



# The Dark Side of Healthy Diets: A Study on Orthorexia Nervosa, Nutrient Toxicity, and Diet Trends

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## Abstract

Healthy food is often heralded as the cornerstone of achieving and maintaining optimal health. However, this widely accepted notion does not always hold true in practice, as there are significant risks associated with the overconsumption of healthy foods or their consumption under certain conditions. This research delves into the various health risks that can stem from an otherwise healthy diet, particularly when it leads to nutritional imbalances, potential organ damage, and psychological issues such as Orthorexia Nervosa a condition characterized by an obsessive focus on healthy eating. Through an extensive review of the relevant literature, this study critically evaluates the side effects associated with diets that are considered healthy but lack balance. It also investigates the long-term consequences of adhering to popular diet trends that, without proper medical guidance, may inadvertently cause harm rather than promote health. The findings underscore the necessity of a balanced and individualized approach to diet, as well as the importance of comprehensive nutritional education to mitigate the adverse effects of dietary habits perceived as healthy.

**Keywords:** Orthorexia Nervosa, nutritional imbalances, flavanol toxicity, diet trends.

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## 1. Introduction

Kidney The concept of healthy eating has become deeply ingrained in contemporary society, with numerous campaigns and guidelines emphasizing the importance of consuming nutrient-rich foods to promote well-being. As a result, many individuals strive to follow diets that prioritize whole foods, organic produce, and other items deemed beneficial for health. However, while the intention behind these choices is often positive, the reality is that even healthy foods can pose risks when consumed inappropriately or excessively (Arsenault, et. al, 2011)

This paper seeks to investigate the paradoxical effects of healthy eating, exploring how the pursuit of an ideal diet can sometimes lead to unintended health consequences. By examining case studies, reviewing scientific literature, and analyzing current diet trends, this study aims to shed light on the potential dangers associated with common perceptions of healthy eating. The goal is to provide a more nuanced understanding of what constitutes a truly balanced and safe diet, offering insights that can guide individuals toward making more informed nutritional choices. The following sections will delve into the specific health risks linked to overconsumption of certain healthy foods, the psychological impact of strict dietary regimens, and the broader implications of popular health trends. Through this exploration, the paper will challenge the conventional wisdom surrounding healthy eating and propose strategies for mitigating the associated risks.

Research on the relationship between healthy eating and health risks has become increasingly relevant in recent decades. One concept that has emerged from this research is *Orthorexia Nervosa* (ON), first introduced by Bratman & Knight (2000). ON describes an unhealthy obsession with healthy eating, which can lead to nutritional deficiencies and social isolation. Koven & Abry (2015) reviewed the psychological impact of ON, emphasizing that this condition has become a significant public health concern, with symptoms including anxiety and compulsive behavior.

Furthermore, studies on nutritional imbalances have also become a focus of research related to the negative impacts of diets perceived as healthy. Arsenault, et. al., (2011), in their review of the Mediterranean diet, which is well-known for its health benefits, revealed that strict adherence to this diet could lead to deficiencies in certain nutrients if not properly balanced. Fardet & Rock (2014) proposed the "Healthy Core" concept, highlighting the importance of maintaining balance even in diets rich in healthy foods to prevent chronic diseases associated with nutritional imbalances.

Other research has also pointed out the potential dangers of excessive nutrient intake. Hurst et al. (2012) conducted a systematic review on the toxicity resulting from excessive flavanol intake, compounds commonly found in foods like tea and cocoa. Although flavanols possess antioxidant properties, excessive consumption can lead to adverse health effects. Williams (2019) also explored the risks of overconsumption of healthy foods, noting that an overemphasis on certain nutrients can lead to health complications such as kidney stones or toxicity.

Studies on popular diet trends have also shown that while certain eating patterns may enhance athletic performance, overly restrictive diets can limit essential nutrient intake. Thomas, Erdman, & Burke (2016) highlighted the importance of a balanced diet for athletes, warning against the risks of following diets that might reduce the intake of vital nutrients. Tiwari & Kumar (2020) reviewed the rise of orthorexia nervosa in the context of popular diet trends, emphasizing the need for public awareness of the risks associated with extreme dietary practices.

This literature review indicates that while healthy foods are generally recognized as beneficial, there are significant health risks if a healthy diet is not approached wisely. Good nutritional literacy and a balanced approach to diet are crucial to prevent the potential negative impacts of eating habits perceived as healthy.

