# Physical Activity and Body Image of Female Adolescents

## MOVING TOWARD THE 21ST CENTURY

*DEBORAH J. RHEA*

Tremendous strides have been made to involve female adolescents in physical activity and athletics. Since the passage of Title IX (1972) legislation, a number of organizations, including the National Association for Girls and Women in Sport and the Women's Sports Foundation, have identified and publicized the benefits of physical activity and the importance of equal participation of girls and boys. Although these efforts have helped to increase participation in sports and physical activity among females of all ages, two growing trends exist among adolescent females: to become either dramatically more inactive or more involved in extreme dieting behaviors and extensive exercise (Sundgot-Borgen, 1994). These trends are often associated with body image and self-esteem.

Both trends are dangerous, and we, as physical educators and coaches, have the influence to change them. Before a change can be made, it is critical to better understand female adolescents. We know much more about adolescents than we did even two decades ago. This better understanding has come about through research efforts publicized in reports such as *Physical Activity and Health: A Report of the Surgeon General* (1996) and the report on *Physical Activity and Sport in the Lives of Girls* from the President's Council on Physical Fitness and Sports (1997). In order to continue increasing the level of participation by girls in sport and physical activity, we must address the issues confronting female adolescents as reported in publications such as these and make the necessary changes to move us successfully into the 21st century.

The purpose of this article is to identify some of the important issues surrounding female adolescents' body image (e.g., puberty, eating disorders, and obesity) and to provide guidelines in the physical education and sport settings that will enhance continued growth of physical activity and sport in the lives of female adolescents.

### Psychological Impact of Puberty

In order to support the increase of girls and women in sport and physical activity, we need to understand the impact that growth and development has on adolescent females. As adolescent females reach puberty and start to develop secondary sex characteristics (e.g., breasts and broader hips), their bodies begin to have a higher percentage of fat and their self-esteem begins to diminish. Consequently, studies have shown that adolescent females are generally more negative about their bodies and are concerned with physical beauty and maintaining an ideal, thin shape (as identified by media and societal images) (Galgan & Mable, 1986; Gill, 1995). Studies also report that females spend a great deal of time worrying about how other people will respond to them (Greif & Ulman, 1982). Generally speaking, adolescent females are most concerned about being too tall or too fat, and many well-proportioned young girls may compensate for perceived physical inadequacies by slouching, wearing baggy clothes, or trying a seemingly endless number of fad diets. Individuals with warped body images and the associated low self-esteem lay the groundwork for weight preoccupation and disordered eating.

