# Orthorexia Nervosa and Body Image

# 12

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The term orthorexia nervosa (ON) was introduced by Steven Bratman in 1997 [1] to describe a "condition" characterised by a pathological fixation with healthy eating and proper nutrition. Differently by anorexia nervosa (AN) or bulimia nervosa (BN), the primary concern is not the quantity of food consumed, but the quality of food [2, 3]. ON has not yet been recognised as an eating disorder (ED) (and it has not been included in the DSM-5), and there is an ongoing discussion concerning its definition and the characterisation of diagnostic criteria. The link with other ED is under debate since ON is considered by some Authors as a socially acceptable method of weight control for individuals with AN and BN (coping strategy) or a risk factor for a "classical" ED when patients switch from an obsession with the quality of food to an obsession with its quantity [4, 5]. In any case, a growing number of PubMed articles refer to the word *orthorexia* as a keyword (83 papers on 18.02.2018; https://www.ncbi.nlm.nih.gov/pubmed/?term=orthorexia) with a tendency to an increase in publications in the last years [6].

Orthorexia nervosa is characterised by a desire to consume a healthy diet. The classification of food as healthy or harmful is autonomously given by the subject with ON and it doesn't coincide in most cases with any real risk [2]. Consequently, individuals suffering from ON eliminate from their diet food that is, individually, perceived as impure or not suitable. Their diet may be therefore very restrictive with a high risk of insufficient intake of certain nutrients [7]. Besides, the obsessive preoccupation with food and its source is characterised by a pathological level of concern and stress regarding food [8] that may lead to a significant amount of time (more than 3 h per day) spent on seeking, examining, and preparing meal [7].

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Due to certain similarities between ON and AN, some Authors have focused their research on factors that have been implicated in the development and maintenance of EDs (body image, perfectionism, attachment style, self-esteem) [9–11] to verify their role in ON.

The term body image represents a global conceptualisation of perceptions, attitudes, and behaviours. The characteristics of the body image concept are presented in Table 12.1.

Concern about body image and internalisation of the thin ideal are dominant in eating disorders (EDs) [13]. Behaviours and psychopathology related to body image in EDs are presented in Fig. 12.1.

**Table 12.1** Main characteristics of body image (adapted from Cash and Pruzinsky, 1990) [12]

| • Components of body image |
|---|
| Perceptions (size and shape of various aspect of the body) |
| Cognitions (thoughts, beliefs, and self-statements concerning body) |
| Emotions (experiences of (dis)comfort, (dis)satisfaction associated to appearance) |
| • Body image experiences are linked to feelings towards the "self" |
| • Body image is a construct determined by socio-cultural factors |
| • Body image is changeable |
| • Body image influences the information processing (people who are schematic with respect to their physical appearance process the information in terms of competence in body attractiveness)<br>• Body image influences behaviour |
| • Body image concept is multifaceted (body experiences encompasses the perceptions and attitudes towards appearance, body shape and size, aspect relating to physical condition, health, and disease) |