## **2. Literature Review**

### **2.1. Orthorexia Nervosa (ON)**

The concept of Orthorexia Nervosa (ON) was first introduced as a condition describing an excessive obsession with eating foods perceived as healthy. ON is often overlooked but has serious consequences, including nutritional deficiencies and social disturbances. Although not officially recognized as a psychological disorder, ON continues to be a significant topic in mental health research (Bratman & Knight, 2000).

In their examination of the clinical basis of ON, Koven and Abry demonstrated that ON is often associated with symptoms such as anxiety, perfectionism, and obsessive-compulsive behaviors. Their study also emphasized that ON can develop into a serious health issue if not properly addressed (Koven & Abry, 2015).

### **2.2. Nutritional Imbalance**

Arsenault et al. (2011) This study investigated the nutritional quality of the Mediterranean diet, which, despite being known for its health benefits, can pose risks of nutritional imbalances if applied too rigidly without variation. They highlighted the importance of flexibility in the diet to ensure balanced nutrient intake.

They proposed the concept of a "Healthy Core," suggesting that healthy foods should be consumed within the context of a balanced and varied diet. Imbalances, even within a diet rich in healthy foods, can contribute to chronic diseases (Fardet & Rock, 2014).

### **2.3. Toxicity from Excessive Flavanol Intake**

Hurst et al. (2012) Conducted a systematic review on the potential toxicity of excessive flavanol intake. Flavanols, compounds found abundantly in tea, chocolate, and wine, possess strong antioxidant properties. However, when consumed in very high amounts, flavanols can cause toxic effects, including digestive disturbances and other health issues.

Discussed the health risks associated with excessive consumption of flavanol-rich foods. While these components are generally considered beneficial, there is evidence that uncontrolled consumption can lead to side effects such as organ damage due to toxicity (Williams, 2019).

### **2.4. Diet and Popular Diet Trends**

Highlighted the role of diet in athletic performance, focusing on the need for balanced nutrition to support intense physical activity. They warned that overly restrictive diet trends can limit the intake of essential nutrients, potentially compromising health and performance (Thomas, et. al., 2016).

Reviewed the rising prevalence of Orthorexia Nervosa alongside the popularity of certain diet trends. The study indicated that while these diets are often promoted as effective ways to improve health, they can also trigger eating disorders and mental health issues if followed in an extreme manner (Tiwari & Kumar, 2020).

### **3. Research Methods**

#### **3.1. Research Design**

This research utilizes a qualitative descriptive approach, focusing on a comprehensive review of existing literature to explore the potential health risks associated with healthy eating, Orthorexia Nervosa (ON), and the effects of specific nutrients like flavanols. The study systematically reviews and synthesizes findings from previous research to identify patterns, themes, and gaps in the existing knowledge base regarding healthy eating behaviors and their associated risks.

#### **3.2. Literature Selection Criteria:**

Inclusion criteria for literature selection include:

1. Research published in the last 20 years.
2. Research that focuses on Orthorexia Nervosa, nutritional imbalances, flavanol toxicity, and diet trends.
3. Research that includes human subjects or theoretical models relevant to the study's objectives.

Exclusion criteria include:

1. Research that is not available in full text.
2. Studies focusing solely on animal models without clear human implications.
3. Non-peer-reviewed sources, such as opinion pieces or editorials, unless they provide significant theoretical insights.

#### **3.3. Data Sources**

The literature will be searched from several credible scientific databases, including PubMed, ScienceDirect, and Google Scholar. These databases were selected for their extensive collections of scholarly articles in the fields of Orthorexia Nervosa, nutritional imbalances, flavanol toxicity, and diet trends.

#### **3.4. Data Analysis**

The collected literature was analyzed using thematic analysis to identify recurring themes and patterns related to the health risks of healthy eating. Key themes include the psychological impact of Orthorexia Nervosa, the risks of nutritional imbalances, and the effects of overconsumption of certain nutrients like flavanols.

A comparative approach was used to evaluate differences and similarities in findings across various studies. This involved comparing results from different dietary studies and analyzing the potential reasons for discrepancies.

The final step involved synthesizing the findings into a coherent narrative that addresses the research objectives, highlighting the importance of balanced dietary practices and the potential risks of popular diet trends.

