SPORTS TIP

FOOTBALL INJURIES AND PREVENTION

Football remains one of the most popular youth sports played in the United States. Current estimates are close to 3 million children between the ages of 6 and 14 play football. While youth football has high numbers of participants, it also has the highest injury rate in sports. It is estimated that over 80 percent of children will sustain an injury at some point playing football. Recently, injuries sustained in football, particularly involving the head and neck, have received a lot of attention in the media and the medical literature. As a collision sport that involves tackling, there are clearly intrinsic hazards to playing the game that cannot be completely reduced.

Risk Factors for Injury in Football

Injuries in youth football occur at higher rates in games then in practices. Most studies have shown that overall incidence and severity of football injuries increases with age and higher levels of play. Some studies have shown that injury rates in youth football are similar to other youth sports, but football has a higher incidence of serious and catastrophic injuries. Tackling remains one of the biggest risk factors for the high injury rate in football. The majority of concussions sustained in youth football are from tackling or being tackled. The large amount of force required to tackle an opponent or resist being brought to the ground makes football players prone to injury. Some physicians have recommended minimizing the number of contact practices in youth football, while others have called for postponing tackling until a set age (similar to raising the checking age in youth hockey).

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Common Injuries in Football Players

Head and Neck Injuries

Concussions are one of the most common injuries in youth football. A concussion can result in abnormalities of balance, cognition and vision. Sometimes a concussion can be challenging to diagnose. Coaches and parents should be aware of the most common symptoms including headache, confusion, dizziness, loss of balance and light sensitivity. A player with unresolved symptoms should not be allowed back on the field until cleared by a medical professional. Currently, there is no such thing as a concussion proof football helmet. Prevention strategies to minimize concussion in youth football have focused on removing hits to the head in defenseless players, eliminating spear tackling, teaching good tackling fundamentals,
and encouraging a neck muscle strengthening program.

Shoulder Injuries

Despite shoulder pads, injuries to the shoulder area are seen in football players. Broken collarbones, AC joint separations, rotator cuff contusions, and shoulder instability are the most commonly seen injuries involving the shoulder in these athletes. Quarterbacks and defensive backs are the positions with the highest risk for shoulder injuries. Lineman suffer more rotator cuff contusions and posterior instability of their shoulders.

Knee Injuries

The most commonly injured area in football players of any age. The most common positions to sustain a knee injury playing football are running backs and linebackers. Lineman are at high risk for MCL injuries and may benefit from playing with a hinged knee brace. ACL injuries are also seen on the football field and playing an offensive position is a known risk factor for this injury (tight end, wide receiver, or running back).

Ankle Injuries

Ankle sprains are another frequent injury seen in youth football players. Sometimes this requires the player to miss some time from games and practices. Initial treatment consists of ice, anti-inflammatories, ankle brace/taping and physical therapy. Some additional rest and time away from football should be considered after the first significant ankle sprain to help minimize the chance of the player developing recurrent injuries to the ankle.

Overuse Injuries

These tend to occur during fall camp or any time when the player's training exceeds their ability to properly recover. Osgood-Schlatter (tibial tubercle apophysitis) and Sinding-Larsen-Johansson (inferior pole patella apophysitis) are fairly common overuse injuries around the knee that usually respond to ice, anti-inflammatory medication and a physical therapy program targeting quadriceps and core strengthening and stretching. Overuse injuries can also be seen involving the foot and ankle, back and elbow.

Heat Injuries

Heat Injuries are a serious concern for youth football players during fall camp and for those who play in warm climates. This is particularly worrisome during late August when temperatures and humidity are the highest during the year. Intense activity with full pads can result in excessive sweating depleting the body of water and nutrients. Fluid replacement is essential. The first symptoms can be muscle cramping, and if not addressed by cooling and replacement of fluids, it can evolve into heat exhaustion and even heat stroke. Special concern for heat injuries should arise when the practice or game Wet Bulb Temperature >82˚F or 28˚ C.

References

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KEY TAKE AWAY POINTS FOR INJURY PREVENTION IN FOOTBALL

- Properly fitting equipment is essential. Protective equipment from helmets to mouthguards to shoulder pads can't protect if they do not fit!
- Preseason screening health and wellness examination
- Zero tolerance for hits to the head, especially for a defenseless player
- Enforcing rules of no spear tackling, tackle with the head up, and do not lead with the crown of the helmet.
- Teach good tackling form, the player should be leading with and initiating contact with the shoulder and their head up.
- Stay hydrated during warm practices or games. Drink 500 mL of water or a sports drink 1–2 hours before and after activity up to 1.5L of fluid for every 1 kg lost during play.
- Neck muscle strengthening can be important to minimize neck fatigue and allowing the heads up position recommended for proper tackling.
- Speak with a sports medicine professional or athletic trainer if you have any concerns about injuries or prevention strategies.

The goal is to ensure that our young players heading to the field have fun, tackle with their heads up improve their skills, and enjoy playing football!

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