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### **Girl and Women Athletes have Unique Health Concerns**

February 5, 2003 will be the 17<sup>th</sup> anniversary of the Annual Girls and Women in Sports Day, and a number of celebrations and events will occur around the country to mark the date. The day was established in 1987 to call attention to “the positive influence of sports and fitness participation” for women, while advancing the goals of equality and access for women in sports. Since the passage of Title IX of the Civil Rights Act in 1972 (requiring gender equity in athletic programs), there has been a tremendous increase in the number of women participating in both organized and recreational sports. (For example, women now comprise 53% of health club memberships, according to the International Health, Racquet and Sportsclub Association.)

The increased interest in fitness and participation in sports is a positive development for women. The benefits derived are notable at any age. Girls who play sports have a more positive body image, higher self-esteem, suffer less from stress and depression, are at a reduced risk for obesity, and have more energy. Teen-age girls who are physically active are less likely to smoke, less than half as likely to get pregnant, and are more likely to abstain from or postpone the onset of sexual activity compared to non-active peers. Women who exercise report being happier, miss fewer days of work, reduce the level of fat in the blood, weigh less, have lower blood pressure, blood sugar, cholesterol, and triglycerides than their non-exercising counterparts. Further, participation in sports and fitness activities can decrease the need for medication for those with diabetes, increase joint flexibility and range of motion for those with arthritis, reduce the risk of cancer of the ovaries, uterus, cervix, breast, and colon, increase bone mass (reducing the risk of osteoporosis), improve sleep, and reduce the risk of coronary disease.

Unfortunately, the increased participation in sports and fitness activities by women has led to an increase in sports injuries in females as well, and a new branch of sports medicine related to women’s health issues has emerged. It has become evident that certain injuries are more common in women than in men, and that women have sports-related health concerns specific to their gender. Female athletes have a higher risk for stress fractures, kneecap pain, anterior cruciate ligament (ACL) injuries, osteoporosis, eating disorders, and menstrual irregularity.

Researchers have suggested a number of possible reasons for the increased number of certain injuries in women. With reference to knee pain, explanations include anatomical differences between men and women, such as a wider pelvis, looser joints due to female hormones, and a tendency to land straight-legged when jumping. The Santa Monica Orthopaedic and Sports Medicine Research Foundation has found 15-20 year old females are 2 to 8 times more likely to experience ACL tears than males, suggesting that the way women run (more extended and flat-footed) may be the cause.

Eating disorders are understandable in light of societal pressure on women to be thin and an over-emphasis on weight rather than fitness. The result is often poor dietary habits that begin in adolescence. Compounding the problem of poor nutrition during the teen years is the fact that maximum bone mass is accrued during those years until the early 20’s, so osteoporosis becomes a greater concern. Additionally, female athletes may exercise too much while not eating

properly and consuming too few calories, leading to a condition known as amenorrhea, in which menstruation does not occur for 3 or more months. This is an early, unnatural menopause; the production of estrogen is reduced and bone health is jeopardized further. In fact, this pattern of inadequate nutrition in female athletes, leading to amenorrhea and ultimately osteoporosis was recognized in 1992 and labeled the female athlete triad.

Also, inadequate levels of estrogen can lead to loss of bone density that then contributes to the development of stress fractures. Stress fractures are chronic in nature, and result from the accumulated effect of small forces or impacts over a period of time, particularly in areas where bone density is less than optimal.

There are a number of measures girls and women can take to reduce the likelihood of being injured when participating in a sport or fitness activity. First, eat a well-balanced, nutritional diet consisting of adequate calories to meet the demands of the activity. This is especially important for young athletes with developing bodies – parents, physicians, and coaches should be on the alert for missed or delayed menstrual periods, which may indicate a more serious problem. Second, a well-constructed training program is a must. Training should include instruction in the proper techniques to run, jump, pivot, and land without causing injury. Stretching before and after an activity, warm-up and cool-down exercises, gradually increasing the distance, speed, weight, etc. involved in preparing for the sport, and including both aerobic and weight-bearing exercises as well as resistance training, will result in fewer injuries. It is important to drink plenty of water before, during, and after working out to prevent dehydration, and get lots of rest to allow the body to recover from an active lifestyle.

In addition, participation in a number of sports requires certain protective gear, such as mouth guards, properly fitting shoes in good condition designed for the intended sport, and sports bras. Athletes with a history of ankle sprains may benefit by wearing specially designed braces. Females should take advantage of the growing field of sports equipment designed for women's smaller hands and frame. Minor sprains and injuries can be helped or prevented by the use of strategically placed athletic tape. But when an injury does occur, athletes need to be reminded that resting the injured part is essential. Ice and anti-inflammatory medications may help, but as Richard Cotton, spokesperson for the American Council on Exercise notes, "I can't think of an injury you should play through. Just about all injuries require recover time. . . if you feel pain, don't ignore it. Take a break from all the sports that exacerbate it. . ."

Further information about the National Girls and Women in Sports Day can be obtained on-line at [www.NGWSDcentral.com](http://www.NGWSDcentral.com) or [www.WomensSportsFoundation.org](http://www.WomensSportsFoundation.org). Questions on this topic may also be directed to the Central Connecticut Health District at 721-2822.