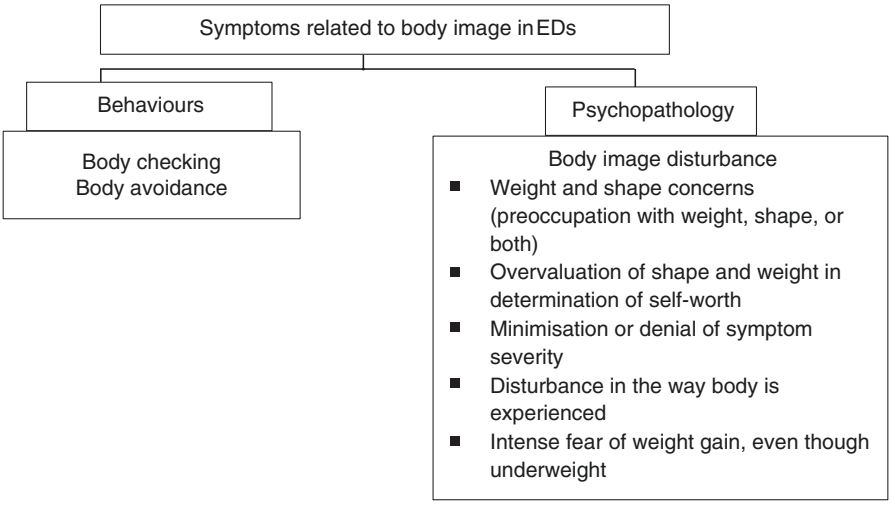


**Fig. 12.1** Symptoms related to body image in eating disorders

ON did not include the most characteristic symptoms of EDs such as fear of becoming fat and overestimation of body size. The literature suggests that individuals with ON are not concerned with weight loss, while the presence of body dissatisfaction is not universally accepted. Some studies found no clear and significant association between ON and negative body image attitudes [14], while in other studies the concern about body image was found to be present in ON.

The latest research has shown that ON involves both the associations related to disturbed eating-related behaviours and cognitive preoccupations about body shape and weight [4]. In ED patients, orthorexic behaviour was negatively predicted by eating pathology, weight concern, health orientation, and appearance evaluation and body areas satisfaction [15].

In a paper published by Brytek-Matera et al., the Authors found that in female students with ON "low body areas (parts) satisfaction, high fitness orientation, high overweight preoccupation, and high appearance orientation were independent predictors of greater fixation on eating healthy food" [16].

These data are consistent with another study where it was found that fitness participants who displayed orthorexic tendencies showed internalisation of a thin ideal as well as social physique anxiety associated with body image dissatisfaction and disordered eating [17].

ON, as well as other EDs, seems to be connected with social pressures. EDs are influenced by the thin-ideal standard of beauty, whereas ON is affected by the requirement for the healthy living [18]. Maintaining a healthy diet and having control over their own desires seems to be in ON more fulfilling and important than possible concerns about body image.

Self-esteem, which may be associated with body dissatisfaction, has been found to be lower among individuals suffering from AN and BN [19]. The literature suggests that self-esteem is associated with ON, but the results are not univocal.

The previous research has shown that self-esteem seems to be higher in ON than in non-orthorexic subjects [20] and adherence to dietary restriction may become linked to self-esteem individuals with ON tendency [21]. However, in another study [22] the results demonstrated a relationship between ON and lower self-esteem. The link between ON and self-esteem has not been confirmed in latest studies: self-esteem was not significantly correlated with ON [5].

Eating disorders (following the DSM-5 classification), muscle dysmorphia (see Chap. 4 of this book), and ON are different conditions affecting above all adolescents and young adults, with a relatively high prevalence and an important social impact.

These attitudes seem to be frequently associated, particularly in certain cohorts. It has been hypothesised that some students could choose a university course oriented on healthy food (e.g. school of Dietetics) and healthy body (e.g. Exercise and Sport Sciences school) because they have a pre-existent peculiar eating behaviour or pre-existing muscle dysmorphia traits. Anyway, individuals with traits of any of these disorders are more frequently on a diet, are highly concerned with body image, and are more frequently at risk of another disorder [23].

Cultural ideals of beauty strongly influence the behaviours of those who most desire to be socially accepted. Today's adolescents are bombarded with images of extreme thinness which represents, in Western culture, beauty, happiness, wealth, and popularity.

Social media contribute significantly to the promotion of these ideals. They can influence psychological well-being and behaviours by amplifying messages, which are bounced through the various communication modes, suggesting controversial or dangerous behaviours to achieve these goals (e.g. pro-ana blogs), and promoting negative social comparison in particular with media celebrities. Finally, a negative role on body image/dissatisfaction and disordered eating has been attributed to them in particular among young adults. In a recent online survey conducted on media users ($N = 680$) following health food accounts, and investigating eating behaviours and ON the Authors found that healthy eating community on Instagram has a high prevalence of orthorexia symptoms, with higher Instagram use being linked to increased symptoms [24, 25].

In conclusion, although body image dissatisfaction is not required at the moment for the diagnosis of ON, the discussion is going on, and this particular concern has been proposed among the possible diagnostic criteria or specifiers [6].

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