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SHORT ARTICLE

Muscle dysmorphia

ANTIDOPING / DOPING / SPORTS AND SOCIETY / TRAINING

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The current ideal of beauty consists of a strong shift towards physical activity and aims to develop a muscular, athletic physique. While the athletic ideal for women has been a product of recent years, the muscular ideal for men has been observed since the 1970s. Increasing pressure to achieve this muscular ideal is associated with both body dissatisfaction and a strong desire to increase muscularity. In extreme

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terms, the pursuit of a muscular body and its associated behaviours, such as strength training and dieting, may lead to the development of muscle dysmorphia.
Muscle dysmorphia was first described in 1993 by Pope et al. as a reverse form of anorexia nervosa after studying the steroid use of male bodybuilders [1]. Despite well-developed musculature, the bodybuilders perceived themselves as small and skinny and therefore often adhered to rigid diet and training routines. It was conceptualized later as a type of body dysmorphic disorder and was placed within the somatoform disorder spectrum in the DSM 5.
Although the diagnostic criteria have been developed primarily through the study of bodybuilders [2], extensive bodybuilding or strength training does not automatically equate with the diagnosis of muscle dysmorphia. Those affected suffer from the perceived lack of sufficient leanness and muscularity, which leads to clinically significant distress or impairment in social, occupational or other important areas of functioning.

The diagnostic criteria for muscle dysmorphia include the following [2]:
1. Preoccupation with the idea that one's body is not sufficiently lean and muscular. Characteristic associated behaviours include long hours of lifting weights and excessive attention to diet.
2. The preoccupation is manifested by at least two of the following criteria:
a. The individual frequently gives up important social, occupational, or recreational activities because of a compulsive need to maintain his or her workout and diet schedule.
b. The individual avoids situations where his or her body is exposed to others, or endures such situations only with marked distress or intense anxiety.
c. The preoccupation about the inadequacy of body size or musculature causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.
d. The individual continues to work out, diet or use ergogenic substances despite knowledge of adverse physical or psychological consequences.
3. The primary focus of the preoccupation and behaviours is on being too small or inadequately muscular, as distinguished from fear of being fat as in anorexia nervosa, or a primary preoccupation only with other aspects of appearance as in other forms of body dysmorphic disorder.

Patients who suffer from MD may engage in body related avoidance or checking behaviour such as frequent weighing, looking in the mirror or wearing heavy sweatshirts in the summer to avoid body exposure [3].
Although conceptualized as a subtype of body dysmorphic disorder, there's evidence that suggests a conceptual similarity with eating disorders [4,5]. According to the transdiagnostic model by Fairburn et al. the core psychopathologies of eating disorders consist of over-evaluating eating, shape, weight and their control [6]. Body shape, eating habits and their control are crucial in the development and maintenance of MD, which leads to the idea of placing MD within the eating disorder spectrum.
The overvaluation of a muscular body type may lead to the development of disordered eating, that differ from those seen in Anorexia and Bulimia nervosa and therefore may often remain undetected when screening with questionnaires designed for thinness-oriented eating disorders [7]. The current muscular ideal emphasizes both muscularity and leanness, which is reflected accordingly in eating behaviour that is designed to either increase muscle mass or reduce body fat. This usually results in alternating dietary

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practices with increased, reduced or balanced caloric intake depending on the current goal. While a positive energy balance combined with resistance training provides a strong anabolic effect that helps to increase muscle mass, a negative energy balance is required to lose body fat. Until now alternating dietary practices have not been taken into account when studying disordered eating and its association with muscle dysmorphia. At present little is known about how the pursuit of the muscular ideal affects the development of disordered eating behaviour in both men and women. A recent study of males with muscle dysmorphia and males with anorexia nervosa showed widespread similarities in eating disorder related psychopathology in both groups [3]. Since anorexia nervosa and muscle dysmorphia share similarities and can both be seen as opposite poles of an eating disorder spectrum, it is important to further investigate the influence of muscular-oriented eating behaviour on the development of muscle dysmorphia and eating disorders in general.
We plan to further investigate the influence of the muscular ideal on the development of body image disorders, muscle dysmorphia and muscularity-oriented disordered eating in both men and women.

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