



# NOT GETTING ENOUGH PLAY TIME?

KEEP YOUR BODY IN TOP SHAPE BY TAKING  
CARE OF IT!

**TOP 5 VOLLEYBALL INJURIES**



**NEXT LEVEL**  
P H Y S I O

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# COACHES!

We understand  
the value of your  
teams  
**reputation.**



We understand the  
importance of  
**stamina** and  
**conditioning** when it  
comes to  
performance during  
tournaments.

And of course, every  
parent and coaches  
worst nightmare... an  
**INJURY!**



# TOP 5 VOLLEYBALL INJURIES

## 1 ANKLE SPRAINS

One of the most common injuries for athletes that participate in sports involving quick, sudden changes of directions. A sprain is when there is damage to a ligament, the soft, non-contracting, tissue that connects bone to bone. There are three grades when it comes to assessing the extent of a sprain:

Grade	Anatomical Changes	Symptoms
I	Mild stretching or micro-tearing of the ligament	Tenderness, swelling, joint stiffness, mild pain with weight bearing and/or walking
II	Moderate stretching, incomplete tear	Tenderness, swelling, feelings of ankle instability, painful walking
III	Complete tear, severe swelling, bruising	Instability causing the ankle to give out with all walking and weight bearing, severe pain

Physical Therapy is the primary method for treating Grades I-III, and often Grade III.

Ankle sprains in sport occur most commonly when the foot and ankle roll in beyond its normal limits, causing an "inversion sprain" of the ankle's outer ligaments. Its trademark symptoms include swelling, tenderness to touch, and for Grade I-II ankle sprains, pain with weight bearing.

## ***How does physical therapy help treat ankle sprains?***

While every treatment session is different, often times our method for treating ankle sprains involve:

- Getting athletes out of the "pain" state- reducing inflammation, restoring mobility, normalizing walking, and improving basic function of the ankle joint back to baseline
- Education our athlete on the "why" behind the injury- what caused it in the first place and how can we minimize the risk of it happening again
- Improving balance and proprioceptive awareness
- Increase lower extremity strength and pillar stabilization
- Utilize return-to-sport drills to maximally prepare an athlete for their next practice and game.

# 2

## **ACL TEARS**

The ACL is a ligament in the knee that provides support and stability, especially for athletes who are involved in high-speed movements and quick changes of direction. Because of volleyball's high athletic demands, the chances of damaging an ACL are high - however with the proper knowledge and strengthening, volleyball players can minimize their risk of tearing.

Studies have shown that female athletes have a much higher risk of tearing their ACL than their male athlete counterparts. In fact, one study showed that female athletes are anywhere from 2-10x more likely to sustain an ACL injury.

***Athletes that undergo ACL reconstruction surgery take on average 12 months to begin to return to sport. With proper rehab and consistent strengthening, athletes return to "normal" play anywhere from 18-24 months.***

Therefore, it is especially important for female volleyball players to take action to minimize ACL injury risk and educate themselves about how they happen in the first place.

The most common movements that can cause ACL tears are:

1. Planting your foot and pivoting
2. Sudden changes in direction
3. Improperly landing from a jump

... all of these movements occur dozens of times in a volleyball game.

### **How to REDUCE RISK OF ACL TEARS**

- Educating athletes of vulnerable, high-risk positions
- Strengthening from the “top down” including hip strength, hamstring strength, and pillar stabilization
- Encouraging proper body mechanics with volleyball specific movements including diving, cutting, lunging

## **3**

## **Jumper's Knee/ Patellar Tendinitis**

Does your athlete ever complain of knee pain just below their kneecap after practice? Do they complain of front knee pain with squatting, running, and going up and down stairs? They may be suffering from jumper's knee or patellar tendinitis.

Tendinitis is the umbrella term for inflammation of a tendon - the part of the muscle that connects the thick muscle belly to the bone. The tendon is the area of the muscle that endures the most tension and stress with movement and is subject to irritation. Especially if movements are being performed incorrectly or with too much load too quickly.

Patellar tendinitis is inflammation of the patellar tendon - the tendon that connects your four quadriceps muscles into one tendon attaching to the tibia, your shin bone.

Often times, this tendon gets irritated with repetitive movements performed with non optimal biomechanics such as:

- Jumping - especially on hard surfaces
- Running
- Squatting or Lunging

Does this mean you have to completely stop performing these movements forever? **No!** But temporarily modifying your movements and participating in a proper performance physical therapy program will help you to reduce your pain, restore mobility, and improve strength in the surrounding musculature to prevent these symptoms from reoccurring.

### ***What will physical therapy look like?***

The most proven method of treating any type of tendonopathy (acute tendinitis or long standing chronic tendinosis) is a combination of:

- **Low Load (light weight) + High Repetition Strengthening of the affected tendon**
- **Personalized Blood Flow Restriction Training**
- **Focus on strengthening surrounding musculature to reduce the load on the effected tendon**
- **Manual Therapy — think soft tissue work, myofascial decompression (cupping), instrument assisted soft tissue mobilization, & more**
- **Education! (are you starting to see a pattern here?) on proper movement patterns, teaching athletes when is it not appropriate to push through pain, and the basics of how this injury happened so that it can be prevented.**

We strongly believe that back pain, at any age, is not normal and should be addressed. Regardless of sport, age, or gender, back pain should be assessed by a qualified physical therapist to prevent athletes from developing life-long compensatory patterns.