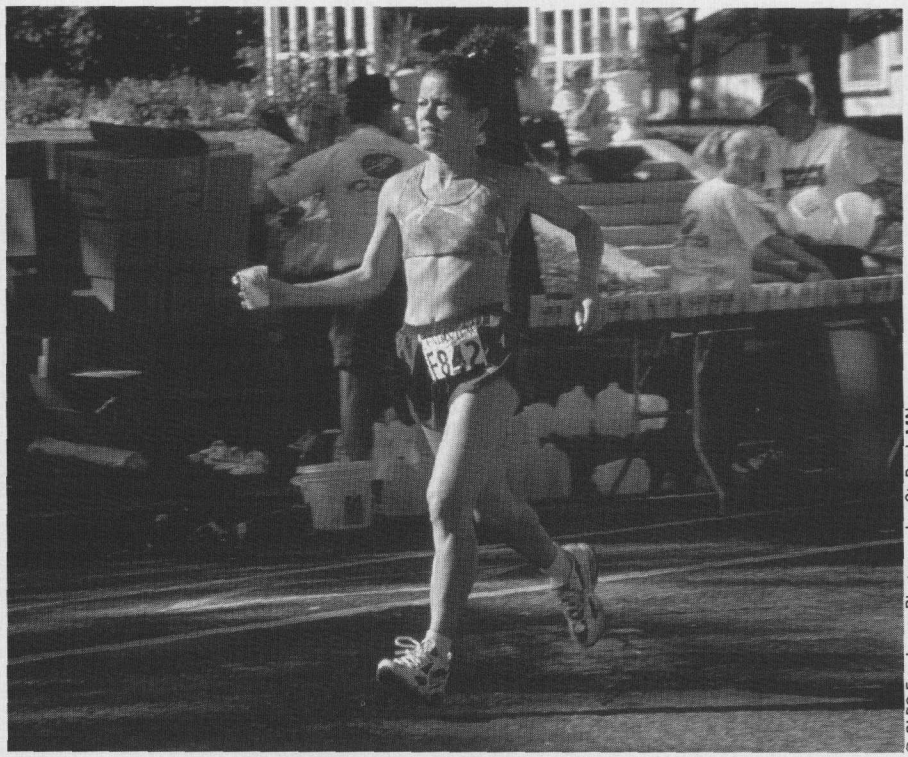
### Body Image and Disordered Eating

One key problem regarding body image lies in the conflict between perception and reality (President's Council

on Physical Fitness and Sports Report, 1997). Even when evidence to the contrary shows that females are not overweight, many females perceive themselves to be overweight. Such preoccupation with physique can lead to dangerous attempts to control weight, including excessive levels of physical activity. As Polivy (1994) suggested, "There is a range of compulsiveness connected to physical activity, with some individuals crossing a hypothetical line between what is normal and acceptable and what is destructive or pathological" (p. 883).

Coaches may require workouts that exceed what is considered an acceptable level of activity because of the competitive nature of the sport. Athletes may interpret the excessive amounts of exercise as an answer to the preoccupation they have with their physiques. The fine line between an acceptable or destructive level of physical activity may be determined by the number of injuries incurred, menstrual dysfunction, or interruption as a result of an eating disorder (anorexia or bulimia). The number of female athletes who demonstrate unhealthy attitudes and use unhealthy weight-loss methods (e.g., excessive exercise) is higher than the number of clinically diagnosed eating disorders (Plaisted, 1995). Unfortunately, the quest for the ideal body may drive some of these athletes to dangerous extremes (Yates & Brodkin, 1994).

Examples from research in a variety of sports illustrate factors that may contribute to disordered eating and ultimately eating disorders. Overdorf & Gill (1994) found female adolescent athletes perceived their bodies as heavier than they actually were. Of the females in a normal weight range, 43.8 percent admitted using some form of pathogenic weight control method (e.g., diet pills, diuretics, laxatives, and exercise abuse) at least occasionally because they felt they needed to lose weight. Other studies have found as many as 59 percent of adolescent females were attempting to lose weight because they perceived themselves as overweight (Morbidity and Mortality Weekly Report, 1995; Rhea, 1993). White and Hispanic females (47 percent) were more likely to rate themselves as overweight and attempt to lose weight than Black, non-Hispanic females (MMWR, 1995; Rhea, 1995).



Running is one of the sports most likely to lead to the onset of anorexia and bulimia in female athletes.

Estimates of female athletes with eating disorders typically range from 10 to 20 percent (The President's Council on Physical Fitness and Sports Report, 1997). Although much of the research has identified sports that accentuate the body (e.g., running, gymnastics, swimming, body building, and aerobics) as most likely to lead to the onset of anorexia and bulimia, participants in other sports are not immune to eating disorders. Female athletes can be so preoccupied about body image and how performance is affected by body size that influential factors such as their desire for acceptance, pressure from coaches and parents, and peer modeling may also apply to the development of disordered eating.

