Orthorexia Nervosa: Pathologically Healthful Eating vs Pathologizing Healthy Habits

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17 year old sufferer of Tanorexia
Objectives

1. Review the history of Orthorexia (ON).
2. Current state of the scholarship in ON will be discussed.
3. Risk factors will be presented.
4. Treatment and therapeutic considerations will be discussed.

A new term: Orthorexia

First described by a physician in a yoga magazine in 1997.

Bratman (1997) coined the term “orthorexia nervosa” to describe people whose extreme diets-intended for health reasons-are in fact leading to malnutrition and/or impairment of daily functioning.

His first book was in 2000.
Two Stages of Orthorexia

The first is innocent, choosing to eat a healthy diet.

The second involves an intensification of that pursuit into an unhealthy obsession. (Bratman, 2017)

- Patients were inadvertently harming themselves psychologically through excessive focus on food.

Pathology?

Is Orthorexia equivalent to being a vegan (Bill Clinton) or raw foodist (Gandhi).

Backlash from vegans and Paleo dieters against Orthorexia
When does “health foodism” become pathological?

It becomes pathological in the **second stage**:
- Obsessive thinking
- Compulsive behavior
- Self-punishment
- Escalating restriction (Bratman, 2017)

**Symptoms**

Concerned by the **quality** of food as opposed to **quantity**.

Spending considerable time scrutinizing the source (e.g. whether vegetables have been exposed to pesticides, hormones in cow milk).

Do labels provide enough nutritional information?

Outside meals become programmatic, researching and cataloging food.
Symptoms

Feelings of guilt when deviating from strict diet guidelines
Increase in amount of time spent thinking about food
Regular advance planning of meals for the next day
Feelings of satisfaction, esteem, or *spiritual fulfillment* from eating “healthy”
Thinking critical thoughts about others who do not adhere to rigorous diets

Symptoms

Fear that eating away from home will make it impossible to comply with diet
Distancing from friends or family members who do not share similar views about food
Avoiding eating food bought or prepared by others
Worsening depression, mood swings or anxiety
Worsening of Symptoms

Obsessive concern over the relationship between food choices and health concerns such as asthma, digestive problems, low mood, anxiety or allergies

Increasing avoidance of foods because of food allergies, without medical advice

Noticeable increase in consumption of supplements, herbal remedies or probiotics

Worsening of Symptoms

Drastic reduction in opinions of acceptable food choices, such that the sufferer may eventually consume fewer than 10 foods.

Irrational concern over food preparation techniques, especially washing of food or sterilization of utensils.
Pivotal Points in ON

Donini et al.

- 2004 publish the first journal article on ON, “maniacal obsession” in the pursuit of healthy foods. OCD?
- Sample of 404 Italians
- 6.9% prevalence using Ortho-15

2005: Ortho-15

“Do you think that consuming healthy food may improve your appearance?”

“Are your eating choices conditioned by your worry about your health status?”

“Does the thought about food worry you for more than 3 hours per day?”

“At present, are you alone when having meals?”

4 point scale for 40 points
### Pivotal Points in ON

Case studies started appearing

- Zamora et al. (2005) – 28 F, BMI 10.7 after being told to eliminate fats from her diet to control acne
- Park et al. (2011) 30 M restricted diet to 3-4 spoons of brown rice to treat a tic disorder
- Saddichha et al. (2012) 33 F, BMI 14.5, with an obsession with healthful eating
2013 First Diagnostic Criteria

Jessica Setnick publishes proposed orthorexia criteria.

Pathological preoccupation with nutrition and diet far beyond that which is necessary for health, and undue influence of diet on self-evaluation.

- Phobic avoidance of or response to foods perceived to be unhealthy
- Severe emotional distress
- Persistent failure to meet nutritional needs
- Insisting of health benefits of diet despite contrary evidence
- Marked interference with social functioning

2013 Orthorexia criteria exclusions

1. Not the result of a lack of available food or a culturally sanctioned practice.

2. The individual endorses a drive for health or life extension rather than a drive for thinness.

3. The eating disturbance is not attributed to a medical condition or another disorder such as anorexia nervosa, bulimia nervosa or obsessive-compulsive disorder.
2014 The Blonde Vegan

“The Blonde Vegan” in 2014 surprised her 70,000 Instagram followers by admitting that she suffered from an eating disorder that was not based on the quantity of her food intake, but its quality (Pfeffer, 2014). Younger discussed she was suffering from malnutrition.

