

# Developing Bone Crushing Tennis Serves Specificity Training for Tennis

By Todd Scott – CPT, ISSA Training Advisor, Men's Fitness Magazine

### Welcome from Todd Scott & Tennis Fitness Tips...

Hi! I'm Todd Scott, a Certified Personal Trainer & Sport Conditioning Specialist, and author of too-many-articles-to-count in magazines such as Men's Fitness and Muscle and Fitness Hers.

Your going to LOVE these Tennis Workouts, because it's going to help you develop incredible strength and power within the muscles that are directly responsible for cranking out bone crushing serves.

These workouts are individualized in nature in respect to the specific muscle groups responsible for driving each shot & stroke for your tennis game.

These workouts can be tough, so if you are feeling pain, dizziness, or discomfort at any time, please stop the workouts and see your doctor.

With the Tennis Serving series I've put together short, quality workouts you can do with minimal equipment.

I also have an advanced research background that stretches back over a decade. Although, I'm not a "teaching tennis pro", I continue to study the latest training, supplementation, and nutrition research to help improve your game as well as your physical and mental performance.

Looking forward to your success!

Your friend and coach,

Todd Scott

Author, http://UltimateTennisTraining.com & http://TennisFitnessTips.com

PS - Don't forget my other sites here...

www.TennisFitnessTips.com/Matrix - Original Tennis Conditioning Program.

**www.TennisFitnessTips.com/MatrixII** - Advanced Tennis Conditioning Programs

<u>www.TennisFitnessTips.com/16Weeks</u> – 16 Week Tennis Specific Training Program

<u>www.TheTennisReport.com</u> My blog with advanced tennis instruction & training information to help serious tennis players separate themselves from the pack.

#### Disclaimer:

This manual is not intended for the treatment or prevention of disease, nor as a substitute for medical treatment. Programs outlined herein should not be adopted without consultation with your health professional. Use of the programs herein is at the sole choice and risk of the reader. The author is neither responsible, nor liable for any harm or injury resulting from this program or the use of the exercises or nutrition strategies described herein.

You must get your physician's approval before beginning this exercise program. These recommendations are not medical guidelines but are for educational purposes only. You must consult your physician prior to starting this program or if you have any medical condition or injury that contraindicates physical activity. This program is designed for healthy individuals 18 years and older only.

The information in this report is meant to supplement, not replace, proper exercise training. All forms of exercise pose some inherent risks. The editors and publishers advise readers to take full responsibility for their safety and know their limits. Before practicing the exercises in this book, be sure that your equipment is well-maintained, and do not take risks beyond your level of experience, aptitude, training and fitness. The exercises and dietary programs in this book are not intended as a substitute for any exercise routine or treatment or dietary regimen that may have been prescribed by your physician.

Don't lift heavy weights if you are alone, inexperienced, injured, or fatigued. Don't perform any exercise unless you have been shown the proper technique by a certified personal trainer or certified strength and conditioning specialist. Always ask for instruction and assistance when lifting. Don't perform any exercise without proper instruction. Always do a warm-up prior to resistance training and interval training.

See your physician before starting any exercise or nutrition program. If you are taking any medications, you must talk to your physician before starting any exercise program, including Turbulence Training. If you experience any lightheadedness, dizziness, or shortness of breath while exercising, stop the movement and consult a physician.

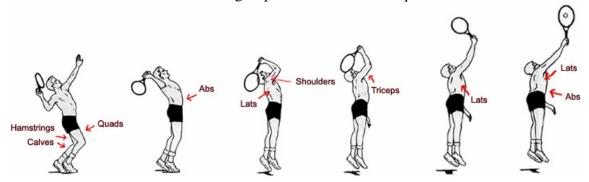
You must have a complete physical examination if you are sedentary, if you have high cholesterol, high blood pressure, or diabetes, if you are overweight, or if you are over 30 years old. Please discuss all nutritional changes with your physician or a registered dietician. If your physician recommends that you don't use this workout, please follow your Doctor's orders.

