# Prevalence and assessment of disordered eating (DE) in adolescent male elite athletes

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| Rosendahl$^{16}$ 2009 | • 576 athletes (366 male, 210 female)  
• 291 controls (122 male, 171 female)  
• 26 different sports  
• 218 athletes (136 male, 82 female) competing in weight-sensitive sports  
• Age: 14-18 years; athletes 15.7 (±1.25) years; controls 15.9 (±0.9) years | Self-reported EAT | 15.6% of male elite athletes (compared with 9.0% non-elite athletes and 12.3% controls) and 34.0% of female elite athletes (compared with 24.4% non-elite athletes and 36.1% controls) scored ≥10 in the EAT indicating DE behaviour. | • DE prevalence was predicted by gender and dietary experience, but not by athlete status (athletes vs. non-athletes). The frequency of DE was five times higher among boys and eight times higher among girls with a thinner body ideal compared with a thicker or equal body ideal.  
• An ED risk ratio of 1.73 for male elite athletes vs. non-athletes; 1.27 for male elite athletes vs. non-elite athletes and 0.73 for non-elite athletes vs. non-athletes was found.  
• A significantly higher DE prevalence was found among male athletes competing in weight-sensitive sports; no significant difference among female athletes. |
| Martinsen$^{13}$ 2010 | • 606 athletes (389 male, 217 female)  
• 355 controls (197 male, 158 female)  
• 50 different sports  
• 159 athletes competed in weight-sensitive sports  
• Age: all 15-16 years | Self-reported questionnaire including EDI subscales (BD, DT), various DE symptoms and BMI | 13.1% of male and 44.7% of female athletes showed DE symptoms compared with 30.5% of male and 70.9% of female controls. | No association among symptoms of DE and athletes competing in leanness sports, non-leanness sports, physically active controls or non-physically active controls. |
| Francisco$^{48}$ 2013 | • 131 elite athletes (30 male, 101 female) competing in aesthetic sports  
• 112 (15 male, 99 female) non-elite controls; 480 (227 male, 253 female) controls competing in non-aesthetic sports  
• two different sports (gymnastics, dancing)  
• 133 athletes competing in weight-sensitive sports  
• Age: all 15.3 (±2.1) years | Self-reported EDE-Q and MRFS-IV | 6.7% of male elite athletes showed DE at clinical level compared with 6.2% of controls and 0% of male non-elite athletes. | • No significant body dissatisfaction differences among male elite athletes vs. male non-elite and control.  
• No significant DE prevalence differences among male elite athletes, non-elite athletes and controls. |
| Francisco$^{61}$ 2013 | • 85 athletes (25 male, 60 female)  
• 142 controls  
• two different sports (gymnastics, dancing)  
• 85 athletes competing in weight-sensitive sports | Self-reported EDE-Q and MRFS-IV | 20% of athletes (mixed gender group) scored above the clinical cut-off for ED in the EDE-Q compared with 14.1% of controls (mixed gender group). | Significantly higher EDE-Q scores, more shape concerns, higher BMI and significantly lower body dissatisfaction were found among the male athlete group compared with the non-athlete controls. |
• Age: athletes 15.35 (±2.73) years; controls 14.58 (±1.81) years

**Martinsen**

- **2013**
  - 611 athletes
  - 355 controls
  - 50 different sports
  - 163 athletes competed in weight-sensitive sports
  - Age: Athletes with 16.5 (±0.3) years; controls 16.9 (±0.3) years; athletes significantly younger (p=0.003).
  - Self-reported questionnaire including EDI subscales to identify "at risk" individuals
  - Followed by standardised clinical interview of all "at-risk" individuals using DSM-IV criteria
  - 7.0% of athletes (vs. 2.3% control) had an ED with 3.2% (vs. 0% control) for male compared with 14.0% (vs. 5.1% control) for female athletes.
  - With 73.5% (F:M=20:5), EDNOS was the most frequent ED in athletes, followed by BN with 23.5% (F:M=7:1) and AN with 2.9% (F=100%).
  - No difference among the proportion of athletes classified as being “at risk” for ED between weight-sensitive and less weight-sensitive sports in female athletes. Subgroup comparison in male athletes was not possible because of the few ED cases.

**Martinsen**

- **2014**
  - 611 athletes (390 male, 193 female) screened
  - 231 athletes clinically interviewed
  - 50 different sports
  - Age: all 16-17 years
  - Screening by self-reported questionnaire including EDI subscales (BD, DT), various DE symptoms and BMI.
  - Clinical interview (EDE) using DSM-IV criteria.
  - 5.6% of the athletes were excluded after pre-test screening due to a present ED. 11.7% of the clinically interviewed athletes were diagnosed with an ED.

**Giel**

- **2016**
  - 1138 athletes (638 male, 500 female)
  - 51 sport disciplines
  - Age: all 16.3 (±1.1) years
  - Self-reported SCOFF, body acceptance subscale of the FKKS, reported weight control behaviour
  - 21.5% of athletes with 14.4% of male compared with 30.7% of female athletes answered ≥2 questions of the SCOFF positively. 32.5% of athletes showed an eating disorder pathology.

EAT, Eating Attitudes Test; ED, eating disorder; EDI, Eating Disorder Inventory; BD, body dissatisfaction; DT, drive for thinness; BMI, body mass index; EDE-Q, Eating Disorder Examination Questionnaire; MRFS-IV, McKnight Risk Factor Survey IV; DSM-IV, 4th edition of the Diagnostic and Statistical Manual of Mental Disorders; EDNOS, Eating Disorder Not Otherwise Specified; BN, bulimia nervosa; AN, anorexia nervosa; SCOFF, SCOFF questionnaire; FKKS, Frankfurter Körperkonzeptskalen.