Coaches occupy important positions of influence and power over girls in sport (Shisslak & Crago, 1992). Controversial training methods, including verbal abuse and extreme dieting techniques, can result in extensive physical and emotional damage to adolescent females. One sports journalist has reported that girls are called "fat cows" by the coaching staff (Ryan, 1995, p. 16). Athletes have reported derogatory statements made by coaches such as "your hips are too big—lose some weight" or "you will never accomplish high scores in gymnastics if you don't lose weight." Athletes have also reported that coaches supported extreme measures such as vomiting before practice or fasting over time to enhance performance. Not suprisingly, these athletes begin to get a distorted view of what they should (and do) look like. Particularly in gymnastics and figure skating, female athletes are in a "race against time to transform into perfect little machines" (Ryan, 1995). It is incumbent upon coaches to use their influence wisely in the best interest of the athletes, rather than for personal glory or gain.

## Obesity

Another concern for coaches and physical educators is the increased

rate of obesity in adolescents today. As we move into the 21st century, we must consider how we will train overweight adolescents and increase their chances of developing into healthy adults with a high self-concept. Two of the major lifestyle factors associated with cardiovascular disease in adults include obesity and physical inactivity (Allensworth, 1996; U.S. Department of Health and Human Services, 1991). The national health objectives, "Healthy People 2000," address these risk factors (United States Department of Health & Human Services, 1991). Adolescent obesity has increased 39 percent in the past 20 years (Gortmaker, Dietz, Sobol, & Wehler, 1987; Ward & Evans, 1995). The U.S. Department of Health and Human Services reports that one in five adolescents (21 percent) is overweight (1996). Of those 21 percent, 80 percent are destined to become obese adults (Plimpton, 1987). Furthermore, children who immigrate to this country often develop problems of excessive body fat even though obesity is not common in their culture (Himes, Story, Czaplinski, & Dahlberg, 1992).

An alarming thought concerning these statistics is that as children approach adolescence, self-esteem declines. Studies have shown that increased adiposity may negatively affect endurance fitness, and low fitness levels may affect the willingness of adolescents to be active (Corbin & Pangrazi, 1992; Saris, 1983). Since obese adolescents typically possess negative attitudes toward physical activity, it is important to introduce them gradually to enjoyable forms of exercise so they begin to feel more confident in their physical abilities and self-image. When this happens, their sense of self-mastery can also improve (King & Tribble, 1990; Rowland, 1990).

## Change Is Needed

Although the adolescent female may be concerned about body image, social status, or performance, understanding that adolescent females struggle with these psychological and physical elements can be a key to future participation in sport and physical activity. Many female athletes are creating a new definition of what a girl or woman can look like and still be considered successful. Mia Hamm, World Cup and USA Team soccer player, and Lisa Leslie, WNBA and USA Team basketball player, are very successful athletes, but more importantly, they have been able to use their strength and/or height to demonstrate success through diverse body images. Shannon Miller and Kim Zmeskal, USA Team gymnasts, have also demonstrated that larger-boned bodies can be successful. Physical limitations are only as inhibiting as the individual permits.

## Developing a High-Quality Athletic Program

The following six steps are recommended for coaches in order to strengthen the chances of recruiting and retaining many female adolescent athletes as we approach the 21st century.

*Teach athletes how to maintain a level of physical fitness.* Physical fitness is the ability to perform daily tasks with vigor and alertness, without undue fatigue, and with ample energy to enjoy leisure-time pursuits and to meet unforeseen emergencies. Cardiovascular endurance activities such as running, walking, swimming, and cross-country skiing are excellent for increasing fitness.

*Teach athletes how to care for their bodies.* Many female athletes believe that they have to abuse their bodies (e.g., diet, starve, or overtrain) to achieve success in their sports. Communicate on a regular basis that the keys to success are eating well-balanced meals, getting the proper sleep each night, and training in moderation. The coach can communicate messages inadvertently by not saying anything. For example, if an athlete tells you that she is throwing up after practice every day and you fail to respond, you may be telling her that it is all right to maintain that behavior.

*The athletic program should be based on the maturation level of participants.* Junior high programs should give all females who want to participate in a sport the opportunity to do so. The program should be developmentally appropriate, that is, preadolescent programs should be geared toward skill development and progressively move to a highly competitive program at the college and professional levels. Athletes potentially will reach their best performance levels after the age of 21.

