Difficult Dialogues Webinar Series
Approaching Vegetarianism and Veganism in Eating Disorder Recovery

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with Moderator
Caitlin A. Martin-Wagar, PhD

Vegetarianism/Veganism (V/V) Associations with Eating Disorders

- Previous research suggests a link between vegetarianism, broadly defined, and symptoms of eating disorders
- Demographics of veganism is similar to anorexia nervosa
  - Young, female, living in urban areas
- Veganism requires
  - Reading food labels, excluding foods based on ingredients
- Recent studies suggest multiple motivations for adopting a vegetarian diet
  - Hedonic preference
  - Ethical convictions
  - Environmental concerns
  - Autonomy
  - Religious beliefs
  - Health concerns
  - Weight control motivations

Zuromski KL, Witte TK, Smith AR, Goodwin N, Bodell LP, Bartlett M, Siegfried N. Increased prevalence of vegetarianism among women with eating pathology. Eating behaviors. 2015 Dec 1;19:24-7.
Zickgraf, Hana F., et al. "Examining vegetarianism, weight motivations, and eating disorder psychopathology among college students." *International Journal of Eating Disorders*53.9 (2020): 1506-1514.
Sergentanis, T. N., Chelmi, M. E., Liampas, A., Yfanti, C. M., Panagouli, E., Vlachopapadopoulou, E., ... & Tsitsika, A. (2021). Vegetarian Diets and Eating Disorders in Adolescents and Young Adults: A Systematic Review. *Children*, *8*(1), 12.
Fuller, S. J., & Hill, K. M. (2021). Attitudes toward veganism in eating disorder professionals. *BJPsych Bulletin*, 1-5.

What is the Eating Disorders and V/V Concern?

- Perfectionism, Orthorexia linked to OCD or lack of flexibility in choosing food which could lead to functional impairment, social isolation

- Desire to Eliminate food groups perceived as containing too many calories or fat-how to avoid? Some programs use a questionnaire that asks about inclusion of foods that will supply fats or help ensure adequate calories.

V/V Nutrition Concerns

- Lacto-ovo (consumes dairy & eggs)
  - Iron
  - Zinc
  - Iodine
  - Omega-3 fatty acids (if avoids fish)
- Pescatarian (consumes fish, often also consumes dairy & eggs)
  - Iron

Vegan Nutrition Concerns

- Protein
  - Amino acids
- Omega-3 fatty acids
- Iron
- Calcium
- Zinc
- Iodine
- B-12
- Vitamin D
- Calories

Enough Protein?

- Most V/V consume adequate protein
  - Associated with well balanced diets and adequate caloric intake
- Some vegans at risk for low protein intake
  - Associated with low caloric intake
- Protein quality
  - Plant foods contain all 20 amino acids & all 9 essential amino acids
  - Individual pant foods have "less than optimal" essential amino acid profile
  - Diets rich in legumes and grains meet protein and amino acid needs
    - Lysine low in grains
    - Methionine & cysteine low in legumes
  - Don't need to "combine" proteins at each meal
- Plant-based meat alternatives (PBMA) compared to animal products
  - Same calories
  - Lower in protein, calcium, potassium, magnesium, zinc, & Vitamin B12
  - Higher in sodium & fat

Mariotti, F., & Gardner, C. D. (2019). Dietary protein and amino acids in vegetarian diets—A review. *Nutrients*, *11*(11), 2661.
Tso, R., & Forde, C. G. (2021). Unintended consequences: Nutritional impact and potential pitfalls of switching from animal-to plant-based foods. *Nutrients*, *13*(8), 2527.

Omega 3's: Essential Fatty Acids

- Omega-3
  - ALA
    - Found in vegetable oils, soy, walnuts, flax seeds, chia seeds, hemp seeds
  - DHA, EPA
    - Seafood, seaweed, algae**, eggs, grass fed animals**
    - **Some conversion of ALA into DHA, EPA**
    - DHA and EPA supplements & fortified foods

