron is important for everyone, and a vegetarian diet provides many sources including legumes (beans, including peanuts), tofu, dark green leafy vegetables, nuts, dried apricots and whole grains. Vitamin C can enhance the absorption of iron.
- ▶ **Zinc.** Though zinc is found widely in plant foods, its absorption can be reduced by phytates (phosphorous) found in wheat bran, whole grains and legumes. Soaking, fermenting and sprouting can make zinc more available from sources such as legumes, nuts, brown rice and whole grain bread.
- ▶ **Omega-3.** Intake of the omega-3 polyunsaturated fatty acids may also be lower in vegetarian diets. Good non-animal sources include linseed (or flaxseed), walnuts, canola, pumpkin seeds and green leafy vegetables.

