



ATHLETE HEALTH AND INJURY PREVENTION INFORMATION PACKET

Providing an overview of **common injuries, treatment options and injury prevention** for a wide range of sports and activities, and an overview of the role your Athletic Trainer plays in keeping student-athletes safe throughout the school year.



**KNEE
INJURIES**



**RUNNING
ATHLETES**



**HEAD
INJURIES**



**OVERHEAD
ATHLETES**

HOW ATHLETIC TRAINERS ASSESS, TREAT & MANAGE



KNEE INJURIES



Knee injuries are some of the most common injuries in sports, particularly within the adolescent population.

As athletes grow, they need to strengthen the musculature in their lower body, hips and core to protect their knees from injury. Acute injuries, such as ligament ruptures, typically occur due to mechanisms such as a direct blow, twisting or falling on the knee. Overuse injuries like tendinitis are chronic conditions that occur commonly in adolescent athletes as growth occurs; additional stress on the knee joint due to repetitive motions leads to irritation of the tendon and knee structures.

HOW CAN AN ATHLETIC TRAINER HELP?



Athletic trainers can respond quickly to acute injuries to evaluate and determine if the athlete is safe to be moved, bear weight on their leg, and work with athletes through the initial phases of treatment and rehabilitation by working on decreasing pain and swelling, and strengthening the surrounding structures.

Chronic injuries can restrict athletes play significantly during the season. Athletic trainers work with to provide injury prevention training as well as activity modification.

Once symptoms have resolved and athlete has been cleared to begin activity, athlete will begin the return-to-play protocol supervised by the Athletic Trainer.



When to seek further treatment...



When serious ligament injuries occur and chronic injuries need additional rest and attention, physical therapists work with athletes to decrease pain and get them through their recovery.

Together AT and PT create treatment and rehabilitation plans to address not only the initial injury but also how to prevent further injury.

COMMON KNEE INJURIES

ACL Injury (tears, sprains)

An ACL injury is a tear of the anterior cruciate ligament (ACL), one of four ligaments that connect your shinbone to your thighbone. An ACL injury is particularly common in people who play basketball, soccer or other sports that require sudden changes in direction.

Fractures

The bones of the knee, including the kneecap (patella), can be broken during falls or auto accidents. Also, people whose bones have been weakened by osteoporosis can sometimes sustain a knee fracture simply by stepping wrong.

Torn Meniscus

The meniscus is the tough, rubbery cartilage that acts as a shock absorber between your shinbone and thighbone. It can be torn if you suddenly twist your knee while bearing weight on it.

Knee Bursitis

Some knee injuries cause inflammation in the bursae, the small sacs of fluid that cushion the outside of your knee joint so that tendons and ligaments glide smoothly over the joint.



Patellar Tendinitis

Tendinitis causes irritation and inflammation of one or more tendons — the thick, fibrous tissues that attach muscles to bones. This inflammation can happen when there's an injury to the patellar tendon, which runs from the kneecap (patella) to the shinbone and allows you to kick, run and jump. Runners, skiers, cyclists, and those involved in jumping sports and activities may develop patellar tendinitis.



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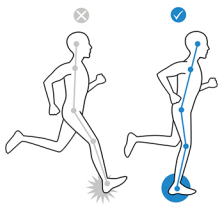
RUNNING INJURIES



Injuries to Runners: An Overview

Running injuries can present in different forms – from mild, nagging aches and pain to severe trauma – and can include things like stress fractures, shin splints and tendonitis, as well as acute injuries such as ankle sprains and muscle strains. Running injuries are most commonly caused by muscle weakness or from overuse. Because of the wide variety and range of severity of running injuries, it is important that any pain or discomfort experienced while running is addressed early to prevent worsening of symptoms and/or the potential for acute injury.

HOW CAN AN ATHLETIC TRAINER HELP?



Proper form, equipment and warm-up/cool-down routines are vital to maintaining good health as a runner. Athletic trainers can provide athletes with guidance, along with stretching and strengthening programs, as a preventative measure to decrease the risk of running injuries and to improve overall performance.

If an injury occurs, the athletic trainer will assess and evaluate for the extent of injury and provide recommendations for management and treatment or referral to a physician or physical therapist when needed.



When to seek further treatment...



