

Olympics 2012: Treating Female Athletes

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Editor's Note:

The 2012 Olympics represents a watershed for female athletes. Not only do women outnumber men on the US National Team, but for the first time, all participating countries will have sent female athletes to the competition. According to Abigail K. Allen, MD, a pediatric orthopedic surgeon at the Mount Sinai College of Medicine in New York City who manages many young athletes and Olympic hopefuls, the 2012 games are mirroring what has already been happening for years in the United States: An increasing number of women are becoming involved in sports. Medscape interviewed Dr. Allen about the challenges involved in treating female athletes.

Medscape: Studies show that female athletes are more prone to injury than male athletes. Can you elaborate on the specific types of injuries that women are more susceptible to?

Dr. Allen: Historically in sports, and even just several decades ago, sports were thought of as male activities; females didn't really play sports as much. But now, more and more females are playing sports. And more and more females are getting injured more commonly than males -- so they are not really created equal.

The most classic example of injury that female athletes are more prone to is the anterior cruciate ligament (ACL) tear. As females participate in sports more and more, they are getting the same injuries as males but at a higher rate. I think the incidence of ACL tears in female college soccer players is about 5%, which is pretty high; it's actually about 3 times higher than for male soccer players.

Medscape: What are some of the reasons why women are injured more often than men? How much of it relates to intrinsic biologic differences vs the way they're trained?

Dr. Allen: The reasons behind this are probably multifactorial, but it is thought to be potentially hormone related or anatomy related, because the notch in the knee is shaped a little differently in the female.

Differences in landing mechanics have been proposed as well. Females don't land the same way as males. They are thought to land a little more knock-kneed and not squatting down as much as how a male would land. Nowadays, a lot of the training programs focus on landing to try to decrease the incidence of ACL tears.

Medscape: Do you think training in landing mechanics is something that physicians should recommend, or is more research needed in this area?

Dr. Allen: This research is from a few years ago, so people are recommending it now.

Medscape: What research related to female athletes are you most enthusiastic about?

Dr. Allen: I've always been intrigued by the huge studies on improving landing mechanics and proprioception of the female athlete -- essentially, to get them to jump and land like a male so that they don't get ACL injuries as much. There are some studies that show that these training programs work.

Medscape: What research is lacking in this area?

Dr. Allen: You could think of this as a new frontier because females are just now becoming athletes and elite athletes. It is more common for females to play sports nowadays, even from childhood. Doing research, even if it is reproducing in a female population the same research that has been done in males in the past, would be beneficial. Research is lacking in the female population in general, because we haven't been playing sports as much as the male population until recent years.

Medscape: What should the medical community be doing to better cater to female athletes?

Dr. Allen: It goes back to the concept of being a team. It's partly about the physician gaining knowledge and trying to do things preventatively, but it's not just the role of the physician. It's also the athlete, the athlete's family, the coach, the athletic trainer, etc. It's about just being aware that females are athletes nowadays and that they can get the same injuries as men.

Also, the injury may not be the musculoskeletal injury that one always thinks of, such as a fracture or a sprain or an ACL tear. Especially in the female population, one should be aware of the Female Athlete Triad: disordered eating, amenorrhea, and resultant osteoporosis. The physicians (whether they be orthopedic or primary care physicians), the coaches, and the family should not just ask how Sally's ankle is doing but also make sure that they address her eating habits and ensure that she is menstruating relatively regularly.

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