Information Found In This Manual Is For Research and Informational Purposes Only and Is Not Intended to Replace A Safe Nutrition or Exercise Program.

### How to Develop The Strength and Power to Produce Bone Crushing Serves.

There are many different muscles that contribute to the velocity and power of your Tennis Serve. And not only does each muscle deserve specific attention, but as a whole the muscles should be trained in a way that together they produce power that begins in your toes and is transferred up your body and out to the ball.

Below is an image that displays specific pivot points during your serving motion and is labeled as each of the main muscle groups are activated in Sequence.



As you can see there are 7 Major Muscle groups that must be activated to generate power for your serve:

- 1. **Calves** Activated in the loading phase to explosively contract to generate power to your quads and hamstrings
- 2. **Quads** Work with the hamstrings to generate and transfer power & explosiveness through to your core
- 3. **Hamstrings** Work with the hamstrings to generate and transfer power & explosiveness through to your core
- 4. **Abs** The abs are activated and produce stability throughout the entire motion while momentum is transferred from the ground through your racquet head. In the later stage of the service motion, the abs contract viciously & operate as a leverage point to help generate more racquet head speed.
- 5. Lats This is often an overlooked muscle group when it comes to training for tennis. Check out any pro player that has a big serve, and their lats will stand out big time. This is the back muscle that sticks out behind your rib cage. The lats are activated in figure 3 and continue to explosively contract through the end point of the service motion. This is the muscle responsible for the beginning of the arm motion all the way through the follow through motion.
- 6. **Triceps** The triceps aid in the whipping motion of your arm, not only do the triceps have a large role in racquet head speed, but the explosiveness of this muscle plays a major role in how much spin you can generate for topspin & kick serves. The more explosive your triceps, the more spin you can put on the ball.
- 7. **Shoulders** The Shoulders are responsible for maintaining stability in the joints & aiding in generating forward moving force in your upper arm.

### **How to Train Your Serving Muscles**

Naturally, one of the first things folks do when they want a big serve is they go out to the courts and practice more. This is not a bad approach, but it can and will only get you so far. In most cases, we must look for ways off the courts to improve not only our game, but also shot development. And one of these being training the muscles responsible for what we want to improve. In this case – we want to train the muscles responsible for our serving motion.

There are 2 ways to train your body for a more powerful serve (this applies to not only the serve, but all tennis strokes).

1. Universal Tennis Focus – Using training methodologies & program design that train each muscle group in tandem in a way that helps them work together for a specific end goal. The training program would be set up to encompass all muscle groups required for the serve & each muscle group would get the same amount of focus as the next.

This method is great, but what happens if we have a "weak link" in the serving chain? Using this method prematurely will improve your serve, but it would be better utilized if any weaknesses along the line are focused on FIRST to bring them up to speed so that we have better overall functioning.

2. Specific Foundational Tennis Focus – As you saw in the Tennis Serve Pivot Diagram, different muscle groups at specific points in the serving motion are activated to aid in generating power & explosion for our serves. And each pivot point is linked together like chinks in a chain. For most of us some chinks in this chain are stronger than others. This is where we either identify the "weak link" or decide to make an already strong link Stronger with muscular stroke specific training.

For example, we are discussing 7 main muscles:

Calves
Quads
Hamstrings
Shoulders
Abs
Lats
Triceps

Now, in this case, let's say that we have advanced development in our legs, abs, and lats, but our triceps are our weak link. We would then break down each muscle group and focus our attention mainly on the "weak" components of our stroke while still giving attention to the other muscles - in this example, we'd focus mainly on exercises that target our triceps.



Often times it's not that difficult to figure out what your weak link is. Heck, maybe you don't really have a weak link, but strengthening one or more of the phases of your stroke would create a more blistering serve.