Injuries sustained while running need time to recover and rehabilitate to prevent further injury and/or long-term problems.

Physical therapists can work with athletes through the healing process and provide treatment and rehab exercises. This can include:

- **Manual Therapy**
- **Exercise and strengthening programs**
- **Trigger Point Dry Needling**
- **Blood Flow Restriction Therapy**

COMMON RUNNING INJURIES

“Runner’s Knee” (Patellofemoral Syndrome)

“Runner’s Knee” most commonly presents as pain in the front of the knee or around the kneecap, usually caused by overuse. Symptoms can include dull ache or pain in the knee that gets worse with prolonged sitting or exercise, running, jumping or squatting.

Achilles Tendinitis

Inflammation of the achilles tendon, which connects your calf to your heel. Symptoms include dull pain in the lower leg above the heel, swelling of the achilles tendon and limited range of motion.

IT Band Syndrome

Pain in the iliotibial band (IT Band), a connective tissue that runs from the outer hip to the knee, caused by friction of the band rubbing against the leg bone. Symptoms can include pain on the outer side of the leg, just above the knee.

Shin Splints

Pain that occurs in the front or inner parts of the lower leg along the shinbone. If left untreated, shin splints can develop into stress fractures.

Plantar Fasciitis

A common foot injury that involves irritation or degeneration of the fascia, a thick layer of tissue at the bottom of a foot. Symptoms can include pain under the heel or foot or a burning sensation under the foot during or after walking/running.

Hamstring Injuries

Strains or tears of the hamstring muscles running between the hip and the knee. Symptoms can include dull pain in the back of the legs, a hamstring that is tender to the touch, and/or weakness in the hamstring.

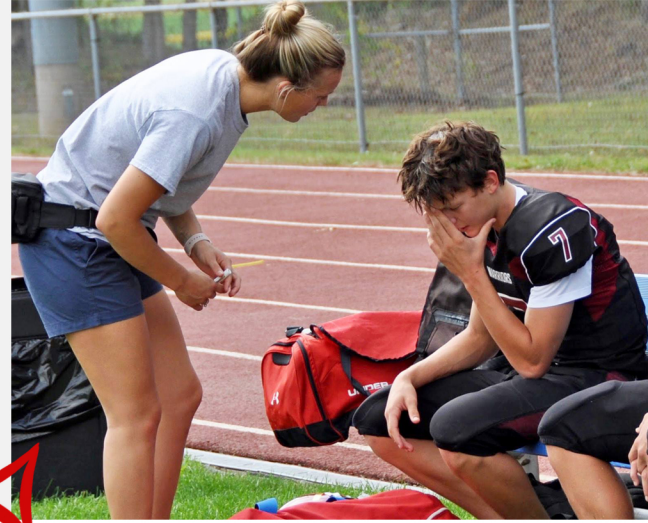


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CONCUSSIONS



What is a CONCUSSION?



A concussion is a type of traumatic brain injury (TBI) caused by a blow to the head or body that causes the brain to move rapidly inside the skull. Symptoms such as **headache, dizziness, and sensitivity to light and sounds**, along with many other cognitive changes, can occur.

After a concussion has been sustained, it is vital that the athlete is given time away from athletic participation to give the brain time to heal and recover.

HOW CAN AN ATHLETIC TRAINER HELP?



AT performs initial assessment after injury to examine vital signs, coordination and balance, and cognitive status including memory and processing speed.

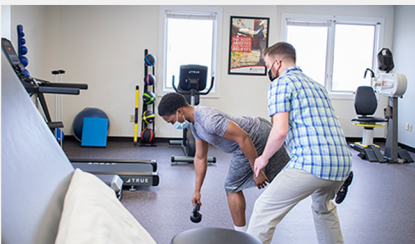
AT will provide recommendations to the athlete and family regarding referral to a physician and home care instructions.



Once symptoms have resolved and athlete has been cleared to begin activity, athlete will begin the return-to-play protocol supervised by the Athletic Trainer.

When to seek further treatment...

If an athlete experiences prolonged symptoms such as headaches, balance and coordination impairments or neck pain, **physical therapists can work with them to decrease discomfort and improve function**. Also, many PTSMC clinics have physical therapists who specialize in vestibular therapy, which can address ongoing symptoms.



