Figure skating safety

children's MEDICAL CENTER
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A PARENT'S GUIDE FOR GETTING KIDS BACK IN THE GAME

Young skaters can injure themselves when they increase the intensity and volume of skating and when going through their growth spurt. This reference guide provides information on the most common figure skating injuries that require treatment.

FOOT AND ANKLE INJURIES

The most frequent injuries in figure skating involve the foot and ankle. One such injury is **lace bite**. This is an irritation of the tendons on the front of the ankle and top of the foot due to the rubbing of a tight or improperly fitting boot. Lace bite usually can be treated by adjusting the placement and padding of the boot's tongue or adjusting the style of lacing the boot.

Another common injury in figure skating is a **lateral ankle sprain**. A lateral ankle sprain causes damage to the ligaments just below the bone on the outside of the ankle. In some cases a "pop" is felt or heard by the athlete. This injury occurs by rolling the ankle over the outside of the foot. This can happen when landing from a jump or falling out of a turn during a cross training session.

Figure skaters are more susceptible to ankle injuries during off-ice training. This is because the muscles that stabilize the ankle may not be as strong since the boot provides such rigid support. Often, the muscles that are relatively weak in the young skater are those that allow the ankle to be dorsiflexed or "pulled upward." Strengthening this muscle group helps prevent some lower extremity injuries.

Treatment recommendations vary with the severity of the ankle sprain:

- Mild sprains require rest, but not necessarily medical treatment (follow the PRICE treatment plan, printed on back).
- Injuries with persistent swelling, pain or any deformity should be seen by a physician.

HIP INJURIES

Muscle strains of the hip, groin and abdomen are commonly seen in figure skating. These injuries usually are the result of a routine that includes performing multiple jumps or continuing to practice when the athlete is fatigued. Many skaters have relatively weak core muscles (back/abdomen/trunk) and an imbalance in flexibility which may contribute to soft tissue injuries. Proper warm-up, stretching, strengthening and cool down of identified areas of limited flexibility and weakness can help prevent muscle strains.

Hip contusions due to falls on the outside of the hip are common and cause bruising, swelling and tenderness. Padding the area may prevent some injuries. Treatment with PRICE and analgesics are recommended.

Overuse hip injuries in figure skating occur when a specific area of the hip sustains repetitive stresses and trauma. These commonly occur as a skater increases the number and difficulty of jumps, such as when beginning to work on double Axel or triple jumps.

It is important to understand that in order to increase the number of revolutions of jumps, the skater has to enter a jump at a faster speed rather than simply trying to jump higher. Many skaters will "throw" themselves into a jump, which commonly leads to hip and groin injuries. These injuries often go unnoticed by the athlete for an extended amount of time before eventually becoming debilitating. Symptoms of an overuse injury to the hip generally start out as vague pain that increases over time. The pain will begin to increase with activity. Eventually, the pain may focus more onto a specific point, hurt at night and cause increased discomfort when the hip is flexed forward. Figure skaters who experience these symptoms should be evaluated by a sports medicine physician to determine the cause and develop a treatment plan. Most of these injuries require relative rest, and an appropriate rehabilitation exercise program

KNEE INJURIES

Knee pain that comes on suddenly and pain that develops slowly are both common in figure skating. Falls are routine in figure skating, so **knee contusions**, deep bruises, are common. Knee contusions can be painful, discolored and swollen for weeks. Athletes should see a primary care physician or sports medicine physician if they are unable to walk and bear weight normally or if pain and/or swelling persist after PRICE treatment. Training in proper jumping and landing technique may help to prevent this injury.

Knee pain that comes on slowly over time can indicate other problems, such as:

- **Patello-femoral Pain Syndrome (Runner's Knee)** – pain in the front of the knee related to muscle and tissue stress around the knee cap. This can be addressed with proper training in physical therapy.
- **Osteochondritis Dissecans** – a defect in the knee's cartilage that can become evident over time during repetitive activity such as jumping.
- **Osgood-Schlatter Disease** – stress-related inflammation in a growth center at the front of the knee leading to a painful, swollen, tender bump.

The Sports Medicine Center at Children's offers the only comprehensive, integrated program in North Texas specifically designed for young and growing athletes. The center goes beyond treatment and rehabilitation of traumatic injuries that occur on the playing field to problems associated with sports participation, including cardiac disorders, asthma and nutrition.

The Children's Sports Medicine Center at the Legacy campus in Plano features a 5,000-square-foot facility complete with diagnostic imaging capabilities, a dedicated sports therapy gym, video motion analysis, isokinetic muscle testing and state-of-the-art rehabilitation equipment – all geared to provide your child with the best medical evaluation by the experts treating young and growing athletes.

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BACK PAIN

Figure skating puts a lot of demand on a young skater's back due to repetitive maneuvers that require hyperextension and hyperflexion of the back and sudden changes in direction. Some injuries to the back occur suddenly, and are known as **back strain**. Others occur more gradually, especially if the body doesn't have time to recover properly.

Over time, repeated hyperextension of the low back can cause:

- **Spondylolysis** – a stress fracture of the bones in the lower spine, or lumbar vertebrae.
- **Spondylolisthesis** – the lumbar vertebrae slip forward, if an athlete with a stress fracture continues to participate in the sport. This is much more serious, and can lead to continued pain that may require treatment.

Therefore, it is important that skaters experiencing lower back pain modify their skating until evaluated by their physician or a sports medicine specialist.

WEIGHT MANAGEMENT

Figure skaters should stay close to their competition weight during the off-season to avoid dangerous weight-cutting practices for the competitive season. Figure skaters who desire to lose weight should not lose more than 1-2 pounds a week to avoid breakdown of lean body mass. Once figure skaters achieve a healthy body weight, weight maintenance should be emphasized.

Weight loss is best achieved using a combination of reducing caloric intake and increasing calories burned. Nutrition tips for good weight control include:

- Give your body energy from sources of carbohydrates, proteins and fats. Do not omit any food groups.
- Choose whole-grain foods, lean protein and healthy fats at meal times.
- Eat a balanced diet rich in fruits, vegetables and fiber.
- Drink calorie-free beverages; eat fresh fruits instead of drinking fruit juices.
- Watch your portion sizes.
- Choose low-fat dairy products.
- Do not skip meals. Eat a healthy snack if hungry in between meals.
- Limit high-calorie foods with added sugar and fat – read food labels to compare calories and look for reduced-sugar and reduced-fat varieties of your favorite food products.

BUMPS, BRUISES, TWISTS & MUSCLE STRAINS

These can affect all areas of the body. Recommended treatment is the PRICE formula:
Protect the area with a sling or crutches, if necessary.
Rest the injured area.
Ice the injury for 20 minutes at a time. Do not apply the ice directly to the skin.
Compress the injured area with a wrap. Do not pull tightly, as this can cut off circulation.
Elevate the injured area above the heart, if possible.

Athletes should see a pediatrician or pediatric sports medicine physician if any of these symptoms are present:

- Deformity.
- Limping that lasts more than 48 hours.
- Soft tissue swelling that gets worse the next day despite ice and over-the-counter anti-inflammatory medication such as Motrin®.
- Effusion – mobile soft tissue swelling on both sides of a joint, often easily seen at the knee or ankle.
- Pain that returns quickly with activity at the next session or is not gone after two weeks of forced rest.

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