*The program should emphasize enjoyment and participation.* Skill development and a positive experience are a heritage that students can take with them after graduation. Athletics should be a springboard for promoting physical activity for the rest of the athletes' lives. If the program creates a negative experience, then the sport and the athlete suffer. The athlete may view physical activity negatively, and the sport will lose another potential athlete.

*Coaches need to highlight the positives associated with puberty.* Adolescents may begin to grow taller and will have increased levels of body fat. Coaches should emphasize that going through puberty is an essential part of life. Motor performance may falter for a time as they go through the process, but by the time they reach their junior or senior year in high school, performance levels should increase.

*Coaches should monitor the types of remarks made about weight and appearance.* Some coaches make decisions about the need for weight control in their athletes on the basis of appearance rather than more objective indicators, such as high cholesterol, hypertension, or coronary heart disease (Griffin & Harris, 1996). Simple remarks such as "get the lead out," "you eat more than I do—that will make you fat," or "you are a perfect little girl" can lay the groundwork for weight preoccupation and disordered eating. Avoid using the words perfect, little, petite, fat, and diet. Each carries a negative connotation to an adolescent female.

## Guidelines for Physical Educators

In order to strengthen the physical

educator's chances of reaching female adolescents in the 21st century (e.g., improving body image, disordered eating, and physical inactivity), the following nine steps are recommended.

*Teach proper nutrition and physical activity.* Adolescent females tend to be less active than their male counterparts and more concerned with dieting behaviors. The media influences these two issues by promoting the thin model as the equivalent to success and advertising the use of new and improved diet pills with the absence of physical activity. Physical educators will have to combat this by reminding them of the only equation that works: proper eating habits plus daily physical activity equals long healthy life There are no shortcuts. Shortcuts will only prolong the unhappiness that accompanies dieting and inactivity.

*Focus on time rather than distance.* As physical educators, we tend to focus on fitness tests and on how well the students compare to the national norms. We can sometimes become so absorbed in a one-mile run test that we only focus on the distance and time needed to achieve the national norm. It will take some individuals 20 minutes to finish the mile, and others will finish in eight minutes. Constantly training this way reinforces the problem we are trying to correct. If we have everyone run or walk 15 minutes on a consistent basis rather than run or walk a mile, then the individuals that were having a more difficult time completing a distance will now feel more successful completing the same time as someone else. We should not focus on whether they ran a mile, but rather how much time they were physically active. The message is simple: daily moderate activity for at least 30 minutes will improve the quality of one's life.

*Help students set goals.* Goal setting, if realistic, may increase the student's commitment and confidence to achieve (Silva & Weinberg, 1984). One way to assure students' willingness to set goals is to involve the student in planning and choosing activities in the physical education curriculum. This does not mean that the students control the curriculum. Involving them, for example, means allowing the students to choose between three team sport activities or three aerobic endurance activities. If the students are involved in the program, they will take more ownership in the results (Pemberton & McSwegin, 1989).

*Focus on individual needs.* Various types of students are in the physical education setting. All too often, instructors focus on a task and then introduce only one way to accomplish the task. Not all students can accomplish a physical task at the same pace or at the same level of difficulty. Educators often tend to "teach to the mean" and allow skilled students to become bored while the least skilled become frustrated (Plimpton, 1987). Therefore, success should be measured by individual progress rather than group comparison. One way to do this is by orienting the class or practice sessions toward achievement and maintenance of fitness levels. Exercise prescriptions could be individualized and followed.

*Develop self-responsibility.* Motivation is paramount when developing an exercise program for adolescent females. The drive to be active has to come from within the individual, not from the instructor. Developing activities that are fun and rewarding, not painful and humiliating, is a start. Instilling self-motivation will induce long-standing changes (Parker & Bar-Or, 1991).