SIGNS + SYMPTOMS

Signs Observed

- Loss of consciousness (LOC,) even briefly
- Vomiting or seizures
- Appearing "dazed or confused"
- Difficulty following instructions
- Moving clumsily
- Difficulty with memory pre/post injury
- Mood or behavior changes

Symptoms Reported by Athlete

- Headache or "pressure in the head"
- Nausea or vomiting
- Dizziness (light-headedness)
- Double vision or blurry vision
- Fatigue



Latent Symptoms Often Reported

- Neck Pain
- Light and motion sensitivity
- Trouble sleeping
- Trouble reading or watching movement
- Mental slowness or fogginess in head
- Imbalance



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OVERHEAD INJURIES



Overhead Injuries: An Overview

Overhead injuries can happen to athletes in all sports, but most typically occur to those who perform repetitive overhead motions, such as in baseball, volleyball, tennis and swimming.

Overhead injuries are typically broken into two categories: acute or chronic. Acute injuries, such as muscle strains and tears, can occur from improper movement, while chronic injuries like tendinitis and shoulder instability develop over time and can cause long term impairments in function and performance.

HOW CAN AN ATHLETIC TRAINER HELP?

Athletic trainers work with coaches to monitor and evaluate overhead motions in athletes to identify improper technique and make modifications for safer movement to reduce the potential risk of injury.



When an injury occurs, the athletic trainer will assess and evaluate the extent of injury and then provide recommendations for management and treatment - or a referral to a physician, specialist or physical therapist if needed.

As the athlete recovers from injury, the athletic trainer will continue to work with them to ensure that their body mechanics are restored for a safe return to activity.

When to seek further treatment...



Untreated shoulder injuries can lead to lifelong functional impairments.

Along with athletic trainers, physical therapists can work with athletes throughout the healing process and provide treatment and rehab exercises to prevent future injuries.

The goal of physical therapy is to restore function while strengthening the surrounding structures to prevent further injury, and to ultimately help the athlete return to activity safely. Treatment for overhead injuries likely includes manual therapy, customized strength and stretching routines and coaching on proper technique.

COMMON OVERHEAD INJURIES

Rotator Cuff Strain or Tear

The rotator cuff includes the four main muscles and tendons that stabilize the shoulder through its full range of motion. A strain to the muscles or tear of the tendons in the rotator cuff are common amongst overhead athletes who perform repeated overhead motions. Symptoms of a rotator cuff injury can include pain from the upper shoulder down to the elbow, limited range of motion, a dull, aching pain in the shoulder and shoulder/arm weakness.

Shoulder Impingement

Shoulder impingement occurs when one or more rotator cuff tendons get trapped and pinched between shoulder bones during arm movement, causing extreme pain and swelling/inflammation of the rotator cuff.

Shoulder Instability

Also called "Shoulder Looseness," shoulder instability occurs when the labrum is damaged or torn, which causes joint shoulder weakness and a feeling of the shoulder coming out of its socket. Typical causes of this are either damage from a sudden dislocation or damage due to overuse/repetitive motion.



Elbow Tendinitis

Elbow tendinitis, also referred to as "tennis elbow" or "golfer's elbow," is the inflammation of the tendons connecting the muscles of the lower arm to the bone. This typically occurs when a person injures or overuses a tendon. Elbow tendinitis is most commonly seen in baseball/softball, tennis and golf athletes. Symptoms can include a dull ache/pain in and around the elbow and radiating into the upper or lower arm, especially following activity.



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WHAT DOES AN ATHLETIC TRAINER DO?

As certified, licensed healthcare professionals, Athletic Trainers are **the first ones on the field or court to treat an injured athlete.** They are highly-qualified, multi-skilled healthcare professionals who are often the first to evaluate an injured athlete to determine the cause and severity of an injury, and the next steps for treatment.



The work of an athletic trainer is not over once the athlete has left the field.

ATs work with coaches, athletes, families, physicians, physical therapists and emergency crews to guide the athlete through the injury and recovery process from the initial evaluation to creating a custom rehabilitation program to get athletes back to their sport.

Common Injuries Assessed by ATs Include:

- Trauma (broken bones, fractures, cardiac-arrest)
- Concussion
- Respiratory issues
- Dehydration-related issues
- Muscle sprains and strains



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