Benefits of a Raw Vegan Diet?

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Claims

- Heating food above 118 degrees F. causes chemical changes that create acidic toxins, including the carcinogens, mutagens and free-radicals.
- Cooking destroys the live enzymes that aid in digestion and health.
- Fruit, vegetables and nuts are alkanizing.

Typical Foods for a Raw Vegan

- Fruit or vegetable smoothies and juices, filtered water
- Soaked and sprouted nuts and seeds
- Nut milks and oils
- Young coconut, shredded coconut, expeller pressed coconut oil.
- Salads, vegetable dishes, sprouts, fresh and dried herbs
- All kinds of seaweed, blue-green algae, chlorella
- Seeds: hemp, flax, pumpkin, sunflower, and others
- Crackers, breads, desserts made from nut flours, “nut cream,” seeds, occasionally buckwheat groats or oats
- Dehydrated vegetable chips ie kale
- Nutritional yeast, soy sauce, sea salt
- Date sugar, yacon syrup, lucuma powder, coconut sugar, stevia, raw organic agave, raw cacao

What a Raw Vegan Diet is...

- Comprised primarily vegetables, nuts, fruit, seeds.
- Never heated over 118 degrees
- Nutritionally- and phytochemically-dense
- All or mostly organic
- Free of additives, food dyes, preservatives
- Containing fats and proteins derived from nuts, seeds, and avocado.
And What It Isn’t…

- Inexpensive
- Processed
- Animal-based: no meat, fish, dairy, or eggs
- Gluten- or legume-based

Do Raw Vegan foods offer particular benefits?

Fewer Dioxins

Brassicas: Is Heating Harmful?

- Boiling cruciferous vegetables from 9-15 minutes resulted in 18-59% decreases in the total glucosinolate content of cruciferous vegetables.
- Cooking methods that use less water, such as steaming or microwaving, reduced glucosinolate losses in some vegetables.
- Some cooking practices, including boiling, steaming, and microwaving at high power can inactivate myrosinase, the enzyme that catalyzes glucosinolate hydrolysis.
- Even in the absence of plant myrosinase activity, the myrosinase activity of human intestinal bacteria results in some glucosinolate hydrolysis.
- Several studies in humans have found that inactivation of myrosinase in cruciferous vegetables substantially decreases the bioavailability of isothiocyanates.

Carotenoids: Is Heating Harmful?

- Heating improves bioavailability of lycopene from tomatoes.
- May be by breaking down cell walls, which weakens the bonding forces between lycopene and tissue matrix, thus making lycopene more accessible and enhancing the cis-isomerization.
- Processing, such as mechanical homogenization or heat treatment, has the potential to enhance the bioavailability of carotenoids from vegetables (from 18% to a sixfold increase).
- Carotenoids are best absorbed in the presence of fat.

Data on Raw Vegan Diet

- Very Limited!

Fibromyalgia

- Fibromyalgia syndrome improved using a mostly raw vegetarian diet: An observational study
  - The mean FIQ score (n = 20) was reduced 46% from 51 to 28.
  - 7 of the 8 SF-36 subscales, bodily pain being the exception, showed significant improvement (P < 0.01).
  - The QOLS (0 to 7), rose from 3.9 initially to 4.9 at 7 months (P < 0.000001).
  - Significant improvements (P < 0.03, paired t-test) were seen in shoulder pain at rest and after motion, abduction range of motion of shoulder, flexibility, chair test, and 6-minute walk.
  - 19 of 30 subjects were classified as responders, with significant improvement on all measured outcomes, compared to no improvement among non-responders.
  - At 7 months responders’ SF-36 scores for all scales except bodily pain were no longer statistically different from norms for women ages 45–54.
Quality of Life and Immune Markers

- Change in quality of life and immune markers after a stay at a raw vegan institute: a pilot study.
- 51 completed the questionnaire and 38 participants participated in the blood marker substudy.
- Overall QOL improved 11.5% (p=0.001), driven mostly by the mental component.
- Anxiety decreased 18.6% (p=0.009) and perceived stress decreased 16.4% (p<0.001).
- Participants’ ratings of the food’s taste were unchanged, but their ratings of how well they were taking care of themselves improved.
- CRP, lymphocytes, T cells, and B cells did not change significantly, but CD4, CD8, and NK cells decreased slightly.

