

Tennis Program

Training tennis players requires a multidimensional approach that includes strength and conditioning training as well as the sound principles of injury prevention. Tennis is a sport that requires a lot of repetitive movements and full range of motion in every joint. The goal of this program is to discuss proper biomechanics, importance of flexibility, outline proper training techniques and how nutrition affects performance.

Biomechanical Evaluation

It is important to evaluate the body as a whole to detect weakness and any joint dysfunction. To avoid overuse injuries screening for muscle imbalances is an extremely important part of any training program. The rationale behind it is that there are detectable and correctable abnormalities of muscle strength and length. These imbalances can affect basic movement patterns such as running or swinging a racket and lead to unexplained musculoskeletal pain and dysfunction. Once detected, a specific functional rehabilitation program can be implemented. This can include but is not limited to soft tissue release, corrective exercises, core strengthening through tri-planar movements, and balance and flexibility training. The focus is on restoring function and stability by correcting irregular muscle patterns and treating the body as a whole.

Flexibility

Flexibility and balance are the two most important concepts to build a solid foundation. Moving incorrectly will hinder the body's ability to create maximal force which will undoubtedly affect your game and workout. Repetitive incorrect movements actually shut muscles off and create synergistic dominance, reciprocal inhibition and altered neurological pathways which will greatly inhibit your form. Tight muscles cause compensation patterns that will disrupt proper movement and hitting mechanics. Proprioceptive neuromuscular facilitation (PNF), active and dynamic stretching should be part of your program. We find that most athletes move incorrectly due to poor flexibility and balance. Most tennis players have very tight hips, shoulders and pecs. You need to stretch just about every day especially after a match or practice. If you do not stretch you will have a short lived career riddled with injuries.

Core Training

Core training needs to be specific to tennis and should include balance and proprioceptive exercises. Sit ups, bicycles and leg raises should be eliminated totally from a tennis program. According to research these types of exercises further tighten the hips which are already prone to tightness. These floor exercises also put tremendous torque on the spine irritating disks and do not recruit as many abdominal muscles as you might think. Athletes do not play tennis lying down on their back, so why train that way.

Training should include core stabilization and tri-planar exercises that mimic movements specific to tennis. Training with medicine balls and using chopping motions with balance devices are a good idea. The core is the center of all movement so it should be trained in a way that is optimal for each individual. Building a strong core creates a solid base for supporting your body through specific movements. A weak core will increase the risk of

injury and can lead to loss of power on the court. You need to set up the training environment that challenges balance and proprioception specific for tennis players. Implementing cuing exercises will improve motor skills and promote proper movement patterns. Poor balance and flexibility create wasted movements and will inhibit the body's ability to decelerate properly and change direction explosively.

Strength and Power Training

This is the most overlooked aspect. All athletes can benefit from strength training and should do at least 2 days a week even in season. The exercises should relate directly to tennis and incorporate full body movements targeting weak links. You should be training using multi sets mixing resistance with endurance training. It is crucial to train at a high velocity since tennis is a fast sport.

You need to establish core strength and proper movement patterns before moving onto plyometrics and explosive exercises. Plyometrics should be added only after a full body movement analysis is performed. Too many times athletes do plyos without being able to move or absorb force properly.

Endurance training

Most of your cardio and endurance training should be on court since that is where you perform. Running 5 miles has little benefit to a tennis player since the court is only **78x28**. Interval training should be the staple of your program. Ex. Set up cones on a tennis court or measured area and have athletes run to the cones and explosively change direction while rotating. It would not be a bad idea to do a 30-40 min weight session and then play a practice game. This method can be effective for endurance strength because in a real game you are never doing prior weight training. This method is called pre-exhaustion.

Riding the bike doesn't make you better on court either. It is ok for a cool down or an infrequent change of pace but should by no means be substituted for court work. You stand during tennis so why sit when you train? You should not even sit between points. You should be training according to time. The average 3 set mens match is about 2 hours but a 5 set match can be up to 5 hours. There are short rests of 10-15 sec between points and about 120 sec between sets. An average point is about 15 sec but can go longer. If you play multiple opponents at a tournament Juniors have a minimum 1 hour rest but it can be longer depending on length of previous match. So it is important to train in the same time frames that the game demands. *Would it make sense for a boxer to train 2 min rounds and 1 min rest, when a round is 3 min with 1 min rests or to only do 2 or 3 rounds in training sessions?* Running and most cardio is aerobic so training that way limits carryover greatly. Research proves that too much aerobic activity is actually detrimental to sports training.

Nutrition

This is the absolute most important aspect to any training program. Poor nutrition will hinder performance no matter what sport you play.

- Water
- Calcium/Potassium/Magnesium
- Pre workout carb loading facts
- Pre game carb loading facts
- Restoring glycogen stores after a match or workout
- Importance of multiple meals
- Use of supplements
- Use of BCAAs during long matches

Recovery between multiple games

During this time you need to stretch and rehydrate with carbs to replenish glycogen stores and some protein (BCAA). Gatorade in any form is not recommended, drink something with natural electrolytes and carbs. Zico makes coconut water which has more potassium than 10 Gatorades. An organic protein bar or some type of easily digested form and fruit is a good idea for long days.

Rest

It is necessary to rest. Working out is not good for you every day regardless of how it is done. The body needs to recover, more is not better. Over doing things leads to injury and only hampers results.

At Pure Fitness, we believe that restoring optimal function is the most important concept in eliminating pain and preventing injury. With the combination of our evaluation, treatments and structured program, tennis players will find improved performance and playing satisfaction.

www.purefitclub.com

www.fitandfunctional.com

914 774 3644

Charles DeFrancesco