2015 becomes “The Balanced Blonde”

2015: 1st Peer related journal article in the US

Case Study

28 year old male with three years of reduced nutritional intake.

Limited to self-made “protein shakes” that included only pure amino powders.

Commercial shakes had “unnecessary fillers”

BMI of 12.3

Body was a “temple” and his diet was “pure building blocks” for his health.
TABLE 2. Proposal Orthxia Nervosa Diagnostic Criteria

Diagnostic criteria

Criterion A. Obsessional preoccupation with eating “healthy foods,” focusing on concerns regarding the quality and composition of meals. (Two or more of the following):
• Consuming a nutritionally unbalanced diet owing to preoccupying beliefs about food “purity.”
• Preoccupation and worries about eating impure or unhealthy foods and of the effect of food quality and composition on physical or emotional health or both.
• Rigid avoidance of foods believed by the patient to be “unhealthy,” which may include foods containing any fat, preservatives, food additives, animal products, or other ingredients considered by the subject to be unhealthy.
• For individuals who are not food professionals, excessive amounts of time (e.g., 3 or more hours per day) spent reading about, acquiring, and preparing specific types of foods based on their perceived quality and composition.
• Guilty feelings and worries after transgressions in which “unhealthy” or “impure” foods are consumed.
• Intolerance to other’s food beliefs.
• Spending excessive amounts of money relative to one’s income on foods because of their perceived quality and composition.

Criterion B. The obsessional preoccupation becomes impairing by either of the following:
• Impairment of physical health owing to nutritional imbalances, e.g., developing malnutrition because of an unbalanced diet.
• Severe distress or impairment of social, academic, or vocational functioning owing to obsessional thoughts and behaviors focusing on patient’s beliefs about “healthy” eating.

Criterion C. The disturbance is not merely an exacerbation of the symptoms of another disorder such as obsessive-compulsive disorder or of schizophrenia or another psychotic disorder.

Criterion D. The behavior is not better accounted for by the exclusive observation of organized orthodox religious food observance or when concerns with specialized food requirements are in relation to professionally diagnosed food allergies or medical conditions requiring a specific diet.

Moroze Criteria (2015)

Pursuing a nutritionally unbalanced diet owing to preoccupying beliefs about purity
Preoccupation and worry about eating impure/ unhealthy food
Rigid avoidance of food
Excessive amounts of time preparing foods (3 or more hours per day)
Guilt and feelings of worries following transgressions
Intolerance of others food beliefs
Spending excessive amounts of money related to income on food
-Impairment of physical health related to nutritional imbalances
Distress in social/academic/vocational functioning
Moroze Criteria (2015)

Moroze et al. 2015 criteria do acknowledge an obsessive-compulsive feature thought to be present in the condition. The criteria do not address the role of weight loss in orthorexia.

Dunn et al. (2016)

No studies of ORTO-15 in mainstream US journal
Is the ORTO-15 culturally biased?
Does the ORTO-15 actually capture pathologically healthful eating?
Dunn & Bratman (2016)

4.1.1. Criterion A
- Observing focus on “healthy” eating, as defined by a dietary theory or set of beliefs whose specific details may vary, marked by exaggerated emotional distress in relationship to food choices perceived as unhealthy; weight loss may emerge as a result of dietary choices, but this is not the primary goal. As evidenced by the following:

1. Compulsive behavior and/or mental preoccupation regarding affirmative and restrictive dietary practices believed by the individual to promote optimum health.
2. Violations of self-imposed dietary rules cause exaggerated fear of disease, sense of personal impurity and/or negative physical sensations, accompanied by anxiety and shame.
3. Dietary restrictions escalate over time, and may come to include elimination of entire food groups and involve progressively more frequent and/or severe “cleanses” (partial fasts) regarded as purifying or detoxifying. This escalation commonly leads to weight loss, but the desire to lose weight is absent, hidden or subordinated to devotion about healthy eating.

