Injured Ballet Dancers Are Often Forgotten Child Athletes

BY LINDA LITTLE
Contributing Writer

LAS VEGAS — The worst advice a physician can give to an injured young ballet dancer is to "quit dancing," a San Francisco sports medicine physician said at a meeting sponsored by the American Academy of Pediatrics and California Chapter 2 of the AAP.

"This is the last time you will see this girl. This will drive [her] into the arms of irregular practitioners," said James G. Garrick, M.D., director of the Center for Sports Medicine, Saint Francis Memorial Hospital, San Francisco.

Physicians must realize that these are committed young people who follow instructions. "There are more little girls taking ballet than little boys playing football, soccer, or baseball," Dr. Garrick commented. Limiting ballet while doing other exercises works when ballet dancers are injured.

Seventy-seven percent of ballet injuries occur in females, with 32% occurring between the ages of 12 and 17 years. Injuries usually are in the lower body—26% occurring in the foot, 21% in the knee, and 17% in the ankle. But in student dancers, one-third of injuries occur in the foot and toes.

Younger dancers have more foot injuries, said Dr. Garrick, whose clinic has treated more than 5,000 ballet dancers. "They have more foot injuries because they are too young to take care of their feet. In time, they learn."

But fortunately, the injury rate is quite low in the younger ages and only starts to rise in the teenage years when "girls get pretty serious about dancing," he said. These girls are taking two or three dance classes a day, three or four times a week.

Most of the injuries—42%—are attributed to overuse, Dr. Garrick said. Overuse injuries are highest among younger dancers.

Dancers shouldn't be told to stop dancing when an injury occurs; instead they should be asked to limit ballet and do other exercises.

Ballet also requires abnormal body motion with femoral retroversion, hyperextended knees, excessive ankle dorsiflexion, and excessive ankle plantar flexion.

When an injury does occur, physicians should request that the dancer limit her ballet until the injury heals instead of requesting she stop dancing. Dr. Garrick said a dancer can be asked to not jump and make quick turns, and to do more barre work where there is support and they are working on extending range of motion in a way that doesn't require strength.

He recommended Pilates and an exercise bicycle for dancers to stay in shape once an injury occurs; running should be avoided.

"Always provide an alternative for time missed from dancing," he said. "Recommend exercise that doesn't require painful motion of anything that will worsen the injury."

Begin isometrics on the day of injury. Use electrical muscle stimulation, if possible, and resistance bands to strengthen muscles with limited range of motion exercises, he said.

Ankle sprains are the most common acute injury and usually are lateral. Dr. Garrick recommended horseshoe compression in the area to prevent swelling. "It's important to get some compression in this area." If the ankle swells, then there is a loss of motion and then a loss of muscle strength, which makes patients more apt to have future sprained ankles.

Another common injury is posterior ankle impingement in the back of the ankle. "This usually occurs in a dancer's career when they are starting to get very serious, commonly in ages 15-19 years," he said. "Often it occurs with intense rehearsals or preparing for auditions."

Physicians need to reproduce the pain actively or passively to diagnose. If taking x-rays, then the ankle should be flexed and bearing weight if possible. At times, MRI is necessary and can reveal cysts or ganglia, compromised articular cartilage, or posterior talus.

Other injuries that can occur are stress fractures, knee injuries, hip pain, and spondylolysis.

Dr. Garrick said surgery isn't commonly used in ballet dancers, adding that few procedures are effective for these injuries. "There are minor complications in many operations that are disasters for ballet dancers," he said. ■

Sports Injury Prevention Starts in MD's Office

BY SHARON WORCESTER
Tallahassee Bureau

BAL HARBOUR, FLA. — In the 1970s, only about 20,000 girls in the United States were involved in high school sports. Now more than 3 million girls participate in sports at that level, and that means primary care physicians are seeing more sports-related injuries, Jordan Metzl, M.D., said at the annual Masters of Pediatrics conference sponsored by the University of Miami.

