



Leon Root, MD
Pediatric Outreach Program

Exercise Safely
Reduce Injuries
Improve Sports Performance

Basketball is a fun and exciting game to play, but it can also be a physically demanding sport due to the cutting, pivoting, and landing involved. A player's body is subjected to considerable stress, and such stress can eventually lead to injury if proper preventative conditioning and physical training are not practiced.

What are the most common injuries exhibited by basketball players?

Ankle Sprains: Sprains are injuries to ankle ligaments (short bands of tissue that connect two bones) that usually occur when the athlete rolls the ankle, and the ligaments on the outside of the ankle suffer some stress. This injury occurs more often when the weight is through the front of the foot, i.e., a player lands on another player's foot or steps off an uneven surface.

Anterior Cruciate Ligament: Tearing of the ACL usually occurs when the athlete lands in an awkward position from a jump, as in bending into the knees instead of sitting back into the hips, or during a sudden twisting motion, such as rapidly running forward and backwards, moving sideways or stopping suddenly and then dashing quickly.

Why do injuries happen?

It has been shown that injuries can happen due to deficient movement patterns and poor physical conditioning which occur because athletes:

- **Lack the appropriate strength base**
- **Do not know how to move properly or efficiently**
- **Have not developed a sufficient range of motion**
- **Suffer from poor flexibility**

Are female athletes more prone to injuries than male athletes?

Some factors that contribute to injury are not only related to your movement patterns but are due to anatomical differences, and as such, some female athletes tend to move differently than their male counterparts. For example, females tend to land or take off with their knees closer together making them more prone to knee-related injuries than males.

How do I reduce injuries and improve athletic performance?

The best ways to reduce the likelihood of a basketball-related injury is to be physically prepared for the demands of the sport. By developing sufficient hip and core strength, improving movement techniques, and actively strengthening one's knees, one can not only mitigate injury but can also improve athletic performance due to the physical conditioning required.

Recommended Exercises

Develop hip and core strength

- **Supine bridge**
- **Bird dog**
- **Standard plank**
- **Side plank on elbow**

Strengthen the knees

- **Wall squats**
- **Lateral lunge**
- **Standard lunge**

Improving movement

- **Alternating single leg**
- **Single leg balance raising opposite arm and leg**
- **Single leg balance with trunk rotation**

For more information about POP or to schedule a screening at your school, please contact:

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