



READY TO PLAY

Physically Speaking

March, 2010

Sports are exciting, fun and provide many health benefits. Sports are also very competitive, with high physical demands and sometimes injuries happen. A top priority of an injured athlete is to decrease the recovery time to return to the sport as quickly as possible.

One of the most common questions athletes ask of Sports Medicine Physicians, Athletic Trainers and/or Physiotherapists is **"When can I play again?"** Too often, after injury or illness, athletes return to sport before they have fully recovered, risking re-injury or a more serious injury or condition.

Don't jeopardize your health and career with hasty decisions! Return to competition from injury or illness varies for each athlete and depends on the type and severity of the condition as well as what the athlete does to help herself during the recovery process. To maximize recovery after an injury or illness, the player should see a Physician and/or Primary Health Care Provider (PHCP) before returning to competition.



Tennis and Sport Photos:
Getty Images

INJURY PROCESS

When an outside force or load is applied to muscles, ligaments, tendons, or nerves, the tissue will respond by gradually deforming or lengthening. If the load or force becomes too great, the structure will tear (fail). Most often, when the tissue begins to break down you will experience pain. **Pain tells you that something is wrong.**

As soon as you realize you have injured yourself or have pain, you should consult with your doctor, healthcare provider, or a PHCP onsite at an event. They will guide you and help get your body through the phases of the healing process, so you will be back on court safely as soon as possible!

The healing process for acute (new) injuries (of any severity) occurs in stages: an effective and efficient rehab is planned to work in conjunction with these stages:

ACUTE INFLAMMATORY PHASE

- Occurs in the first 0-72 hours after the injury
- Characterized by redness, swelling, warmth, pain, and loss of function
- Special cells migrate to the injury site to "clean-up" the damaged area
- Anti-inflammatory medications can prevent the body's natural healing process and may be contraindicated for the first 3 days following an injury.

Rehab Goals: decrease pain, decrease swelling, and promote range of motion (ROM)

Intervention: Remember **"PRICE"** = Protection, Rest, Ice, Compression, and Elevation

- Modalities like electrical stimulation and laser are appropriate.
- Referral to specialist or for diagnostic tests may be warranted

REPAIR PHASE:

- Continues from 72 hours up to 6 weeks after the injury
- Length of this phase depends on the type and severity of the injury and if you have followed the Physician and PHCP recommendations.
- Special cells actively repair the torn tissue structures and scar tissue is formed at the injury site. Note: this does **not** mean the tissue is fully healed yet.
- For up to 6 weeks, the scar is still weak and vulnerable to injury. Often times, this is when an athlete returns to competition and re-injures the same tissue!
- It is important to complete the healing process and protect the tissue as it heals.

Rehab Goals: restore flexibility and gently apply load to newly formed tissue (avoid overloading)

Intervention: Gentle joint or tissue mobilization, stretching, gentle strengthening exercises, and tape or brace to support healing structures.

Caution! Do not mobilize tissue TOO SOON as it may produce more collagen creating a thicker scar.





ARE WE THERE YET?!

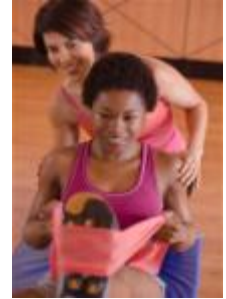
REMODELING PHASE

- Takes 6 weeks to 12 months depending on the type and severity of the injury
- The scar tissue is integrated into the healthy tissue, remodeled and strengthened.

Rehab Goals: increase muscle strength and neuromuscular control, and return to competition

Intervention: sport specific and pre-competition training - exercises focused on restoring:

- Movement patterns, muscle strengthening, endurance training, power, speed, agility, coordination, tennis practice, and joint and soft tissue mobilization as needed.
- Functional tests that mimic tennis skills and movements are used to check if the structure is able to manage the challenges of match play.



THE ROAD TO RECOVERY

Rehabilitation following a sports injury restores the athlete to a pre-injury level of physical and psychological competitive fitness. It encompasses acute injury management followed by a progressive, functional and cardiovascular exercise program that prevents de-conditioning of the total body and rehabilitates the injury.

- For significant injuries where the recovery will be several weeks to months, rehabilitation should take place at home with your personal physiotherapist and medical team. Psychology sessions can help to work on mental strategies, like visualization which can aid your healing and performance, and to maintain motivation during the recovery period.
- For some minor injuries, rehab can be done while in-competition with rest, proper care and protection (tape/brace).
- The PHCPs will guide you through the recovery and rehab process and can help you decide if you can safely compete during your rehabilitation. .

If an injured athlete does not follow her rehabilitation program, the recovery time may be prolonged.

Injured Tissue	Healing Time
Muscle	Regeneration begins within 3-5 days <u>after the start of a rehab program</u> and rest from sporting activity, and complete healing can take 14 - 21 days. A complete muscle tear may require longer.
Ligament	Some strength is regained by 5 weeks after injury, 50% at 6 months, 80% at 1 year, and 1 - 3 years for a ligament to regain 100% of its strength.
Tendon	20-30% of strength is gained by week 5 but chronic tendon injuries (tears and tendinopathies) may require 12 weeks or more (up to one year) to rehabilitate fully. Complete tendon ruptures require surgical repair and may take 1 year or more to rehab.
Bone	Fractures (broken bones) including stress fractures usually need 3-6 weeks of immobilization (cast or brace to prevent movement) depending on the location, extent and blood supply to the area. Once out of immobilizer, the weakened muscles need to be strengthened which takes between 1 - 6 more months.

CAN I PLAY IF I AM SICK?

Injuries are not the only thing that keeps you out of competition – **illness** can put you in bed for days!! Be careful not to disguise your cold symptoms with medications just so you can return to competition sooner! Activity before your body is ready may delay full recovery, aggravate your illness and/or cause chronic associated conditions. Always see a doctor or Tournament Physician before returning to play after an illness to promote your health and that of others.

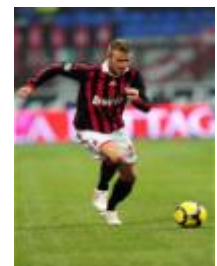
RETURN TO GLORY

You may think you are ready to return to competition, but if you still have pain, inflammation, weakness, imbalance or tightness these will reduce your on-court performance and put you at risk for re-injury. The PHCPs will help determine if you are ready to compete through functional tests.

Use this checklist to help you make safe smart decisions before returning to match play:

- You should have full range of motion in all directions
- You should have no pain or swelling with exercise or activity
- Your strength should be restored in all muscles related to the injured structure
- You should be able to perform tennis specific exercises and drills without pain
- Your balance should be restored both on and off the court
- Your fitness level is peak and you can practice at 100%
- You can play a practice set without any pain

Don't risk it! Come back healthy, fit, and prepared to perform at your best!



David Beckham returned to soccer with success after completing rehab for a knee injury.