

Allegheny General Hospital Sports Medicine Update

Spring 2008

Greentree Sports Plex

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AGH Sports Medicine is pleased to announce a partnership program with The Greentree Sportsplex. It will be called The AGH Human Motion Training Academy.

The AGH Human Motion Training Academy serves the Greater Pittsburgh and surrounding areas with specialized training to all aspiring active people and sporting programs. Our goal is simple: To bring together athletic training, strength and conditioning, and sport specific training to any athlete or active person aspiring to achieve their optimal performance levels. We believe that regardless of age, ability, or level of skill, this can be achieved. We can provide specific training to people of all ages in a safe and effective manner that will help to attain or exceed your athletic or active potential. Our services include: Functional Training, ACL injury reduction training, Return-to-throw programs, Sports specific training, corporate wellness and Transitions to Independent training.

For More information please call: (412) 359-4646.

The Importance of Cross Training

Cross training is not just for runners anymore. In the same way that runners are encouraged to vary their workouts, so should all athletes be encouraged to add a little variety into their training schedule.

Playing one sport year round may do wonders for your skills in that specific sport, but it is not benefiting your body. Your overall fitness and conditioning may be lacking. Rather than continue to improve, you will simply maintain that level of fitness. Variation in the type of activity you do for training can challenge your body in different ways, making you a better overall athlete.

In addition, cross training is also important to reduce the risk of injury from repetitive stress or overuse to a muscle. If one day instead of performing your sport you go roller blading, your body is going to use a whole new group of muscles, and these may have some carry over into your sport of choice.

It is not only important to pay attention to the major muscle groups; you also need to address your core muscles. The core muscles lie deep within the torso and attach to the spine and pelvis. They are responsible for providing a strong base of support and foundation for all other movements.

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Benefits of Cross- training

- *Improves overall fitness and performance*
 - *Reduces the risk of injury*
 - *Gives bones, muscles, and joints a rest from the same repetitive stresses*
 - *Keeps interest in a sport*
 - *Helps a person to become a more rounded athlete*
-

Cross Training (Cont)

Core strengthening is essential to sports performance and injury prevention. One of the benefits of core training is to develop functional fitness.

Remember, variety is the spice of life; add a little variety to your training regimen or work out schedule.

"The harder you have to train your body for just one activity, the more stress you put on your bones and muscles involved in that one activity, so the more you do the better you get, the more you risk overuse, and the greater your risk of injury." (Dr. Todd Schlifstein, DO NYU Medical Center)

Melissa Bauer, North Hills

Prevention and Treatment of Blisters

Cause: Heat, Friction, and Moisture

A blister usually develops when there is friction or irritation to the surface layer of the skin. This friction causes the top layer of skin to separate from the second layer of skin. Fluid then fills in between the two layers of skin. Shoes, socks, or even sports equipment can cause the friction. Those moist, warm conditions are perfect for the formation of blisters.

Prevention:

1. Minimize friction with appropriate footwear and socks.
2. Your shoes should fit properly. There should be a thumbs width between the end of the shoe and tip of your longest toe. Always consider that your feet can swell during activity, particularly endurance events. Athletic socks and orthotics should be worn when trying on new shoes.
3. Your socks should be made of synthetic blends, which will wick away moisture. Cotton blends absorb the moisture and can contribute to the formation of a blister. Socks are also available with a re-enforced heel to decrease friction. Socks should have a snug fit. Beware of the seams on socks which can cause friction, you can always wear your socks inside out.
4. Apply Skin Lube, Body Glide, or Vaseline to your feet before exercise to decrease friction.
5. Stay hydrated because dehydration can cause the skin to fold over itself and rub more easily.
6. Maintain sodium levels, hyponatremia can cause swelling of the hands and feet.

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Meet the Doctor

Each issue we will feature one of our orthopedic physicians. This issue features Dr. Darren Frank. Dr. Frank is one of the latest additions to our group. He was previously one of our sports medicine residents and is now one of our newest attending physicians. Meet Dr. Frank...

- **Title:** AGH Orthopedic Surgery, Sports Medicine
- **Specialty:** Orthopedic Surgery/ Sports Medicine and Arthroscopic Surgery
- **Residence:** Franklin Park, PA
- **Family:** Wife-Barbara, Children-Braden and Conner
- **Length of Time @ AGH:** 5 months, started in August 2007
- **Favorite Movie:** The Godfather
- **Dream Vacation:** Private island in Caribbean
- **Favorite Restaurant:** Sparks Steakhouse in NYC
- **Hobbies:** Sports and exercise
- **People might be surprised to know:** I have authored/co-authored several articles for medical journals in the area of sports medicine.