4.1.2. Criterion B
- The compulsive behavior and mental preoccupation become clinically impairing by any of the following:
1. Malnutrition, severe weight loss or other medical complications from restricted diet.
2. Intrapersonal distress or impairment of social, academic or vocational functioning secondary to beliefs or behaviors about healthy diet.
3. Positive body image, self-worth, identity and/or satisfaction excessively dependent on compliance with self-defined “healthy” eating behavior.

What is the Prevalence?

Epidemiology of orthorexia is shaped by the sensitivity of assessment measures.
No thoroughly vetted measure
Estimates from 6.9% to 57.6% in the general population
State of ON Literature in 2016

<table>
<thead>
<tr>
<th>Study</th>
<th>Prevalence rate (%)</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domini et al. (2006)</td>
<td>4.9</td>
<td>Italy</td>
</tr>
<tr>
<td>Bozi et al. (2007)</td>
<td>45.5</td>
<td>Turkey</td>
</tr>
<tr>
<td>Alexoydan and Cenci (2009)</td>
<td>56.6</td>
<td>Turkey</td>
</tr>
<tr>
<td>Fidan, Erdem, Ziyak and Kuprun (2010)</td>
<td>43.6</td>
<td>Turkey</td>
</tr>
<tr>
<td>Rainaacciotti et al. (2011)</td>
<td>57.6</td>
<td>Italy</td>
</tr>
<tr>
<td>Alvarenga et al. (2012)</td>
<td>87.0</td>
<td>Brazil</td>
</tr>
<tr>
<td>Segura-Garcia et al. (2012)</td>
<td>Men: 28. Women: 30</td>
<td>88.5</td>
</tr>
<tr>
<td>de Souza and Rodrigues (2014)</td>
<td></td>
<td>Brazil</td>
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<tr>
<td>Varga et al. (2014)</td>
<td>74.2</td>
<td>Hungary</td>
</tr>
<tr>
<td>Valera, Ruiz, Valkepesoa, and Viscoli (2014)</td>
<td>86</td>
<td>Spain</td>
</tr>
<tr>
<td>Aul and Senacchio (2015)</td>
<td>41.9</td>
<td>Turkey</td>
</tr>
<tr>
<td>Blytto-Matera, Domini, Kupa, Peggioglia, and Hay (2015)</td>
<td>Mer: 43.2 Women: 68.6</td>
<td>Poland</td>
</tr>
<tr>
<td>Cibec et al. (2015)</td>
<td>59</td>
<td>Poland</td>
</tr>
<tr>
<td>Jerez et al. (2015)</td>
<td>30.7</td>
<td>Chile</td>
</tr>
<tr>
<td>Mindlach et al. (2015)</td>
<td>60.1</td>
<td>Austria</td>
</tr>
<tr>
<td>Stockel et al. (2015)</td>
<td>Study 1: 53.7 Study 2: 52.6</td>
<td>Poland</td>
</tr>
<tr>
<td>Segura-Garcia et al. (2015)</td>
<td>Clinical: 28 Control: 6</td>
<td>Italy</td>
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Criticisms of (ORTO-15) Domini et al. 2005

ORTO-15 not based on diagnostic criteria.
Their items were taken from Bratman’s book, then translated into Italian.
Italian study with items then translated back in English for publication.
Based on a US culture of eating, but repeatedly administered in other countries.
Orthorexia has largely gone unnoticed in the North America literature. Much of the early research is flawed, particularly prevalence studies indicating absurdly high percentages of ON sufferers. Dunn’s research suggests that ON’s true prevalence rate is about 1%. ON is a distinct condition that is separate from AN and ARFID. ON shares common features with AN, including individuals who have significant OC traits, fear/anxiety, and severe lack of insight.

**N = 275**
College students in Northern Colorado

**ORTO-15**

Additional questions to target impairment:
- Is healthy eating important
- Diet healthier than others
- Diet has led to health problems
- Diet has led to conflict with friends/family
- In/been in treatment for an ED?

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"Strongly Agree" "Agree" "Neither Agree nor Disagree" "Disagree" "Strongly Disagree".