Either way, figuring out the weak link (if you have one) isn't difficult. Most of the time, you can identify it during match play (if you haven't already). Are your abs giving out? Do you find yourself not squeezing your abdominals during your serve as the match progresses? If so, this could be due to lack of abdominal strength endurance.

Do you find yourself not properly bending your legs during your serve towards the end of the match? Well, in this case your legs may be your weak link.

What about your triceps? This one is fairly easy to figure out especially if you have a topspin or kick serve, because generally you'll notice as the match goes on that it takes a little more effort than normal to generate the amount of spin you want.

Whatever the weak link is, you can figure it out fairly quickly by playing a couple matches, because it will stick out like a sore thumb if you pay attention.

## What If We Don't Necessarily Feel We Have a Weak Link?

There is always some aspect of our physical fitness that we can improve upon. Now, if you don't feel like you necessarily have a weak link, that's good news. And if you don't feel you have a weak link, but your serves aren't exactly as powerful as you think they can be, focus on the aspects of the serve that can generate the most power or the aspects of the serve that you feel will give you an extra edge. If you feel like you need more spin, but your legs are strong, then focus on your abs, triceps, shoulders and/or lats. If you feel like you want to generate more power, then the focus point should be directed toward your legs, since this is where power and explosion is generated.

# **Training to Generate More Power & Spin**

The Following Workout is Designed for you to use to develop strength to generate more power and more spin by focusing on the 2 main transfer points: Legs & Triceps.

Regardless as to whether these 2 pivot points are a weak link for you or not, by focusing on these 2 muscles in the proper way, you will generate more power off your serve, because these 2 points are critical for generating and delivering a bone crushing serve – legs because they are where the power & explosion originates & triceps because they are the last muscle in the chain to transfer this momentum directly to the ball.



**Disclaimer:** See your physician before starting any exercise or nutrition program. You must have a complete physical examination if you are sedentary, if you have high cholesterol, high blood pressure, or diabetes, if you are overweight, or if you are over 30 years old. Please discuss all nutritional changes with your physician or a registered dietician.

- Train 2 days per week
- Perform all workouts in circuit fashion. A1, A2, A3, etc is 1 circuit. Once you complete all exercises labeled A, rest and repeat the circuit for the required number of sets.
- Once Circuit A is Complete, move to circuit B, etc.
- Rest as little as possible between exercises
- Finish Each workout with light static stretching
- Start Every Workout with this warm-up circuit

#### **General Bodyweight Warm-up Circuit**

- Go through the circuit THREE Times
- Rest 30 seconds between Warm-up circuits.
- 1) Bodyweight Squat 20 reps
- 2) Jump Rope 30 Seconds
- 3) Plank 30 second hold
- 4) Pushups 5-10 reps
- 5) Mountain Climbers 50 reps
- 6) Burpee 15 Reps

## Day 1 – Workout A

- Start with the general bodyweight warm-up circuit
- Do this workout in circuit format
- Perform all workouts in circuit fashion. A1, A2, A3, etc is 1 circuit. Once you complete all exercises labeled A, rest and repeat the circuit for the required number of sets.
- Once Circuit A is Complete, move to circuit B, etc.
- Rest as little as possible between exercises
- Rest 1 minute at the end of each circuit before repeating the circuit 2 more times
- Once Circuit A is complete, rest 1 minute and begin circuit B
- A1) Jumping Lunges 30 seconds
- A2) Pushups 15 reps
- A3) Step Ups 10 reps each leg
- A4) Overhead Tricep Extension– 10 reps
- B1) Squat Jump 15 Reps
- B2) Stiff Leg Deadlift 10 reps
- B3) Lunge 10 each leg

Finish with 5 minute cool-down walk & static stretching.

