



Training Tip

Resource Library

July, 1999 Why Do Women Have More ACL Injuries Than Men?

By David Mazor

Massachusetts State Director for AAU Taekwondo

(Special thanks to Dr. Daniel McBride, MD)

With the rise of women's participation in sports over the last two decades there has also been a concurrent rise in women's sports related injuries. Taekwondo offers an excellent opportunity for women and men to train on an equal basis, and most Taekwondo schools do not have a "men's program" or a "women's program," they just have a program which allows both sexes to gain skills and advance in rank regardless of gender. However, while equality in training is one of the strengths of the martial arts, there are certain injuries which have disproportionately struck women more than men, not just in the martial arts, but in soccer, track, basketball and many other sports.

Among these injuries, one of the most devastating is the tearing of the anterior cruciate ligament or ACL. One of the four major ligament complexes providing stability to the knee joint, the anterior cruciate ligament is frequently injured during twisting motions of the knee, and once the anterior cruciate ligament is torn, it does not heal itself. Many a basketball player has had a career ended by the tearing of the ACL, with the resulting surgery and rehabilitation often taking many months.

Dr. Daniel McBride, an orthopedic surgeon and a consultant to the University of Massachusetts-Amherst sports teams, offers the following theories as to why women suffer more ACL injuries than men, and how they can strive to prevent them.

"The reason women have a higher proportion of ACL injuries than men is a matter of intense study and has yet to be fully worked out. However, theories have focused on differences between men and women in the strength of the hamstrings muscles, variations in muscle function due to the menstrual cycle, and a smaller notch size in the female femur," says Dr. McBride.

While women cannot do anything about things like femur size, they can strengthen their hamstrings. What are the hamstrings? They are the three muscles in the back of the thigh--the biceps femoris, semitendinosus and semimembranosus, collectively called the hamstrings. The hamstrings play a vital role in walking, running, and jumping.

Dr. McBride offers these suggestions for strengthening the hamstrings.

- Weight Training to improve hamstring strength.
- Stretching to improve hamstring flexibility.
- Plyometric Jumping Exercises which improve the hamstrings' firing time (the speed that a muscle contracts).

Overall improved fitness is one of the great benefits of martial arts training, and Dr. McBride notes that improving strength and conditioning in general helps prevent ACL, and other types of sports injuries.