*Choose activities that lack opportunity for social evaluation.* Choose activities that are more individualized and have less emphasis on winning. Teachers place too much emphasis on winning rather than joy of participation (Martens, 1996). Offer activities that involve maximum participation at all times. This leaves little time to judge peers and allows for progress at the student's own rate. Poor body image can lead to a reluctance to perform in front of others, but many teachers will see this as bad behavior. Use competitive games and relay races sparingly (Plimpton, 1987).

*Activities should be geared toward the student's physical abilities.* Again, we tend to judge individuals by the national norms according to body weight and physical abilities. Obese students often lack confidence in their physical ability and are inhibited when asked to participate while others are watching. Therefore, a program should be designed to strengthen self-confidence and should be tailored to the capabilities of each student. These activities should be fun and enjoyable, so the teacher should find out what activities the student might enjoy most. These activities may not induce sufficient energy expenditure (e.g., bowling or softball), but they allow the student to gain confidence in her ability to be active. Once the confidence has been gained, then changes can be made to include activities that may yield higher physiological benefits (Bar-Or, 1993).

*Participate in activities with a high-success rate.* Activities that produce higher success rates for female adolescents include, but are not limited to, walking, jogging, weight training, cycling, stationary bicycling, dance, step and water aerobics, and tennis. Female adolescents are concerned about their bodies, and activities such as these will deemphasize competition and emphasize individual body changes as they occur.

*Use examples of female athletes as role models.* Professional and collegiate female athletes are increasing in number. Since the 1996 Summer Olympics, many female athletes have been highlighted in the media through television and print commercials (e.g., Mia Hamm, Rebecca Lobo, Jackie Joyner-Kersee, Amy Van Dyken, Picabo Street, Dot Richardson). Athletes such as these are redefining female role models for adolescent girls. Identifying the capabilities and successes of female athlete roles will promote diverse body images and build confidence in female youths. It is important for female adolescents to recognize that participants with bodies of different sizes and shapes can be successful and that their future success does not

depend on being thin and small.

Coaches and physical educators share the responsibility for encouraging healthy nutritional and physical activity habits among female adolescents. These recommendations can be particularly helpful for those individuals working with females in sport and physical activity settings to enhance healthy lifestyles for the 21st century.

## References


Allensworth, D. (1996). Cardiovascular objectives for youth in healthy people 2000: Update on the status of risk factors. *Journal of Health Education, 27*(5), S17-S23.

Bar-Or, O. (1993). Physical activity and physical training in childhood obesity. *The Journal of Sports Medicine and Physical Fitness, 33*(4), 323-329.

Corbin, C. B., & Pangrazi, R. P. (1992). Are American children and youth fit? *Research Quarterly for Exercise and Sport, 63,* 96-106.

Galgan, R. J., & Mable, H. M. (1986). Body satisfaction in college women: A survey of facial and body size parts. *College Student Journal, 4,* 326-328.

Gill, D. L. (1995). Gender issues: A social-educational perspective. In S. M. Murphy (Ed.), *Sport Psychology Interventions* (pp. 205-234). Champaign, IL: Human Kinetics.

Gortmaker, S. L., Dietz, W. H., Sobol, A. M., & Wehler, M. S. (1987). Increasing pediatric obesity in the United States. *American Journal of Diseases of Children, 141,* 535-540.

Greif, E. B., & Ulman, K. J. (1982). The psychological impact of menarche on early adolescent females: A review of the literature. *Child Development, 53,* 1413-1430.

Griffin, J., & Harris, M. B. (1996). Coaches' attitudes, knowledge, experiences and recommendations regarding weight control. *The Sports Psychologist, 10*(2), 180-194.

Himes, J. H., Story, M., Czaplinski, K., & Dahlberg, L. E. (1992). Indications of early obesity in low income Hmong children. *American Journal of Disabilities in Children, 146,* 67-69.