Day 2 - Agility/Conditioning Drills

Day 3 – Rest & Recovery

## Day 4 – Workout B

- Start with the general bodyweight warm-up circuit
- Do this workout in circuit format
- Perform all workouts in circuit fashion. A1, A2, A3, etc is 1 circuit. Once you complete all exercises labeled A, rest and repeat the circuit for the required number of sets.
- Once Circuit A is Complete, move to circuit B, etc.
- Rest as little as possible between exercises
- Rest 1 minute at the end of each circuit before repeating the circuit 2 more times
- Once Circuit A is complete, rest 1 minute and begin circuit B
- A1) Bench Dips 10-15 reps
- A2) Overhead Tricep Extension– 15 reps (2-0-1)
- A3) Jump Squats 30 seconds
- A4) Pushup 15 reps
- B5) Close Grip Pushup 12 Reps (2-0-1)
- B6) Jumping Lunges 30 seconds
- B7) Rope Pressdown–15 reps

Finish with 5 minute cool-down walk & static stretching.

Day 5 – Agility/Conditioning Drills

Day 6 & 7 – Rest & Recovery

# **The Tennis Power & Spin Workout Schedule**

| Exercise                          |       |       |       |       |       |       |
|-----------------------------------|-------|-------|-------|-------|-------|-------|
| Workout A – DAY 1                 | Set 1 | Set 2 | Set 3 | Set 1 | Set 2 | Set 3 |
| A1 Jumping Lunges - 30 seconds    |       |       |       |       |       |       |
| A2 Pushups - 15 reps              |       |       |       |       |       |       |
| A3 Step Ups - 10 reps each leg    |       |       |       |       |       |       |
| A4 Overhead Tricep Extension - 10 |       |       |       |       |       |       |
| reps                              |       |       |       |       |       |       |
|                                   |       |       |       |       |       |       |
| B1 Squat Jump - 15 reps           |       |       |       |       |       |       |
| B2 Stiff Leg Deadlift - 10 Reps   |       |       |       |       |       |       |
| B3 Lunge - 10 each leg            |       |       |       |       |       |       |

| Exercise                              |       |       |       |       |       |       |
|---------------------------------------|-------|-------|-------|-------|-------|-------|
| Workout B – DAY 4                     | Set 1 | Set 2 | Set 3 | Set 1 | Set 2 | Set 3 |
| A1 Bench Dips 10-15 reps              |       |       |       |       |       |       |
| A2 Overhead Tricep Extension - 15     |       |       |       |       |       |       |
| reps                                  |       |       |       |       |       |       |
| A3 Jump Squats - 30 seconds           |       |       |       |       |       |       |
| A4 Pushup - 15 reps                   |       |       |       |       |       |       |
|                                       |       |       |       |       |       |       |
| <b>B1</b> Close Grip Pushup - 12 reps |       |       |       |       |       |       |
| B2 Jumping Lunges - 30 seconds        |       |       |       |       |       |       |
| <b>B3</b> Rope Pressdown - 15 reps    |       |       |       |       |       |       |



# The Exercises:

## **Jumping Lunge**



Start position: Stand with feet hip width apart. Step forward 2-3 feet and lower body forming a 90° bend at the front hip and knee. DO NOT allow front knee to extend past the big toe - may cause injury. Explode up by pushing off front foot, in mid-air switch and land with opposite legs in front and back. Alternate legs with each jumping motion. Remember to keep head and back upright in a neutral position. Shoulders and hips should remain squared at all times. Watch for proper knee alignment - do not let front knee extend past big toe or deviate laterally or medially. Back knee should not come in contact with floor.

## Pushups



Place 2 dumbbells on the ground in front of you just wider than shoulder width apart, and perform a pushup. The added elevation of the dumbbells will allow for a greater range of motion.

Step Up



Stand facing the bench. Place right foot on top of bench. Raise body using the right foot only until leg is extended. Lower to start position keeping the foot on top of box. Repeat with other leg

## **Overhead Tricep Extension**



Start position: Grasp DB and place palms on inner side of weight plate as shown. Press DB directly overhead (now palms are up). Stabilize shoulders and lower weight moving only at the elbow joint until forearm is parallel to floor. Keep elbows pointing forward throughout movement. Return to start position.