Dr. Darren Frank

Chronic Overuse Injuries

Nearly 200,000 teams participate in Little League Baseball annually. Increasingly, children and parents are choosing to focus on baseball year-round from a young age. It is important to recognize that young athletes are particularly vulnerable to over-use injuries of the shoulder and elbow. This type of injury, secondary to repetitive use of the shoulder and elbow, actually occurs far more frequently than does acute traumatic injury.

While chronic overuse injuries have been described in a variety of overhead activity sports, the majority occurs in young baseball players, particularly pitchers.

The shoulder and elbow are subject to tremendous stress during the throwing motion. Anatomic differences between adults and children result in distinct injury patterns unique to the skeletally immature athlete. The shoulder and elbow in children have structures known as growth plates, which allow continued growth of the arm throughout childhood. These structures are the weakest link in the kinetic chain during the throwing motion, and poorly tolerate the stresses of throwing.

"Little League shoulder" and "Little League Elbow" are terms that refer to the repetitive use injuries of growth plates in the shoulder and elbow respectively. Most cases of growth plate injury can be treated with a period of rest and symptomatic treatment, followed by a gradual return to throwing. However, continued pitching with injured growth plates can result in growth disturbance or fracture.

More important than treatment is prevention of injury in young throwers, which should begin as soon as participation in organized baseball starts. The simplest way to decrease the stress of throwing is to limit the number of pitches thrown. The USA Baseball Medical and Safety Advisory Committee has established guidelines for specific pitch counts and rest between pitching starts, which take into consideration both the age of the thrower and the number of pitches thrown

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Overuse Injuries (Cont)

per outing.

Young athletes should also avoid throwing breaking pitches (sliders, curve balls) until skeletal maturity, as these pitches are particularly harmful to the joints. Further, a minimum of 2-3 months of complete rest from throwing per year is recommended. Finally, proper mechanics of pitching should be taught and monitored from a young age to minimize trauma to the shoulder and elbow.

A bit of knowledge, some good sense, and adherence to simple guidelines can help protect the health of your young throwing athlete, even if he or she wishes to compete beyond a traditional baseball season.

Dr. Darren Frank

Shin Splint Care

In the next few months, winter sports will start coming to an end, and athletes will start aggressively training for spring sports. The training will most likely begin inside (especially in Western Pennsylvania) and gradually transition to outdoors and the natural environment for that sport. The change of environment and the enduring training for these sports can bring about many overuse injuries.

A very common overuse injury in athletes is Medial Tibial Stress Syndrome (MTSS), which is also known as "shin splints". They are caused by overload on the tibia (shin bone) and the connective tissues that attach your muscles to the bone. This overload can result in the tendons being partially torn away from the bone subsequently causing pain and mild swelling along the inner part of the lower leg. The pain is often worse with running or other weight bearing exercises especially on hard surfaces.

Changes in training, such as: exercising on hard surfaces or uneven ground, beginning an exercise program after a long lay off period, increasing exercise intensity or duration too quickly, exercising in worn out or ill fitting shoes, and/or excessive uphill or downhill running can cause the pain. Biomechanical deficiencies can also typically contribute to shin splints. Flat feet commonly result in this overuse condition, because they cause over-pronation (excessive inward rolling of the foot and ankle)

Athletes should work with their coaches, athletic trainers, and physicians to both prevent and treat shin splints; prevention being the most important. Proper shoe selection is critical. Orthotics are also important for those who have a biomechanical issue. Coaches, athletic trainers, and athletes should also work together to create a good warm up, effective stretching, and strengthening programs throughout the season. Proper physician follow-up is necessary when the conservative treatment is not effective. Do not try and work through the pain, your body will let you know when enough is enough!

Erica Camardese, Avonworth

Blisters (cont)

Care:

1. If you develop a blister try to keep the blister from getting bigger and avoid infection. Signs of infection include pus draining from the blister, red or warm skin, and red streaks leading away from the blister.
2. Small-unbroken blisters that do not cause discomfort can be left alone.
3. Large painful blisters can be drained, but the top layer of skin should be left alone. First you should clean the blister with anti-bacterial soap and water. Sterilize a needle over a flame until the tip glows red. Allow the needle to cool and puncture a small hole at the edge of the blister. Drain the fluid by applying gentle pressure. Apply antibiotic ointment and cover with a bandage.

Carey Cardwell, Hampton