Bone Mass and Vitamin D

- Low bone mass in subjects on a long-term raw vegetarian diet.
- 18 volunteers (54.2 +/- SD 11.5 years; M:F ratio, 11:7) on RF: mean of 3.6 years compared to age- and sex-matched group eating typical American diets.
- RF vegetarians had a mean +/- SD BMI of 20.5 +/- 2.3, compared with 25.4 +/- 3.3 in the control subjects.
- Mean bone mineral content and density of the lumbar spine (P=.003 and P<.001, respectively) and hip (P=.01 and P<.001, respectively) were lower in the RF group than in the control group.
- Serum C-telopeptide of type I collagen and bone-specific alkaline phosphatase levels were similar between the groups.
- Mean 25-hydroxyvitamin D concentration was higher in the RF group than in the control group (P<0.001).
- The mean serum C-reactive protein (P=.03), insulin-like growth factor 1 (P=.002), and leptin (P=.005) were lower in the RF group.
- A RF vegetarian diet is associated with low bone mass at clinically important skeletal regions but is without evidence of increased bone turnover or impaired vitamin D status.

Carotenoids

- Long-term strict raw food diet is associated with favourable plasma beta-carotene and low plasma lycopene concentrations in Germans.
- Dietary vitamin A, carotenoid intake, plasma retinol and plasma carotenoids were determined in 198 strict raw food diet adherents in a cross-sectional study.
- Raw food intake on average 95% total food (mainly fruits).
- Intake = 1301 retinol activity equivalents/d and 16.7 mg/d carotenoids.
- Plasma vitamin A status was normal in 82% of the subjects, with beta-carotene concentrations associated with chronic disease prevention in 63%.
- Fat contained in fruits, vegetables and nuts and oil consumption was a significant dietary determinant of plasma carotenoid concentrations.
- 77% of the subjects the lycopene status were below reference values for average healthy populations.
- Long-term raw food diet adherents showed normal vitamin A status with favorable plasma beta-carotene concentrations, but showed low plasma lycopene levels. Plasma carotenoids were predicted mainly by fat intake.

Vitamin B12

- Metabolic Vitamin B12 Status on a Mostly Raw Vegan Diet with Follow-Up Using Tablets, Nutritional Yeast, or Probiotic Supplements
- 49 subjects were tested. Most subjects (10th to 90th percentile) had followed raw vegan diet 23–49 months.
- 6 subjects had serum B12 concentrations <147 pmol/l (200 pg/ml). 37 subjects (76%) had serum B12 concentrations <221 pmol/l (300 pg/ml).
- 23 subjects (47%) had abnormal urinary methylmalonic (MMA) concentrations above or equal to 4.0 µg/mg creatinine.
- Sublingual cyanocobalamin and nutritional yeast, but not probiotic supplements, significantly reduced group mean MMA concentrations (tablet p < 0.01; yeast p <0.05, probiotic < 0.20). However, one formula of probiotic taken by a few participants did enhance B12 levels.
- Of particular concern because those eating a raw foods diet consume copious amounts of folic acid through raw greens, which can mask the macrocytic anemia associated with B12 deficiency.
**Pros**

- Eating copious amounts of fruit and especially vegetables offers substantial amounts of nutrients and phytochemicals.
- Reducing pesticide exposure and dioxins reduces toxic burden.
- Cutting most allergens from the diet allows immune system healing and rebalancing.
- Eating raw fermented foods allows replenishment of gut flora and healing of gut ecosystem.

**Cons**

- Raw foods may be more difficult to digest.
- Some phytochemicals are more potent after heating.
- Nut-heavy diet can be problematic for those allergic, or those sensitive to high consumption of oxalates.
- Certain proteins, fats, vitamins and phytochemicals may be low or deficient.

**Conclusions**

- Organic raw vegetables, sprouts, fruit and soaked nuts and seeds should comprise a part of a healthy diet (barring allergy).
- A temporary diet consisting only of raw fruits, vegetables, nuts and seeds may play a positive role in detoxifying and perhaps reversing symptoms of illness and improving sense of well-being.
- Over longer periods of time, people may benefit from a combination of raw and cooked foods, and for some, animal products such as grass-fed, organic meat or wild-caught fish.
References

- Chobtang et al. The Need and Potential of Biosensors to Detect Dioxins and Dioxin-Like Polychlorinated Biphenyls along the Milk, Eggs and Meat Food Chain. Sensors 2011, 11, 11092-11716

References