Vitamins

- B-12
  - Only found in animal foods
  - Many processed vegan foods fortified with B-12
  - Deficiency masked or aggravated by high folate (abundant in vegetables)
  - Blood levels should be tested
- Vitamin D
  - Few food sources: fish, eggs, cheese, certain mushrooms
  - Many foods are fortified (cereals)
  - Blood levels should be tested
- Vitamin A, Riboflavin, Niacin (Kristensen, 2015)
  - Retinol found primarily in animal products
  - Riboflavin found in dairy and meat products
  - Niacin best sources are meat, fish, plant sources have poor bioavailability

Bakaloudi, Dimitra Rafailia, et al. "Intake and adequacy of the vegan diet. A systematic review of the evidence." *Clinical Nutrition* 40.5 (2021): 3503-3521.
Kristensen, Nadja B., et al. "Intake of macro-and micronutrients in Danish vegans." *Nutrition journal* 14.1 (2015): 1-10.

Minerals

- Iron
  - Low bioavailability of iron in plant-based foods (fortified breakfast cereals, oatmeal, raisins, blackstrap molasses, lentils, soy, beans, hempseed, sunflower sees, whole wheat bread, swiss chard, spinach)
  - Vitamin C in (raw fruits & vegetables) increases iron absorption in plant foods
  - Ferritin (measure of iron stores) lower in long-term vegans
    - Ferritin blood levels should be tested regularly
- Calcium
  - Low bioavailability in plant foods (figs, kale, soy, bok choy, broccoli, oranges, seeds, **fortified nut & soy milks**)
  - Higher incidence of fractures in vegans (Appleby, 2007)
  - Supplements associated with cardiovascular harm (Michos, 2021)
- Zinc
  - Plant foods low in zinc (beans, grains, nuts, seeds, tofu)
  - Phytates in beans and grains lower absorption
- Iodine
  - Plant foods very low in iodine except for seaweed-products
  - Iodized salt main source for vegans
- Phosphorus
  - Plant foods poor sources, low bioavailability
    - Best sources: peanuts, nuts, beans, grains
  - Lower levels found in vegans (Allès, 2017)
  - **Clinical concern in refeeding?**
- Potassium, Selenium (Bakaloudi, 2021)

Appleby, P., et al. "Comparative fracture risk in vegetarians and nonvegetarians in EPIC-Oxford." *European journal of clinical nutrition* 61.12 (2007): 1400-1406.
Michos, Erin D., et al. "Vitamin D, calcium supplements, and implications for cardiovascular health: JACC focus seminar." *Journal of the American College of Cardiology* 77.4 (2021): 437-449.. Allès, Benjamin, et al. "Comparison of sociodemographic and nutritional characteristics between self-reported vegetarians, vegans, and meat-eaters from the NutriNet-Santé study." *Nutrients* 9.9 (2017): 1023.Bakaloudi, Dimitra Rafailia, et al. "Intake and adequacy of the vegan diet. A systematic review of the evidence." *Clinical Nutrition* 40.5 (2021): 3503-3521.

Recommended for Vegetarians* & Vegans

Recommended Labs

- B-12
- Vitamin D
- Iron*
  - Hemoglobin (short term indicator)
  - Ferritin (long term indicator)
- No labs that indicate nutrition status
  - Omega-3 fatty acids**
  - Calcium
  - Iodine

Recommended Supplements

- Multi-vitamin & mineral
  - Additional calcium
  - Omega-3 fatty acids
- Individual supplements
  - B-12
  - Vitamin D
  - Iron
  - Calcium
  - Omega-3 fatty acids**
  - Iodized salt**

**Vegetarians that do not consume fish

V/V Nutrition Advice

- Wide variety of foods
- Focus on food mixtures: rice & beans, bread & beans, corn & beans, beans & seeds
- Adequate energy
- Infants, children, teens should be monitored closely for adequate calories, nutrients
  - High nutrient needs
  - Brain, bone, height development
  - Picky eating
- Plant proteins provide adequate amino acids if varied and energy needs met
- High fiber intake (excessive phytate) interferes with mineral absorption (calcium, zinc, iron)
- High vitamin C (fruits, raw vegetables) improve iron absorption
- Supplements
- Monitor nutrition status with regular lab assessments

Potential Nutrition Issues for V/V with ED

- Avoiding carbohydrates
- Avoiding legumes
- Avoiding nuts, oils
- Low calorie intake
- Low total protein intake
- Low energy density
- Excessive fullness
- Refusing supplements

Vegan Eating and Positive Health Outcomes

- In relation to BCAA metabolism, diabetes and insulin resistance

Circulating BCAAs are lower in people with a V/V eating pattern compared to omnivores. Higher plasma BCAAs has been linked to increased risk of insulin resistance in some populations.

