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SPECIAL TOPICS/EATING DISORDERS IN ATHLETES - A CALL TO ACTION

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Eating disorders, particularly Anorexia Nervosa, have one of the highest mortality rates of all psychiatric illness, and athletes are known to be at a higher risk than the general population. In particular, athletes have been found to be 2.5-3.9 times more likely to develop Anorexia Nervosa than their non-athletic counterparts¹. While this fact is largely undisputed, there is not much that has been done to specifically prevent and treat Anorexia Nervosa in athletes.

There appear to be multiple factors present in athletes that lead to the increased incidence and prevalence of eating disorders among middle and high school athletes, including genetic predisposition to developing disordered eating, perfectionism, drive for thinness, and poor impulse control. Eating Disorders can also be the result of perceived pressures from instructors and coaches, and the rigor of intensive sports. These pressures are particularly impactful in the dance world where mirrors in classes, tight dancewear, and images of extremely thin athletes abound.

Risk factors for eating disorders, particularly in athletes, include:

- Body dissatisfaction
- Drive for thinness
- Perfectionism
- Impulse control
- Perceived pressure from coaches and instructors
- Use of mirrors and athletic wear

Adolescence is a time of great change and insecurity, and is a critical turning point for young athletes. Adolescents begin to gain weight in many places as they go through puberty. Adolescent athletes may then face pressure to diet in order to maintain unrealistically low body weights

Internal and external factors both play pivotal roles in the development of Anorexia Nervosa in adolescents. Athletes, particularly those in more competitive sports programs, often exhibit elevated levels of perfectionism, which has been found to be a significant risk factor for eating disorders. Elevated perfectionism is critical in understanding how young athletes perceive themselves both in their sport and academic classes.

The social environments surrounding young athletes also contribute significantly to eating disorders through self-objectification and objectification by others as explained by the objectification theory. The objectification theory is a sociocultural theory of eating disturbance. The theory attempts to explain how social/cultural environments in which the body is viewed as an aesthetic object to be evaluated by others contributes to increased self-consciousness about physical appearance, and manifests in heightened

levels of self-surveillance or body-monitoring. This can lead to disproportionately high rates of disordered eating observed in areas where this self-objectification is enhanced. For example, dancers' physical characteristics are on display to themselves more so than in other forms of athletics as dance uses mirrors for training purposes. In addition to mirrors, dancewear has also been found to increase body-monitoring as it is frequently tight and figure-showing. This is also usually the case for gymnasts and track athletes. It is of note that the 2020 Summer Olympics German gymnastics team wore unitards instead of leotards at the 2020 Summer Olympics as a way of protesting against what they view as the "sexualization of gymnastics"— <https://bestlifeonline.com/olympic-gymnastics-uniforms-news/>

While these internal pressures contribute to the development and maintenance of eating disorders in young athletes, it has also been shown that athletes are greatly affected by others, particularly their instructors and coaches. High expectations and pressure from coaches and instructors have been found to be one of the strongest risk factors related to the development of eating disorders. Coaches may make directed comments and/or jokes about middle and high school athletes' bodies, weight, and/or food choices, and sometimes suggest diets that may cause young athletes to lose weight and modify their figures.

These external pressures for young athletes are not limited to influence from instructors and coaches, but can also be attributed by what is perceived as success in the competitive athletic world. Thinner athletes are often thought as being quicker and having faster times in track and field. Similarly, weight limits are placed for jockeys, rowing coxswains, and wrestlers, among other athletes, with their physical form being directly related to their athletic ability. Many dance students believe that low weight is related to better performance, and that thinner dancers get better roles in performances.

Given the clear evidence that young athletes are at increased risk for eating disorders, primary care physicians, parents, and athletic programs can all play a critical role in identifying the warning signs of eating disorders.

Warning signs for primary care physicians to be aware of and screen for in adolescents:

- Weight loss/ decreasing BMI
- Amenorrhea
- Fine hair growth (lanugo)
- Family or school express concern about weight loss
- Recurrent injury or illness
- Sleep problems
- Dizziness
- Lack of growth/sexual maturation
- Dry, pale, and/or discolored hair and skin
- Stress fractures
- Poor teeth and raw knuckles
- Decreased concentration/energy

Warning signs for parents of adolescents to be aware of:

- Friends or school express concern about weight loss
- Sudden/dramatic weight loss
- Excessive weighing
- Recurrent injury or illness
- Sleep problems
- Dizziness
- Consistently wearing baggy clothing whenever possible
- Sudden changes in eating behaviors and patterns (becoming vegetarian, vegan, picky about what foods they eat, new intolerances)
- Secretive or evasive behaviors around food (e.g. repeatedly saying they "have already eaten")
- Frequent visits to the bathroom each time they have eaten
- Getting angry or distressed when asked about eating problems
- New excessive exercise or exercising under abnormal circumstances
- New avoidance of social interactions
- Avoidance of screening and/or other physical tests

There is little information available as to what athletic programs are currently doing to identify and treat eating disorders in young athletes. Few wellness policies exist in athletic programs, while there is some evidence that wellness programs are effective in reducing eating disorders. Only a few studies have looked at actual interventionsⁱⁱ, and these studies have been largely limited to White females. While there is evidence that there are more eating disorders among dancers than other sports, there is also a need for future research looking at other sports since athletes face different pressures and often present with different forms of disordered eating. In addition, patients with eating disorders often feel misunderstood and find that treatment is not always effective.

Research among athletes from more diverse racial and ethnic groups is needed, including engagement with middle and high schools in socioeconomically diverse communities. Training programs for instructors and coaches are critical to assist them in the identification of eating disorders and mitigation of risk factors as early as possible (e.g., the amount of time students spend in front of mirrors, the number of comments they hear about their body or weight). Guidance on specific language coaches use is also an important factor in reducing the risk of eating disorders, as coaches often make critical remarks about young athletes' body, weight and/or food choices. In addition, it is important for coaches and instructors to learn how to identify personality characteristics which may contribute to disordered eating, especially during times of stress such as games, meets, performances, and auditions.

Possible early interventions for athletic programs/ schools:

- Nutritional education
- Education about self-esteem, healthy norms, societal pressures to be thin, depression, drug use
- Educational training for coaches to assist them in avoiding critical comments regarding young athletes' bodies, weight, or food choices
- Training that includes adequate breaks for re-fueling and hydration
- Suggestions for healthy foods that young athletes should include in their diets
- Removal of weight scales from middle and high schools
- Adjusting athletic wear so that they are less form-fitting while still facilitating performance
- Being mindful of decorations around clubs or studios- avoiding photographs of thin or extremely thin athletes
- Minimizing mirror time (e.g., for dance)

Project TEACH can help with a variety of behavioral health concerns, including increased risk for eating disorders and related behavioral health concerns.

<https://projectteachny.org>

<https://projectteachny.org/prevention-science/>

<https://projectteachny.org/parent-and-family-page/>

ⁱAckard, D., Henderson, J., & Wonderlich, A. (2004). The associations between childhood dance participation and adult disordered eating and related psychopathology. *J Psychosom Res*, 57(5):485-90. doi: 10.1016/j.jpsychores.2004.03.004-- https://www.researchgate.net/publication/8145565_Associations_between_childhood_dance_participation_and_adult_disordered_eating_and_related_psychopathology

ⁱⁱVoelker, D., & Galli, N. (2019). Eating disorders in competitive sport and dance. In M. Anshel, T. Petrie, & J. Steinfeldt, APA handbooks in psychology series. *APA handbook of sport and exercise psychology*, Vol 1. Sport psychology (pp. 585-599)-- <https://psycnet.apa.org/record/2019-05400-029>