# 4

## LOW BACK PAIN

Is your athlete complaining of low back pain after practice or a tournament? Or even with sitting during school or remote learning?

Back pain from being in one position for several hours of the day can impact our athlete's ability to play to their full potential. And if "stretching it out" doesn't solve the problem, it is essential that both coaches and parents work together to advocate for their athlete.

### **Some of the most common causes of low back pain in athletes include:**

- **Musculoligamentous Strains**
  - Refers to all injuries of the lumbar spine's soft tissue (muscles, ligaments, and tendons)

SYMPTOMS- Sharp pain with particular movements depending on the location of the strain. Typically one-sided and most irritated with bending and rotation.

- **Scoliosis**
  - An abnormal curve of the spine that usually appears in late childhood or adolescence.

Appears as either a C or S-curve

SYMPTOMS- Mild cases are usually pain free. May appear to have "uneven" shoulders, hips or waist. Some more moderate severe cases may have pain with forward bending and prolonged sitting or standing.

- **Herniated Discs**

- Commonly a result of improper lifting mechanics or repetitive bending and lifting. The intervertebral discs act as “cushions” between the vertebrae become temporarily displaced and irritate surrounding nerves, ligaments, and muscles.

SYMPTOMS- Complaints of increased pain with sitting, rotation in one direction, and forward bending. In more moderate severe cases, there will be complaints of “zinging” pain or numbness/tingling down one leg.

- **Spondylolisthesis and Spondylosis**

- Common in athletes who's sport requires frequent extending (ie. Gymnastics, dance) causing a dislocation of part of a vertebrae. Confirmed with x-ray imaging.

SYMPTOMS- Some cases are asymptomatic. Those that are symptomatic have more pain with extending (bending backward) and standing.

### ***How can performance physical therapy help athletes with low back pain?***

- **Stage I:** Reduce pain and restore normal range of motion with manual therapy techniques. Educate the athlete on what brings on his or her pain and how to avoid symptom-causing movements. Emphasize relieving movements for self management. Begin basic stabilization movements.

- **Stage II:** Progress to more complex stabilization movements as well as incorporating modified sport specific drills. Continue education on avoiding painful movement. Utilize manual techniques as needed.

- **Stage III:** Advanced strengthening and stabilization movements. Minimal usage of manual therapies. Return to sport drills at normal intensity.

# 5

## ROTATOR CUFF TENDINITIS

The shoulder is one of the most complex joints in the human body. It is comprised of four joints - including the scapulothoracic joint, acromioclavicular joint (AC joint), sternoclavicular joint (SC joint) and glenohumeral joint.

The rotator cuff is made up of four smaller muscles that, when working effectively, keep the shoulder stable and strong throughout the entirety of its range of motion. Just above the humerus, they form together creating a “cuff” around the ball-and-socket joint.

The rotator cuff is prone to injuries due to its high demand for use in overhead and throwing sports. The two most common injuries are:

1. **Tears + Strains** — usually occur with traumatic events or one-time events like a fall.
2. **Overuse Injuries** — including tendinitis or impingement from fatigue and inadequate strength. These injuries become “chronic” when symptoms have lasted for more than 4-6 weeks.



Because of volleyball's high demand for powerful overhead movement, overuse injuries are very abundant. Symptoms and complaints typically are described as:

- Aching at rest
- Sharp or intensified pain with movement
- Pinching, especially at mid or end range
- Tenderness to the touch
- Painful popping and/or clicking
- Weakness
- Shoulder pain with sleeping
- Pain with lifting or throwing

### ***How does performance physical therapy treat and resolve rotator cuff tendinitis?***

Similar to low back pain, we treat athletes based on what stage or injury they are in.

The main goal initially is to:

1. Reduce pain and inflammation with manual therapies
2. Introduce low-load, high-rep corrective exercises to reduce tendinitis and promote strength
3. Transition to a more exercise-based program with sport specific drills and advanced movements as tolerated.

The most beneficial type of physical therapy for shoulder pain will not only include treatment and exercise based exclusively at the shoulder.

Question: For rotational and overhead athletes, where does the power of a hit or serve initiate from?

**The answer is from the ground up - with emphasis on the hips and trunk.**

It would be a disservice to our athletes to treat ONLY the shoulder. In fact, the way to best minimize risk for re-injury is to address the root cause of the issue which, several times, is often about teaching athletes how to generate power from their more stable and powerful musculature.

Therefore, athletes that are treated in a performance physical therapy setting will be incorporating movements for shoulder, trunk, and hip stability (pillar stability).

Our goal as a performance physical therapy team is to keep your athletes on the court.

**Injury-Free      Strong      Confident**

The fastest way for any athlete to recover from aches and pain is to have them addressed as soon as possible. We pride ourselves in using the latest evidence-based technology and our backgrounds in strength and conditioning to best prepare your athlete for returning to sport.

If you or your athlete is suffering from an injury — don't wait any longer! Contact our team at Next Level Physio TODAY!

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