1. Healthy eating is among the most important things in my life.
2. Food can be used to treat medical problems.
3. There was a time where I either threw up or choked on food and I changed my diet.
4. It seems that other people eat healthier than I do.
5. My friends or family have worried that I am not eating enough.
6. I make dietary choices based on what I believe is healthy, rather than on what will make me become (or keep me) skinny.
7. There are health benefits to a dietary cleanse or detox (restricting intake to a specific food for a period of time).
8. I have made significant changes to my diet after a medical procedure.
9. It seems that I spend time thinking about my diet when I do not intend to.
10. Other people get frustrated about my dieting.
11. Compared to other people, I spend more time preparing meals.
12. When eating out, I get anxious about whether there will be food there that I can eat.
13. Often, restaurants cannot meet my dietary needs.
14. When it comes to eating, I like trying new things.
15. Over time, I have narrowed down what kinds of food that I will eat.
16. Not following my diet can have significant effects on my health.
17. I feel ashamed if I am unable to follow my diet.
18. I get upset if my food is not prepared to meet my needs.
19. I have specific rules to follow when it comes to my diet.
20. It is more important to be skinny than healthy.
21. It is important to be flexible about your diet; it is OK to sometimes eat things you should not.
22. I have noticed a change in my energy level after making a change in my diet.
23. The only thing that is keeping me healthy right now is following a strict diet.
24. Following my diet has caused problems for me at work or school.
25. Dieting has caused me to have medical problems.
26. I have had to give up certain diet after it caused medical complications.
27. Social media (such as Twitter, Instagram, Facebook, etc.) keep me up to date on effective means to have a healthy diet.
28. People come to me for advice on how to have a healthy diet.
29. Among the most important things to me is having a healthy diet.
30. Following my diet has caused problems for me with my friends or family.
Dunn et al. (2019)

N= 354
Clinical and non-clinical settings were administered the EAT-26
ON had a mean EAT-26 score of 30.89
ON- very high score on Diet subscale. consistent with what we think that we know about pathologically healthful eating, in that these individuals can develop malnutrition based on rigid rules about dieting.
ON group scored higher than the BN group on the Bulimia and Food Occupation subscale.
ON group had a higher Oral Control score than the Control group, but not when compared with the other clinical groups. This may reflect the restricting nature of pathologically healthful eating.

ON is deserving its own diagnostic entry?

Vandereychken et al. 2011- 67% of professionals working with eating disorder clients observed the phenomenon in their clinical practice, and 69% felt the disorder needed greater attention.
Treatment Considerations: Orthorexia Nervosa

Obstacles and Barriers to Treatment
High Risk populations: Males, Athletes, etc.
Differences in Treatment Approaches of Anorexia, OCD vs. Orthorexia
Obstacles to Treatment

Limited research, case and cross-sectional studies

These patients historically do not present for treatment.

Society praises individuals for “healthy eating.”

These patients may proudly discuss their dietary practices and see themselves as morally superior.

Obstacles to Treatment

These patients have a deeply held ideology, as discussed by Lindeman et al., ideologies provide structure and order to one’s life, reducing anxiety by providing a means to exert control over the environment.

Can experience beliefs as highly spiritual.
Risk Factors

Dr. Bratman (2016, IAEDP) described risk factors for orthorexia:

Adoption of a highly restrictive dietary theory. (Pt w/ 3y.o.)

Parents who place undue importance of healthy food.

Risk Factors

Childhood illness involving diet and/or digestive issues.

Medical problems that can’t be addressed by medical science. Special diet for acne?

Traits of perfectionism, OCD, and extremism.

Fear of disease.

Chronic illness: Lyme’s disease, no sugar, gluten or diary, Fibromyalgia no fats, processed foods, or fried foods
High Risk Populations, sparse research, psychometric limitations

Women
Men are emerging as high risk population
Adolescents
Athletes (body builders, ballet dancers)
Yoga practitioners (86% Valera et al, 2014)

High Risk Populations, sparse research

Physicians
Medical students
Dietitians (81.9% de Souza & Rodrigues, 2014)
Performance artists (Opera singers, sympathy orchestra musicians)
Orthorexia and Males

Increase trends in males exhibiting orthorexia.

