

Attitudes and Arabesques

- “ *The standard of exaggerated thinness established in the 1960’s in dance will change only if those recruiting students for professional schools or hiring for companies change their attitudes.*”

- *Mavis Stains, Artistic Director of Canada’s National Ballet School*

Ballet is inarguably based on appearance. It is about the pictures, lines and curves created with the human body. It is a demanding activity requiring unbounded strength, flexibility, co-ordination, gracefulness, and musicality. A dancer must also succumb to another demand: the demand to maintain the stereotypical body type of a dancer. Society has determined that a ballerina must be thin, with long legs. Not every young woman who aspires to express herself through ballet has the means to conform with this demand, which leads to problems. There are three inter-related medical conditions: eating disorders; amenorrhoea; and osteoporosis that are known collectively as the ‘female athlete triad’. The combined aesthetic and athletic requirements of ballet place dancers at risk of developing the female athlete triad and sustaining related injuries. The triad is a serious problem that requires medical treatment, but it could be avoided altogether through education and other preventative measures.

The emphasis on appearance in the ballet world is the initiating factor in the development of the female athlete triad in dancers. Teachers, critics, and the general public are constantly judging dancers on their physical appearance both in class and on stage. Dancers take daily classes in a room full of mirrors, wearing skintight clothing, and as Elvi Moore, executive director of the Washington Ballet points out, “*leotards and*

tights don't let you hide much" (Cox 1997). If a dancer's physical appearance is not up to par with the expectations of society, they often face damaging comments, which "*can be as extreme as directors calling dancers fat to their faces*" (Cox 1997). *'Even the most technically talented dancer may be rejected by a major dance company because her size does not project the right 'look''*" (Benson 1989). A study conducted by researchers from Archives of Pediatrics & Adolescent Medicine regarding the weight perception of female ballet dancers shows that underweight dancers are more likely to incorrectly identify themselves and peers as overweight, despite being quite slim (Akivis 1996), (Sawyer 1989). This appearance based environment exposes dancers to many of the risk factors for developing the female athlete triad, which include: chronic dieting; low self-esteem; perfectionism; societal pressures; frequent weigh ins; pressure to lose weight from parents and coaches; pressure to win at all costs, and traumatic injuries (Cohen 2002). A history of only thin sylph like ballerinas makes young dancers and the general public believe that only people with a certain body type should dance. If there were more diversity in the sizes and shapes of professional dancers people would see that dancing is for everyone. It is the unrealistic idea that all dancers must be very slim that causes some girls to see their bodies in unhealthy ways, and ultimately develop eating disorders.

An eating disorder is the central aspect of the female athlete triad. Eating disorders are "*poor or unhealthy nutritional behaviors that can be as extreme as anorexia nervosa or bulimia nervosa, or as subtle as consciously restricting food intake*" (Cohen 2002). Ritualized eating, obsessive training, and other compulsive behaviors that are pathogenic weight control measures can also be grouped under the disordered eating heading (Cohen 2002). Some dancers find it difficult to maintain a very slim figure

through only their ballet training. Ballet exercises, although physically demanding, last only for a few minutes at most. These mainly anaerobic activities do not promote the usage of fat stores in the body as an energy source. *“To conform with body weight requirements the dietary intake of the female ballet dancer is usually radically restricted”* (Benson 1989). The occurrence of disordered eating in dancers is quite high, it is shown to be between 15-62%, depending on the definition of ‘eating disorder’ used. A study conducted by the American Dietetic Association involving professional ballet dancers with a mean age of 18.7 years shows that sixty- nine percent of professional dancers consume less than 70% of the recommended daily allowance for key nutrients. Only 50% of the dancers consumed enough calories to maintain normal growth and healing (Benson 1989). One third of the dancers reported dieting frequently, and almost all were anxious about weight gain (Akivis 1996). It is evident that food restriction and dieting is extremely common among dancers, as a result of the focus placed on thinness in ballet. The fear of gaining weight leaves many dancers undernourished and prone to other health problems.

The highest frequency of amenorrhea, absent or irregular menstrual periods, is seen in female ballet dancers, and is thought to be related to the prevalence of eating disorders (Cohen 2002). Thirty-three percent of the dancers in the study of menstrual function and eating habits conducted by the American Dietetic Association were amenorrheic (Cohen 2002). Primary amenorrhea is described as reaching the age of 16 without menstruation. A dancer has secondary amenorrhea if they had previously normal cycles but are currently experiencing less than 6-9 cycles per year (Smith 1989). The best explanation of both primary and secondary amenorrhea in dancers is the ‘energy

availability' theory. It theorizes that the central nervous system of the dancer detects that there is not enough energy available to both train and perform other functions, so the body reduces its energy output by suppressing menstruation (Cohen 2002). To obtain the body required by society for ballet performance dancers are essentially starving their bodies to the point where part of it must shut down. The absence of menstruation should not be seen as a normal adaptation to exercise, as prolonged periods of amenorrhoea can be hazardous to bone health.