- In relation to cardiovascular health, lipid profiles

Generally, risk factors such as high cholesterol, high c-reactive protein, high LDL are lower in the V/V population

- In relation to mental health and adherence to values.

Non adherence to one's values can be mentally challenging

Zachary Bloomgarden [1] Diabetes and branched-chain amino acids: What is the link? J Diabetes . 2018 May;10(5):350-352. doi: 10.1111/1753-0407.12645

Amany Elshorbagy,[1] Fredrik Jernerén,[2] Marianne Basta,[1] Caroline Basta,[1] Cheryl Turner,[2] Maram Khaled,[3] and Helga Refsum[2] Amino acid changes during transition to a vegan diet supplemented with fish in healthy humans. Eur J Nutr. 2017; 56(5): 1953–1962.

Unintended Outcomes with Meat Substitutes

- Many plant based meat alternatives (PBMA) are similar to animal products in calories, but lower in protein, calcium, potassium, magnesium, zinc and Vitamin B12 while being higher in sodium and fat after being prepared.
- Traditional vegan diets, or those that contained mainly legumes, nuts, seeds, soy products, grains were found to have adequate protein and all micronutrients except B12 and calcium.
- Vegan diets that contained more PBMA (novel vegan diets) provided adequate phosphorus and iron but had the lowest values for calcium, potassium, phosphorus, zinc and Vitamin B12.

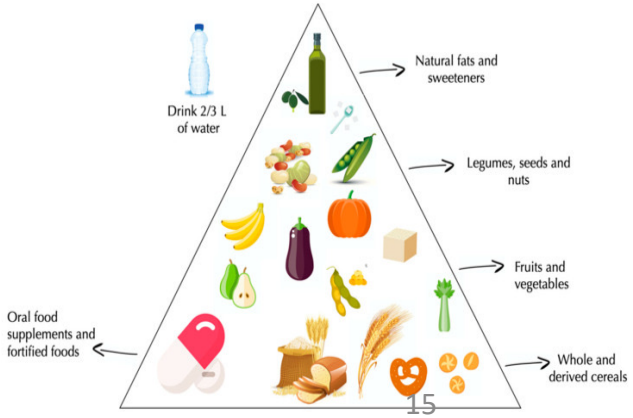
Rachel Tso[1] and Ciarán G. Forde. Unintended Consequences: Nutritional Impact and Potential Pitfalls of Switching from Animal- to Plant-Based Foods. Nutrients. 2021 Aug; 13(8): 2527.

Issues for Children & Adolescents

- High nutrient needs to promote growth and development
- Bone, height development-data to follow
- Picky eating-not being able to eat the variety needed to make a vegan diet adequate
- Parental knowledge & tolerance of vegan nutrition-what if the V/V diet and cooking feels too foreign to parents or they are unaccepting of it?

Giulia Marrone,[1,2,*] Cristina Guerriero,[1] Daniela Palazzetti,[1] Paolo Lido,[1] Alessandro Marolla,[3] Francesca Daniele,[1,2] and Annalisa Noce[1] Vegan Diet Health Benefits in Metabolic Syndrome. Nutrients. 2021 Mar; 13(3): 817

Stine Weder[1,2], Morwenna Hoffmann[3], Katja Becker[4], Ute Alexy[5], Markus Keller[6] Energy, Macronutrient Intake, and Anthropometrics of Vegetarian, (1–3 Years) in Germany (VeChi Diet Study) Nutrients . 2019 Apr 12;11(4):832.



Comparison of Vegetarian & Vegan Children to Omnivore Children

- **Vegetarian**

Higher gluteal/femoral fat mass but similar lean body mass and total body fat.

Lower total bone mineral

Lower total cholesterol, HDL, and serum B-12 and 25-hydroxyvitamin D [25(OH)D] without supplementation.

Higher glucose, VLDL, and triglycerides.

- **Vegan**

Lower fat mass in all regions but similar lean mass.