In fact, studies suggest sports are the most common source of musculoskeletal problems seen in youngsters, said Dr. Metzl, medical director at the Sports Medicine Institute for Young Athletes, New York.

Girls are particularly prone to certain injuries and problems, including anterior cruciate ligament tears (fourfold increased risk compared with boys), stress fractures, and problems associated with the female athlete triad, which includes amenorrhea, anorexia athletica, and osteoporosis, he said.

Primary care physicians can help prevent or provide early recognition of these sports-related injuries and health problems because they see girls at a young age, often before they become highly competitive, he added.

The following tips are helpful in identifying sports-related problems in teen girls:

▶ Provide education about injury prevention, and screen for things such as delayed menarche and bone health at every opportunity, Dr. Metzl advised.

It helps to keep in mind stages of development. For example, a girl's axis of rotation, which is important in many sports such as ice-skating and gymnastics, can change dramatically during Tanner stage IV-V, and this is the time when disordered eating is most likely to emerge.

▶ Weight loss of more than 5% of body weight in the absence of medical illness, along with excessive fear of obesity and severe calorie restrictions, could be an indicator of anorexia athletica. Primary amenorrhea, gastrointestinal complaints, and compulsive exercise also can suggest this.

▶ Remember the importance of early bone health. Bone mass peaks at age 31 years; osteopenic teens become osteopenic adults, Dr. Metzl said.

To promote good bone health, advise young patients—particularly those who are active in sports—to maintain an intake of 1,500 mg/day of calcium.

A landmark study in the early 1990s showed that young girls randomized to receive a 500-mg supplement of calcium citrate (for an average total of 1,350 mg/day) had a significant (1.3%) increase of 24 g in total body and spine bone mineral density after 18 months, compared with those who did not receive a calcium supplement (and who had an average daily calcium intake of 940 mg), he said (JAMA 1993;270:841-4).

The investigators concluded that this increase could protect against future osteoporotic fractures.

Dr. Metzl also recommends 400 units of vitamin D daily to promote bone health.

When evaluating a patient with an injury or sports-related complaint, consider not only the patient's level of activity, but also biomechanics and bone density, he advised.

It's not enough to say, "Just stay off of it until you feel better," Dr. Metzl noted. ■

High School Coaches Lack First-Aid, Injury Treatment Skills

BY MICHELE G. SULLIVAN
Mid-Atlantic Bureau

NASHVILLE, TENN. — High school coaches might not have the first-aid knowledge necessary to deal with athletic injuries, Kirk Armstrong reported in a poster at the annual meeting of the American College of Sports Medicine.

"Coaches will be the first to tell you they know about injury prevention, but they really don't possess the knowledge needed to deal with the injuries sustained, and medical personnel aren't available in most high schools," Mr. Armstrong of Middle Tennessee State University, Murfreesboro, said in an interview.

Mr. Armstrong, a certified athletic trainer, asked 123 high school basketball coaches in Tennessee and Kentucky to complete a modified, 38-question American Red Cross first-aid exam. Most of the coaches (81%) were from Tennessee, and had an average of almost 15 years' experience. The Kentucky coaches had an average of 11 years' experience.

Only a third of the coaches achieved a passing score on the first-aid assessment; almost two-thirds (63%) lacked a current first-aid certification.

"This [number] is extremely low," Mr. Armstrong told this newspaper, particularly in light of some of his other findings. At most high schools in those states, coaches are the only adult with first-aid knowledge available at either practices or games. Almost no schools had a physician at games or practices, and only 26% of Kentucky and 46% of Tennessee schools had a certified athletic trainer at practices and games.

A certified athletic trainer must have at least a bachelor's degree, hold current first-aid and automatic external defibrillator certification, and receive training in injury management, bandaging, splinting, wound care, and preparing patients for transport, Mr. Armstrong said.

The lack of first-aid skills among coaches is a worry, Mr. Armstrong said, but there's not much to be done about it. Only five states mandate coaches that be certified, although most state athletic associations impose bylaws requiring certification. "But that's not anything that can really be enforced," he said. ■