The low estrogen levels resulting from amenorrhoea are related to low bone mineral density (BMD), osteoporosis, and osteopenia in dancers. Osteoporosis and osteopenia are conditions that involve a "*premature loss or inadequate formation of bone*" (Cohen 2002). Dancers with a BMD more than 2.5 less than the normal for their age are considered to have osteoporosis, and a BMD of between 1- 2.5 below average is categorized as osteopenia. The decreased estrogen levels associated with amenorrhoea cause bone disorders in female athletes. Estrogen is an important hormone in the body secreted in high levels during the luteal phase of the menstruation cycle. It supports osteoblasts and the formation of bone. Estrogen and other sex steroids are converted from a common steroid resembling cholesterol in the ovaries and fat cells in the body. If body fat levels are below 17% body fat, they will not be able to convert the precursor into the active form of estrogen. A low estrogen level means a lower bone mineral level, thus a higher risk for fractures and stress fractures (Cohen 2002). A study done by the American Journal of Clinical Nutrition investigating the effects of nutrition on bone health found that a group of dancers that had sustained stress fractures in the previous year had less favourable nutrition habits than the control group. The injured dancers consumed 8 times

more diet pop, ate only 85% of the RDA of calories, and had a much higher tendency to consume foods containing saccharin than the control group (Dhuper 1990). This demonstrates how unnecessary preoccupation with weight can lead to eating disorders, which develop into menstrual problems and ultimately, bone disorders. This grouping of health problems is known as the female athlete triad.

Failing to recognize the development of the triad in a dancer puts that dancer at risk of suffering career-damaging injury. Dancers who display symptoms of the female athlete triad spend more time with severe injuries that require the attention of a physician, and sustain significantly more stress fractures than normally menstruating dancers (Benson 1989). Although dancers feel they must diet and maintain a low body weight for the benefit of their career, their caloric restrictions only lead to injury. A diet consisting of less than 1400 calories daily, common to weight conscious dancers, does not supply sufficient nutrients for the body to function and heal properly, which makes things *“difficult for the serious dancer whose future depends on an optimally nourished, injury free body”* (Benson 1989). A dancer’s limited energy supply puts them at increased risk for not only bone injuries, but other health problems as well. A dancer may experience fatigue brought on by glycogen depletion, which can further lead to musculoskeletal injury; headaches; decreased immunity; decreased concentration; and depression (Benson 1989), (Anderson 2000). These dancers are *“depriving their own bodies of essential nutrients and ultimately harming their performance and encouraging potential injuries”* (Benson 1989). The restrictions some dancers place upon their diet adversely affects their health and is detrimental to their career.

Early intervention in the treatment of the female athlete triad is of utmost importance. The longer a dancer spends in their amenorrheic state, the more bone they lose or fail to develop. This bone loss is irreversible so early detection of the female athlete triad is key in maintaining the long-term health of the dancer (Cohen 2002). The signs and symptoms may include, but are not limited to: fatigue; depression; vomiting; abdominal pain; dry skin; loss of menstruation; ritualized eating; food restriction; obsessive training; stress fractures; preoccupation with food and weight; decreased ability to concentrate; cold intolerance; and self-critical behavior. Dancers who develop the triad are motivated dedicated athletes, who are interested in their success (Smith 1996) this desire to succeed in their career may encourage a dancer to seek out help or take their treatment more seriously once diagnosed. The treatment of the female athlete triad involves a 'multidisciplinary team' consisting of a physician, nutritionist, and mental health professional. The physician might prescribe medication: hormonal replacements to restore estrogen levels, antidepressants to deal with depressive symptoms; calcium and vitamin D supplements to aid in bone mineralization: and oral contraceptives to restore menstruation. The physician also offers referrals to nutritionists and mental health professionals. The nutritionist will aid the dancer in developing a healthy and adequate balanced diet, and the mental health professional will focus on the connections between a dancer's emotional state and their exercise and eating patterns (Cohen 2002). This team will work together to optimize the mental and physical health of the dancer, with positive support from peers, teachers, parents and friends.

Educating dancers about the effects of poor nutrition on health and performance is an important preventative tactic that should be used to avoid the occurrence of the

female athlete triad. If dancers realize the risks they are taking, they might think twice about their unhealthy eating habits. Many major ballet schools and companies, such as the Royal Winnipeg Ballet, and the National Ballet School have programs set up to help their dancers avoid eating disorders, and the female athlete triad. They have professionals at the schools who help dancers face weight issues, and watch for excessive exercise, eating problems, and other signs and symptoms of body image related health problems (Cox 1997). Although the institution of these programs is a major step in the prevention of the female athlete triad, programs are required in many other situations. Competitive dance schools, post secondary dance programs, professional dance companies, and even schools offering recreational classes, should be aware of the signs and symptoms of the triad. They should strive for prevention and offer support and treatment referrals.

Information should also be made available to the general public concerning the health problems dancers must face in order to maintain the low body weight societal pressures demand. An understanding of the body required for the optimal health and related performance level for a dancer may help non-dancers to be more accepting of dancers with various body types, and thus relieve some of the societal pressure that causes weight-related problems in dancers. It is evident that *“an increased awareness of the consequences of inadequate nutrition upon performance and health is needed. It is hoped that with professional counseling, dancers can be an optimally nourished healthy population of artists and athletes”*(Benson 1989).

Society’s attitudes towards the ideal figure for a ballerina are not parallel with the ideal figure that a dancer must possess for optimal health. Dancers feel pressured to meet society’s demand to be thin, and may compromise their health and nutrition to follow

suit. The female athlete triad is common among dancers as a ramification of the societal pressure to be thin. The triad consists of eating disorders, menstrual irregularities, and low bone density. Dancers with inadequate nutrition are more prone to injury, especially stress fractures. Many professional schools are beginning to implement nutrition programs and provide information regarding the treatment and prevention of the female athlete triad, as it poses a serious health risk for dancers. Ballet will always be about the technical placement and beautiful design of the human body. This beauty should include pictures and patterns made with bodies of all shapes and sizes.

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