Research demonstrates orthorexia in men shows a positive correlation with age and weight suggesting that as men age, so may emphasis on health and wellness (Aksoydan & Camci, 2009). (USA Today article)

Desire to prevent or treat illness and adopt “healthy behaviors.”

Orthorexia and Males

Being overweight or obese can result in a possible case of orthorexia.

Heightened social focus on men in the media.

Research indicates that orthorexia is occurring within younger males maintaining lower weight status, and a previously existing risk for an eating disorder.
Orthorexia and Athletes

Athletes have shown increased rates of orthorexia

Higher prevalence amongst males

Competitive athletes know the critical role nutrition plays in enhancing performance and recovery, reaching ideal body weight, shaping the body and preventing physical injuries leading to greater control over their diets.

Orthorexia and Athletes

30% of men and 28% of women in a variety of sports, such as running, swimming, and basketball were found to have orthorexia

Many athletes will follow a strict clean-eating diet while training and in-season to reach or maintain a specific body size or shape.

Athletes are more susceptible to orthorexia because of the desire to have a healthier body, to gain a more athletic body, or for optimal sports performance.
Differences between Orthorexia and Anorexia

<table>
<thead>
<tr>
<th>Anorexia</th>
<th>Orthorexia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Largest difference is the motivation for disordered eating.</td>
<td>Individuals adopt eating habits given a desire to be healthy, natural, or pure.</td>
</tr>
<tr>
<td>Anorexia- are preoccupied with body image and fear of obesity</td>
<td>Entertaining, unrealistic, if not magical, beliefs about foods.</td>
</tr>
<tr>
<td>Altering their eating patterns in order to lose weight</td>
<td>Tend to flaunt their behaviors</td>
</tr>
<tr>
<td>Tend to hide their behaviors</td>
<td>Lack of obsession about physical appearance (?)</td>
</tr>
<tr>
<td>Can feel shame with their disorder</td>
<td>Lack of body image disorder (?)</td>
</tr>
</tbody>
</table>

Orthorexia Treatment

1. Treatment- therapy approaches and strategies
2. Medical and Medication Management
3. Dietary Management
Treatment and Management

To date, there are no studies of treatment effectiveness for orthorexia.

Costa et al 2017- completed a literature review from 2000-2016, yield 15 studies, “pronounced deficit in research.”

Ideal intervention involved a multidisciplinary team that includes physicians, psychotherapists, and dietitians.

Reviewing reasons why patients may present:

- Guilt and self-loathing when they commit to transgressions
- Chronic worry about imperfection and no optimal health
- Desire self-punishment
- Social isolation, family pressures
Treatment: 9 Guidelines

Interventions should be individualized based on the symptoms that are prominent for a given patient.

1. Consistency and structure

Having consistency in my schedule

Having a meal plan, writing down commitments, adding a variety each day/week

Hierarchy of challenging foods (systematic desensitization)

Setting small, measurable obtainable goals
Treatment: Consistency & Structure

Patients with orthorexia have endless environmental triggers. Can be a challenge for clinicians, as the patient is often bombarded with messages that may contradict what is helpful in regards to their recovery. Helping them identify triggers.

2. Reaching out for support

Continuing in outpatient treatment, having a comprehensive treatment team.

Taking my medications- ON patients highly resistant

Making new friends, current friends my reinforce it

Joining groups or clubs
Importance of Team: Dietary Management

- Assessment of on how much time in the day do you spend preparing or planning your meals?
- Is your eating style different when you are alone vs with family or friends?
- Do you have high levels of shame and guilt around eating?
- Is your eating style supportive of your lifestyle or has it taken over your life?

(Based on Setnick, 2018)

Importance of team: Dietary Management

There is always research that these individuals can cite to back up their beliefs.

Psychoeducation about empirically-validated dietetic science may help disabuse orthorexia patients of false food beliefs. Can cause significant emotional upheaval.