Lower total bone mineral

Vegans were shorter

Lower total LDL and HDL, high-sensitivity C-reactive protein, iron status, and serum B-12 and 25(OH)D without supplementation

Higher homocysteine and mean corpuscular volume.

Vitamin B-12 deficiency, iron-deficiency anemia, low ferritin, and low HDL were more prevalent in vegans, who also had the lowest prevalence of high LDL. Supplementation resolved low B-12 and 25(OH)D concentrations.

Małgorzata A Desmond, Jakub G Sobiecki, Maciej Jaworski, Paweł Płudowski, Jolanta Antoniewicz, Meghan K Shirley, Simon Eaton, Janusz Książyk, Mario Cortina-Borja, Bianca De Stavola, Mary Fewtrell, and Jonathan C K Wells Growth, body composition, and cardiovascular and nutritional risk of 5- to 10-y-old children consuming vegetarian, vegan, or omnivore diets. Am J Clin Nutr. 2021 Jun; 113(6): 1565–1577

Choice, Shared Decisions and Bias in Health Care

- Children/adolescents vs adults
- Shared Decision Making
- Informed choice. Why important?
- Who is bothered by another's choice? (case study)
- What do clinicians bring into the room? What are our personal feelings about any of these dietary preferences?

- Emily F. Boss, MD MPH,[1] Nishchay Mehta, BSc MBBS MRCS DOHNS,[2] Neeraja Nagarajan, MD MPH,[3] Anne Links, MS MHS,[1] James R. Benke, BS,[1] Zackary Berger, MD PhD,[4] Ali Espinel, MD,[5] Jeremy Meier, MD,[5] and Ellen A. Lipstein, MD MPH. Shared decision-making and choice for elective surgical care: A systematic review. Otolaryngol Head Neck Surg. 2016 Mar; 154(3): 405–420. Published online 2015 Dec 8. doi: 10.1177/0194599815620558

Reasons Not to Honor Choices

- This author states that, in practice, there are three main reasons why a patient may be refused his or her treatment of choice.
- First, the doctor regards the treatment as worse than no treatment at all, and doctors are not obliged to give treatments which they think will be detrimental to their patients.
- Second, what the patient wants is futile, that is, the treatment is ineffective.
- Third, what the patient wants, whilst effective for him or her, is not cost-effective for the health service or the opposite situation may hold.
- How does vegetarianism fit into these considerations?

Zolkefli. Evaluating the Concept of Choice in Health Care. Malays J Med Sci. 2017 Dec; 24(6): 92–96.

Program Considerations

- Both The Emily Program and Veritas Collaborative work with vegetarians and vegans at all levels of care, across inpatient, residential, PHP, IOP, and outpatient.
- Statement from The Emily Program and Veritas Collaborative: Our position is that those who enter care with a vegetarian diet based on religious, cultural, or familial heritage have this dietary preference taken at face value and are provided an eating plan accommodating vegetarian or vegan eating styles.
- Those who come to our care having made a shift away from their family table or cultural origin toward vegetarianism or vegan diets, are met where they are and the choice of a vegetarian/vegan lifestyle is explored as a therapeutic area of interest within the eating disorder care.
- Thanks again for the invitation to contribute a perspective!
- From Jillian Lampert, PhD, RD, LD, MPH, FAED, Chief Strategy Officer of Accanto Health, Shena Washburn, RDN, CD, CEDRD, Director of Nutrition and Culinary Services, Leah Graves, RDN, LDN, honCEDRD-S, FAED, Vice President of Nutrition and Culinary Services for Accanto Health which includes The Emily Program and Veritas Collaborative, 2022.

Strategies Used by The Emily Program and Veritas Collaborative

- In the interest of tolerance and volume, it is not unusual for our dietitians to inquire about suspending a vegan approach and replacing it with a lacto-ovo vegetarian approach for individuals who are significantly weight suppressed and need substantial energy for their healing and recovery.
- While our limited feeding literature does emphasize the need for energy/nutrient dense selections during the rehabilitation process, taking a “position” against veganism or vegetarianism does not seem therapeutic or practical. Rather, it is grist for the mill.
- Clients often make a shift when they explore their motivations and face the reality of the volume and effort needed to adequately nourish and engage in restorative and then social eating as a vegan or vegetarian.
- For clients who are vegan or have complex allergies and need supplementation and/or replacement, we utilize Kate Farms Nutrition Shake (1.06 kcal/mL) or Orgain Nutrition Shake (0.75 kcal/mL).

