

# Hyperextended Knee

A hyperextended knee injury occurs when a force or excessive pressure pushes the knee beyond its normal range of motion, while the knee is resting in a straight position, and bends the knee backward to an abnormal position. Often, this is the result of bearing an excessive amount of weight on the limb. These particular injuries tend to be quite common in athletes when they land from a jump to a position where their knee is extended, or from outside forces to the knee. They are often seen in volleyball, basketball or gymnastics.

Another potential scenario for this injury is catching your foot inside of a pothole when running or walking, while the body is still progressing in a forward motion. The momentum causes the knee to be hyperextended. Injuries can range from mild up to severe based upon the amount of damage to the knee and its stabilizing structures.

However, the term hyperextended knee can also refer to people who are hypermobile (have lax ligaments) and can naturally hyper-extend their knee backwards. A “normal” knee will lock out at a certain angle, usually when the leg is straight, but in someone with hypermobility the knee can extend backwards beyond straight. In cases like this, people will often also have hypermobility in other joints. For example, they may notice that elbows hyperextend, and fingers thumbs and elbows are more mobile than normal.

Sometimes this condition is known by a more medical term: Genu recurvatum. It is diagnosed by having a knee extension greater than 5 degrees.

## Hyperextended Knee Anatomy

The knee is one of the most complex and largest joints within the human body. It connects the shin bone to the thigh bone. The smaller bone running alongside the kneecap and the tibia are the other ones making up the knee joint. The actual knee joint is made up of the two bones meeting, the tibia and the femur. The joint is called the tibiofemoral joint. Tendons are responsible for connecting the knee bone to the leg muscles responsible for moving the knee joint. The ligaments join the bones together and provide the knee with stability.

The anterior cruciate ligament (ACL) is the one that prevents the femur from sliding backward along the tibia. The medial (MCL) and lateral collateral ligaments (LCL) make sure the femur doesn't slide from one side to the other. It is the posterior cruciate ligament (PCL) that prevents the femur from sliding forward along the tibia.

The ACL is the most important ligament to prevent hyperextension of the knee. So if the ACL is lax, hyperextension is more likely.



## How to Treat a Hyperextended Knee:

### 1. Protect

Protecting the knee, stopping any activity that may cause hyperextension to the knee.

### 2. Rehab

Spend time with a physical therapist or manual therapist to ensure that you rehab the knee. Things that help include strengthening of the muscles around the knee, especially the quadriceps. Also balance exercises can help too. Building knee stability is very useful.

### 3. Ice

If you have pain associated with a hyperextended knee, you can try using ice. Apply ice to the affected knee for 5-10 minutes at a time three to five times per day. The ice will help the body to fight off inflammation and relieve pain.

### 4. Stabilisation

A knee support can provide useful stabilization during high-risk sports. Taping can also help.

### 5. Gait Analysis

A therapist or podiatrist might look at your gait to see if it can be improved either from orthotics, exercises, or gait re-training.

## Tips:

- If you have feelings of instability when trying to walk, pain or limited movement, consult a physician for an evaluation.
- If you have to undergo surgery to correct the condition, you will need six to nine months to heal.
- Physical therapy can assist you with being able to meet your goals.
- Even if you only have a mild case of hyperextension, you might still need to undergo physical therapy to restore function.
- If the ACL ligament is torn, you might have no other option than to undergo surgery.