### **4. Results and Discussion**

#### **4.1. Orthorexia Nervosa (ON)**

The review of literature on Orthorexia Nervosa revealed a growing recognition of this condition as a serious health issue. Studies by Bratman & Knight (2000) and Koven & Abry (2015) confirmed that Orthorexia Nervosa is characterized by an obsessive focus on consuming only foods that are perceived as healthy. This obsession can lead to severe nutritional deficiencies and significant social isolation.

#### **4.2. Nutritional Imbalance**

The analysis of studies such as those by Arsenault et al. (2011) and Fardet & Rock (2014) showed that even diets considered healthy, such as the Mediterranean diet, can lead to nutritional imbalances if not properly managed. These diets, when followed too rigidly, can cause deficiencies in essential nutrients and may not account for individual nutritional needs.

#### **4.3. Toxicity from Excessive Flavanol Intake**

Literature on flavanol toxicity, including studies by Hurst et al. (2012) and Williams (2019), indicated that excessive consumption of flavanols—commonly found in foods like chocolate and tea—can lead to toxicity. Symptoms of flavanol toxicity include gastrointestinal disturbances and potential organ damage.

#### **4.4. Diet and Popular Diet Trends**

The review of diet trends, as discussed by Thomas, Erdman, & Burke (2016) and Tiwari & Kumar (2020), showed that popular diets often promote restrictive eating patterns that can limit essential nutrient intake. These trends, while beneficial for certain health goals, can also lead to issues such as nutrient deficiencies and the exacerbation of conditions like Orthorexia Nervosa.

### **5. Discussion**

The comprehensive review of literature reveals Orthorexia Nervosa (ON), Nutritional Imbalance, Toxicity from Excessive Flavanol Intake, and Diet and Popular Diet Trends.

#### **5.1. Orthorexia Nervosa (ON)**

The findings suggest that while the intention behind focusing on healthy eating is positive, extreme adherence can result in detrimental health effects. ON underscores the need for balanced dietary practices and highlights the psychological impacts of dietary extremism. Addressing ON requires a multidisciplinary approach, including psychological support and nutritional education, to mitigate the negative health consequences.

#### **5.2. Nutritional Imbalance**

The results emphasize the importance of dietary flexibility and balance. A diet that is overly restrictive, even if it consists of healthy foods, can result in adverse health outcomes. Effective dietary guidelines should promote a balanced approach that includes a variety of foods to meet all nutritional requirements, reducing the risk of nutrient deficiencies.

#### **5.3. Toxicity from Excessive Flavanol Intake**

These findings highlight that even beneficial compounds, such as flavanols, can have harmful effects when consumed in excess. It is crucial to understand the safe levels of intake for such nutrients and to educate consumers about the potential risks of overconsumption. Balancing the intake of flavanol-rich foods with other nutritional needs is essential to prevent adverse health effects.

#### **5.4. Diet and Popular Diet Trends**

The results suggest that while diet trends may offer short-term benefits, they often lack long-term sustainability and can lead to imbalanced nutrition. It is important for individuals to approach popular diets with caution and to seek guidance from nutrition experts. Promoting a more balanced and individualized approach to diet can help avoid the pitfalls of extreme dietary practices.

### **6. Conclusion**

The investigation into the health risks associated with healthy eating practices has highlighted several important findings. Orthorexia Nervosa (ON) emerges as a significant concern, characterized by an obsessive focus on consuming only foods deemed healthy, leading to potential nutritional deficiencies and social isolation. This underscores the need for a balanced approach to diet that integrates psychological support and nutritional guidance.

Nutritional imbalances can occur even with diets widely recognized for their health benefits, such as the Mediterranean diet. Strict adherence to these diets without appropriate flexibility can result in deficiencies and adverse health effects. Thus, a well-rounded diet that incorporates a variety of foods is essential to meet all nutritional needs and prevent potential health issues.

The risk of toxicity from excessive intake of flavanols, found in foods like chocolate and tea, further illustrates that even beneficial nutrients can have harmful effects when consumed in excess. Understanding and adhering to safe consumption levels of such nutrients is critical to avoiding negative health outcomes.

Lastly, popular diet trends often promote restrictive eating patterns that can lead to nutrient deficiencies and exacerbate conditions like Orthorexia Nervosa. A more balanced and individualized dietary approach is necessary to ensure long-term health and well-being.

In conclusion, while pursuing a healthy diet is beneficial, it is crucial to approach it with balance and awareness of potential risks. Education on nutritional balance, moderation, and the psychological aspects of eating habits is essential for maintaining overall health and preventing adverse effects associated with extreme dietary practices.

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