

# basketball injury prevention

Many basketball injuries can be prevented by increasing the level of awareness and knowledge among players, parents and coaches. Research shows that more than 200,000 young people under the age of 15 are treated in emergency rooms each year for basketball-related injuries, many of which could have been prevented. At high school and recreational levels, injuries most often happen during practice, while college players are more likely to be injured during games. Injuries are usually minor, including sprains and strains, with the knee and the ankle most susceptible. Female basketball players are also more likely to be injured and usually sustain more serious injuries than male players

## common injuries

- Ankle sprains, ligament tears, Achilles tendonitis and heel cord rupture
- Knee ligament sprains, jumper's knee (patellar tendonitis), meniscus tears and ligament tears
- Rotator cuff tendonitis/tears and impingement in the shoulder
- Jammed or broken fingers
- Muscle strains to the gastrocnemius/soleus (calves), hamstrings (back of thighs), quadriceps (front of thighs) and back



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## preventing basketball injuries

- Establish a good stretching program for the upper and lower body muscles, including the rotator cuff/shoulder, back/trunk, gastrocnemius/soleus, hamstrings, quadriceps, hip flexors (front of hips), adductors (groin) and I-T band (outside of thighs). Stretches should be static (no bounce) and held for at least 30 seconds. It is important to stretch after every practice/game.
- Establish a good strengthening program for upper and lower body muscles, including the rotator cuff/shoulder, back/trunk, ankles, quadriceps and hamstrings. Closed-chain activities (feet or hands fixed on a stable surface) are safer and provide greater strength carryover to game play as opposed to open-chain activities (arms and leg moving freely in space). Proper technique of strength training is necessary to prevent overuse injuries and develop multi-directional skills.
- Establish activities during practice that will challenge the athlete's balance reactions and body awareness.
- Establish plyometrics/agility drills during practice that include explosive/burst-like movements (jumping).
- Wear properly fitted, basketball-specific shoes. Use safety equipment including a mouth guard and knee and elbow pads. Athletes that wear glasses should use safety glasses or glass guards to protect their eyes.
- Tape or brace joints if they are unstable or have a history of repetitive injuries. Address instability with a strengthening program.
- Be proactive in learning correct basketball techniques.
- Hydrate 30 minutes prior to practice/game and drink a combination of water/sports drinks during activities. Sports drinks are only recommended if practice/game lasts longer than one and a half hours.
- The style of play by a basketball team can increase the risk of injury. The more contact that is used, the higher the incidence of injury, but proper enforcement of rules can help decrease the risk of injury.

## preseason conditioning programs

It is recommended to have a preseason, progressive conditioning program in place for young athletes to prepare their bodies for the sport. It is beneficial to start the program at least two to four weeks prior to the season to address flexibility, strength, balance/coordination, endurance, agility and basketball-specific techniques.

## warm-up guidelines

Research shows that cold muscles are more prone to injury, so always take time to warm-up and stretch. A comprehensive warm-up will take approximately 30 minutes.

- Start with five minutes of light aerobic activity, including jogging or jumping jacks, to gradually raise the heart rate and increase blood flow to muscles.
- Spend at least 15 minutes stretching, following the guidelines listed above.
- Spend five minutes on basketball-specific drills, including multi-directional dribbling and defensive slide skills.
- Finish with five minutes of high-intensity, multi-directional sprinting and jumping activity.



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1-866-205-7270