King, A. C., & Tribble, D. L. (1990). The role of exercise in weight regulation in nonathletes. *Sportsmedicine, 11*(5), 331-349.

Martens, R. (1996). Turning kids on to physical activity for a lifetime. *Quest, 48,* 303-310.

Morbidity and Mortality Weekly Report. (1995). Youth risk behavior surveillance—United States, 1993. *MMWR, 44*(No. SS-1).

Overdorf, V. G., & Gill, K. S. (1994). Body image, weight and eating concerns and use of weight control methods among high school female athletes. *Women in Sport and Physical Activity Journal, 3*(2), 69-79.

Parker, D. F., & Bar-Or, O. (1991). Juvenile obesity: The importance of exercise and getting children to do it. *The Physician and Sportsmedicine, 19*(6), 113-125.

Pemberton, C., & McSwegin, P. J. (1989). Goal setting and motivation. *Journal of Physical Education, Recreation & Dance, 60*(1), 39-41.

Plaisted, V. (1995). Gender and sport. In T. Morris & J. Summers (Eds.), *Sport psychology: Theory, applications and issues* (pp. 538-574). New York: John Wiley & Sons.

Plimpton, C. E. (1987). Childhood obesity: A concern for the physical educator. *Journal of Physical Education, Recreation & Dance, 69*(1), 24-27.

Polivy, J. (1994). Physical activity, fitness and compulsive behaviors. In C. Bouchard, R. J. Shephard, & T. Stephens (Eds.), *Physical activity, fitness and health* (pp. 883-897). Champaign, IL: Human Kinetics.

President's Council on Physical Fitness and Sports Report (1997). Physical activity and sport in the lives of young girls: Physical and mental health dimensions from an interdisciplinary approach. Minneapolis, MN: The Center for Research on Girls & Women in Sport.

Rhea, D. J. (1993). The perspective of coaches and high school female athletes on eating disorders. Unpublished master's thesis, University of Houston.

Rhea, D. J. (1995). Risk factors for the development of eating disorders in ethnically diverse high school athlete and non-athlete urban populations. Unpublished doctoral dissertation, University of Houston.

Rowland, T. W. (1990). *Exercise and children's health.* Champaign, IL: Human Kinetics.

Ryan, J. (1995). *Little girls in pretty boxes: The making and breaking of elite gymnasts and figure skaters.* New York: Doubleday.

Saris, W. H. M. (1983). Habitual physical activity in children: Methodology and findings in health and disease. *Medical Science in Sports and Exercise, 18,* 253-263.

Shisslak, C. M., & Crago, M. (1992). Eating disorders among athletes. In R. Lemberg (Ed.), *Controlling eating disorders: With facts, advice and resources* (pp. 29-36). Phoenix, AZ: Oryx Press.

Silva, J. M., & Weinberg, R. S. (Eds.) (1984). *Psychological foundations of sport.* Champaign, IL: Human Kinetics.

Sundgot-Borgen, J. (1994). Risk and trigger factors for the development of eating disorders in female elite athletes. *Medicine and Science in Sports and Exercise, 26*(4), 414-419.

United States Department of Health and Human Services (1991). Healthy People 2000: National Health Promotion and Disease Prevention Objectives (DHHS Publication No. PHS 91-50212). Washington, DC: U.S. Government Printing Office.

United States Department of Health and Human Services (1996). Physical activity and health: A report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion.

Ward, D. S., & Evans, R. (1995). Physical activity, aerobic fitness, and obesity in children. *Med Exerc Nutr Health, 4*(3), 3-16.

Yates, A., & Brodkin, A. M. (1994). Adolescent development: Body blues. *Instructor (Middle Years), 103*(6), 6-14.



*Deborah J. Rhea is an assistant professor in the Department of Health and Human Performance at Iowa State University, 244 Forker Building, Ames, IA 50011; e-mail: djrhea@iastate.edu*