Weight and nutritional restoration
Importance of Team: Dietary Management

Avoid specific grocery stores, restaurants, brands of food

These patients typically will avoid drinking Boost or Ensure while in treatment due to “chemicals”

<table>
<thead>
<tr>
<th>Wheat and other grains</th>
<th>Carbohydrates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anything processed</td>
<td>Salt/Sodium</td>
</tr>
<tr>
<td>High caloric foods</td>
<td>Corn</td>
</tr>
<tr>
<td>Sugar (especially “refined sugar”)</td>
<td>Fiber</td>
</tr>
<tr>
<td>High fructose corn syrup</td>
<td>Glutten (increase of 64% since 2012)</td>
</tr>
<tr>
<td>Caffeine</td>
<td>Processed drinks</td>
</tr>
<tr>
<td>Yeast</td>
<td>Daily vitamins</td>
</tr>
<tr>
<td>Fat</td>
<td>Dairy</td>
</tr>
<tr>
<td>Protein</td>
<td>Medications</td>
</tr>
<tr>
<td>Coffee</td>
<td>Artificial and flavors</td>
</tr>
<tr>
<td>Alcohol</td>
<td>Animal products (vegan cheese sticks up 22.7%)</td>
</tr>
</tbody>
</table>
Treatment: Dietary Management

Treatment goals should focus not only on what patients eat but also how they shop for, prepare, and feel about the food they consume.

Exposure and response prevention, potentially in conjunction with habit reversal training may be most successful.

Importance of Team: Medical

Research indicates increased risk for anemia, malnutrition, loss of menses, heart failure, weight loss, osteopenia and other medical consequences. (Bartina, 2007)

Severe hyponatremia (low sodium)
Hypokalemia (low potassium)
Metabolic acidosis (too much acid in the body)
Subcutaneous and mediastinal emphysema (gas in layer under the skin, pocket of air surrounding the heart)
Pancytopenia (low levels of all types of blood cells) (Park et al. 2011)
Importance of Team: Medications

Orthorexic individuals often reject pharmaceuticals as “non-natural” substances.

Serotonin reuptake inhibitors have been found to be helpful (Mathieu, 2005).

Others have successfully used antipsychotics such as olanzapine to decrease the obsessive nature of magical food-related thinking (Moroze, Dunn, Holland et al. 2014).

3. Sharing my story

Sharing orthorexia behaviors with support system (ED auto)

Discuss resistant to sharing story:

Shame, fear, guilt?

“Want to keep doing what I am doing and don’t want to be stopped, can’t know my tricks.”
Sharing my story: Family Therapy

Social isolation—there are social ramifications for orthorexia.

Research indicates these individuals often are negatively perceived by their peers (Nevin & Vartanian, 2017)

Friends and family stop inviting them to events, feel judged by them and conflict can arise.

Family conflict can often be a reason for seeking treatment—managing a rigid diet leads to scrutiny of other’s choices and lifestyles. Family may embrace it?

4. Being Honest

1. 24 Hour Honesty Rule
2. Pick an accountability person
   - Identifying Triggers
   - What if choose to not follow my meal plan?
4. Learning from mistakes
5. Social Media

Facebook
Instagram
Recovery Blogs
Recovery Apps
“Connections with people that understood my issues”
22 “Healthy Lifestyle” Study

Social Media Triggers

Turner and Lefevre 2017 – examined social media use with 680 social media users following health food accounts.

High Instagram use was associated with greater tendency towards orthorexia, with no other social media channel having this effect. Healthy Eating community on Instagram has a high prevalence of orthorexia tendencies (i.e., Clean Eating Alice)
6. Service

Bolster self-esteem with service!

Creating meaning in my life through service.

Volunteering my time

Forcing myself to be out of my comfort zone

Realizing that I had value and could contribute to others.

7. Unhealthy Environment

Family members eating clean

Roommates with eating disorders

Keeping clean eating friends

Working in unhealthy setting (i.e. vegan food truck)
8. Spirituality

For patients with ON, finding “purity” in other areas since clean eating can become spiritual for them

Discovering passions and interests

Exploring spirituality

Going to church

Improving relationship with higher power

9. Self Care

Making/scheduling time for myself

Caring for my own needs before others

Journaling, affirmations & gratitude statements

Learning to love myself

Relaxation training may assist with pre- and postprandial anxiety.