Program Considerations

- Tammy Beasley from Alsana has developed a questionnaire for clients who identify as V/V. The questions focus on reasons for the V/V choice and also seek to honor individual choice.
  - Alsana “Statement” about the treatment of ED clients who follow a vegan lifestyle:

- Our evidence-based vegan programming is based on over 1 ½ years of collaborative planning and is integrated into all five dimensions at all levels of care.
- We believe that it is our responsibility and privilege to provide a safe supportive place to guide vegan clients in discovering if and how their eating disorder overlaps with veganism and how to fully recover in both circumstances.
- Nutrition, medical and therapeutic assessments have been created specifically for vegan clients and are monitored and re-assessed throughout the recovery process.
- For a client to participate in our vegan program, they must be consistently practicing veganism for 6 months prior to admission with confirmation from the outpatient treatment team, as a client cannot decide to be vegan while in treatment.
- **Tammy Beasley, MS, RDN, CEDRD-S, CSSD Vice President of Clinical Nutrition Services**

Client Conversations

- **Client Conversations Related to the "Vegan Food Beliefs Questionnaire":**
- If client refuses to eat the vegan version of what everyone else is eating (Ex: refuses to eat vegan ice cream when all others are eating regular ice cream):
  - *"Might this be your eating disorder making the decision vs your ethics?"*
- If client is having cravings for non-vegan foods:
  - *"Do you want to explore this together?"*
  - *"Do you want to work through these cravings to reduce feelings of restriction to achieve true food freedom?"*
    - § May present the opportunity to put vegan choices on back burner while making peace with all foods, including non-vegan choices
      - Choose to eat the non-vegan food now
      - Return later to veganism once food freedom embraced
    - § OR make peace with the craving by having a VEGAN version of the non-vegan food (vegan hamburger if craving hamburgers; vegan cookie if craving cookies)
- If client is avoiding/fearful of vegan cheese, vegan meats, vegan "fun foods":
  - This is a RED FLAG indicating enmeshment with eating disorder vs pure ethical motives
  - Challenge as you would any unsafe/fear food
- Explore all the reasons for being vegan:
  - *"What are all the reasons you have chosen a vegan lifestyle?"*
  - *"What are you hoping to achieve by following a vegan lifestyle?"*
- When active in eating disorder behaviors:
  - *"Are my desires coming from my TRUE INTERNAL self?"*
  - *"Is my ED finding its way out through my behaviors?"*

- Thank you Tammy Beasley and Alsana for sharing

Working with Our V/V Patients

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Working with our V/V Patients

Marcia

- Take home messages
  - Respect choices, curiosity, lack of personal bias
    - In Britain protected by law as non-religious philosophical belief (Gayle, 2020)
  - Treat collaboratively
  - Be knowledgeable
  - Situational V/V
    - Grandma's house
    - Lifesaving or health improvement
  - Advise parents of children & adolescents to consider prohibiting adoption of V/V
    - Maximize health & development

Therese

- Take home messages
- Explore reasons for a person making the choice to exclude animal products from their diet.
- Realize people can eat adequately using a V/V plan.
- Consider a trial period where you “Root Out the ED” Have definite boundaries that delineate when to move from a V/V diet.
- In working with children and families, explore parent’s attitudes about V/V and whether or not this will allow the child to be able to eat adequately.

Fuller, S. J., & Hill, K. M. (2021). Attitudes toward veganism in eating disorder professionals. *BJPsych Bulletin*, 1-5. Gayle, D. (2020). Ethical Veganism is a Belief Protected by Law, Tribunal Rules. *The Guardian*. The Royal College of Psychiatrists, The British Dietetic Association, BEAT. Consensus Statement on Considerations for Treating Vegan Patients with Eating Disorders. The Royal College of Psychiatrists, 2019 (https://www.rcpsych. ac.uk/docs/default-source/members/faculties/eating-disorders/vegan- patients-eating-disorders-mar19.pdf?sfvrsn=be96d428_2).

Questions & Discussion

with Moderator

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