Are raw food claims overcooked?

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Choosing an exclusively raw-food diet can potentially put a person at a small disadvantage. Credit: jefah/Flickr

Eating only raw foods has emerged as a popular dietary trend. Proclaiming an emotive health message, it is enough to make you think twice before next adding heat to your food. But fear not – on the scales of health, there is little to tip the balance in either direction.

Raw food advocates claim cooking food destroys the natural enzymes and nutrients that would otherwise give us optimal health and control

body weight.

A raw food diet is almost entirely plant-based and includes fruits, vegetables, nuts, seeds, grains, vegetable oils and juices in their natural uncooked state.

On the pro side, there is great merit in this type of diet. If you are currently eating a lot of processed food, then switching to raw food will be a clear nutritional win.

Where the science gets murky is claims that raw food is better because cooking destroys enzymes in plants. It's 100% correct that cooking will do this. But so too does digestion. Few enzymes survive their trip through a hydrochloric acid spa bath in the stomach.

Where there is small kernel of truth to raw food claims is the nutrient loses from cooking. Yet this is a clear case of be alert, not alarmed.

The United States Department of Agriculture has compiled a detailed table of nutrient losses for 16 vitamins and eight minerals from 290 foods using a variety of cooking methods. For anyone overtly fixated on just what proportion of nutrients they are losing when they cook food, this is the best resource you will find.

A quick glance at the table shows that most minerals are unaffected. Only vitamin C, folate and thiamin stand out as being the main nutrients lost, but even then, levels rarely drop to 50%.

Losing vitamin C, thiamin and folate from cooking vegetables is easily offset by eating foods that are high in these nutrients and are not normally cooked further. Citrus fruits are an excellent source of vitamin C. Leafy green vegetables and avocados are high sources of folate, as is bread (which is fortified with folic acid). Vegemite is packed with

thiamin and because of fortification, so too is bread.

Putting nutrient losses from cooking into context, just storing fruits and vegetables for several days means a gradual loss of vitamin C. Fresh will always be best, but frozen vegetables are certainly an option to consider as they are blanched and frozen very soon after picking, effectively "locking in" their nutrients for months.

Lentils are a nutrient powerhouse. Credit: You As A Machine

Food though is much more than just the essential vitamins and minerals. There are hundreds of bioactive compounds found in plant foods that have favourable health benefits. They can serve as antioxidant and anti-inflammatory agents and have anti-cancer and antibacterial roles as well.

Cooking losses of these bioactive nutrients is considered small; in many

cases, cooking can actually increase the amount of some of these substances. Heating food breaks down plant cell walls so they can release more of their nutrients.

Numerous studies have shown that the beneficial antioxidant, lycopene, for example, is much higher in cooked tomatoes than in uncooked tomatoes. Adding a bit of olive oil increases absorption even more. The Mediterraneans were certainly on to something.

So how do you ensure the highest retention of nutrients during cooking? The three keys are water, temperature and time.

As temperature, cooking time, and water volume go up, so too do nutrient losses. If you can, steam rather than boil as this cuts down on nutrient leeching. Cook at lower temperatures where possible, or use a higher temperature for a shorter period of time.

Keep the size of vegetable pieces as large as possible to minimise oxidation losses. And don't overcook food: you want your broccoli firm and green, not wilted and white.

Choosing an exclusively raw-food diet can potentially put a person at a small disadvantage. When you exclude all cooked foods, you also exclude many healthy foods, and the nutrient diversity of your diet narrows.

Take the nutrient powerhouses beans and lentils. When cooked, they are a cornerstone to super-healthy vegetarian, Japanese and Mediterranean diets. Legume-based diets have many health benefits including the prevention and management of obesity, heart disease and stroke, diabetes and metabolic syndrome.

Cooking can also destroy some of the anti-nutrients found in foods that

bind minerals in the gut and interfere with absorption.

And the elephant in the room when it comes to cooking is not what it adds, but what it takes away. Cooking food at 75°C or hotter will kill most bacteria that causes food poisoning.

Unquestionably, there are many benefits to eating plenty of fruits and vegetables. These foods are high in nutrients and fibre and low in kilojoules. But is raw superior to cooked? A review of 28 research studies found that eaters of both cooked and raw vegetables had a lower risk of cancer compared to people who did not eat many vegetables in the first place.

But the biggest health problems are due to eating too much highly processed, energy-dense, nutrient-poor food.

So worrying over losing some vitamin C every time you steam or stir-fry vegetables fades into insignificance when you consider that most in the developed world are not eating enough of these foods in the first place. An emphasis on eating mostly plants is indisputably good, be they raw or cooked.

More information: The meta-review is available online: cebp.aacrjournals.org/content/13/9/1422.long

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