Stiff Leg Deadlift



Stand with feet shoulder width apart with knees slightly bent (at 20°). Start position: Grasp bar with overhand grip shoulder width apart. Back should be straight in a neutral position. Bending at the hips, lower bar to approximately knee height. Keep knees bent at 20° throughout movement. Return to start position. Remember to keep back straight - movement should occur at the hip. To facilitate this, shift glutes back as if ready to sit down. Knees should not move forward beyond the toes.

## Lunge



Start position: Stand with feet hip width apart. Step forward 2-3 feet forming a 90° bend at the front hip and knee. DO NOT allow front knee to extend past the big toe - may cause injury. Push body up and move the back foot beside the front foot. Alternate feet and repeat. Remember to keep head and back upright in a neutral position. Shoulders and hips should remain squared at all times. Watch for proper knee alignment - do not let front knee extend past big toe or deviate laterally or medially. Back knee should not come in contact with floor.

## **Bench Dips**



Sit on a \*raised surface, and place your hands (facing forward) on the surface right next to your hips. Extent your legs, and shift your hips forward. With your shoulders locked into place, bend at the elbows and lower your hips toward the ground. Return to the starting position. This exercises focuses on the triceps and latissimus dorsi muscles.

\*Raised Surface can be anything from a picnic table to a couch to a bench as shown in the picture

## **Squat Jumps**



Grasp bar with overhand grip (palms forward) and slightly wider than hip width apart. Step under bar and position bar across posterior deltoids at middle of trapezius (as shown). DO NOT rest bar on neck. Lift elbows up, pull shoulder blades together, and lift chest up to create a "shelf" for the bar. Start position: Using the legs, remove bar from rack. Stand with feet slighter wider than hip width apart. Back should be straight in a neutral position. Lower body by flexing at the hips and knees. Be sure to "sit back" so that knees stay over the feet. Once thighs are parallel to floor, return to start position and follow through by jumping into the air in one fluid motion. Land in the starting position and repeat. Remember to keep head and back straight in a neutral position - hyperextension or flexion may cause injury. Keep weight over the middle of foot and heel, not the toes. DO NOT allow knees to go past the big toe or deviate medially or laterally throughout movement. Keep abdominals tight throughout exercise by drawing stomach in toward spine.

## **Bench Dips**



Sit on a \*raised surface, and place your hands (facing forward) on the surface right next to your hips. Extent your legs, and shift your hips forward. With your shoulders locked into place, bend at the elbows and lower your hips toward the ground. Return to the starting position. This exercises focuses on the triceps and latissimus dorsi muscles.

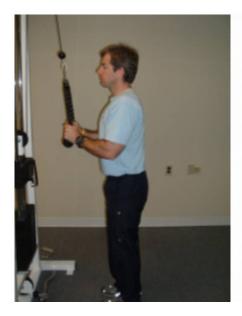
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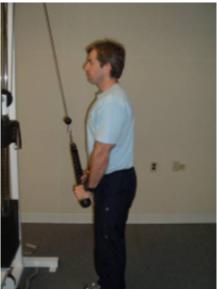
## Close Grip Pushup



Assume the pushup position and place your hands 3-6 inches apart just below your chest. Perform a pushup by lowering your upper body to the ground and extending your elbows to the side. This exercise places more emphasis on your triceps than the normal pushup







Stand approximately 2-3 feet away from overhead pulley with feet shoulder width apart and knees slightly bent . You may use a staggered stance for increased stability. Start position: Grasp rope with neutral grip (palms facing each other, thumbs up). Lower bar to chest level so that elbows are bent at  $90^{\circ}$ . Keeping shoulders stabilized and elbows close to sides, extend arm and lower rope to hip level. Return to start position.