

# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning

Tennis is unpredictable with variability of point length and length of match times. While points last on average from three to 15 seconds depending on styles of play, court surfaces and playing conditions, players must prepare to play points that last for as little as one second to points that last well over one minute. The longest men's point on record at a grand slam event between Gael Monfils and Gilles Simon (won incidentally by Simon) lasted one minute and 40 seconds and included a rally of 71 shots. Match duration also varies based on scoring formats, player matchups and competitive balance, playing styles, court surface, playing conditions, etc. with matches lasting less than one hour and matches lasting four or more hours. The longest match in tennis history between John Isner and Nicholas Mahut (won by Isner) lasted 11 hours, five minutes.

Tennis is a game of intermittent play with periods of activity followed by breaks for recovery, collection of balls, change sides for service and return and change of ends during odd games and sets. Factoring in time between points, games, and sets (20 seconds between points, 90 seconds during changeovers and two minutes between sets), average work to rest ratios range from 1:2 to 1:5.

In addition to a variability in point length and match duration, tennis is also unpredictable with variability in shot selection and tactics, court coverage, strategy, and choice of playing style, match tempo and duration, weather (climate), court surface and opponent playing style, strategy, shot selection and tactics. Players must respond to varying levels or degrees of pace, spin, and trajectory. There is a requirement to hit from different court positions, respond to balls hit from different angles and lines of direction, maintain or redirect ball path direction, hit balls in the air with volleys or after the bounce as the ball is rising, at peak height or dropping, hit balls at varying heights and distances (spacing) from the body, generate pace or take pace off the ball and maintain, change, increase and/or decrease spin and the type of spin.

The game of tennis requires a considerable amount of dynamic court coverage with explosive starting and stopping, linear and multi-directional footwork patterns, acceleration, deceleration, and repeated short sprints up to an extreme distance of approximately 80 feet. Tennis includes an average of three to five changes of direction per point. With an average of 60 points per set, that amounts to 360 to 600 changes of direction per two-set match. On average, 70% of court movement is in a lateral direction, 20% in a forward direction and 10% in a backward direction. In an analysis of 2016 ATP singles playing data, the average court distance covered per point was 65 feet. The average court distance covered for points with rallies of five or more shots was 138 feet and the average court distance covered per match was 2.8 miles. On average the serve returner had to cover 10% more court distance per point (12% more if the first serve was put in play and 7% more for second-serve points). Although not always a correlation due to different playing styles and match ups, on average players covering more court distance lost 58% of points played.

# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning

With periods of low and high periods of intensity, stop/start requirements of play and repeated short explosive bursts of energy in sprinting to the ball, stroke execution and recovery after the shot, tennis can be categorized as primarily an anaerobic sport. Tennis predominantly taps the ATP-PCr (phosphocreatine) system (the first and most immediate source for energy) and the anaerobic glycolysis system (the second source for short-term energy utilized as stores of phosphocreatine are depleted). There is also an aerobic component to the sport in recovery (and replenishment of energy resources) between points and after play and to maintain stamina (and the ability to repeatedly generate explosive actions) through the duration of match play. The mean maximum heart rate for competitive match play ranges from 60 to 80% (with heart rates reaching 95% of maximum heart rate during long and intense rallies). Elite male tennis players have  $\text{VO}_2\text{max}$  levels above 60 milliliters of oxygen used in one minute per kilogram of body weight ( $\text{mL/kg/min}$ ) with mean maximum  $\text{VO}_2$  levels ranging from 60 to 70% during competitive match play. Average blood lactate concentration levels range from 1.7 to 3.8 mmol and can increase to 8.6 mmol during high intensity play. In terms of ventilatory zones, elite players generally spend 77% of match time at or below VT1 (aerobic threshold), 20% at a moderate to high level of exertion between VT1 and VT2 (anaerobic threshold) and 3% at a high level of intensity above anaerobic threshold.

Tennis requires complex coordination and movement, dynamic balance, linear/multi-directional speed, strength, endurance or stamina, flexibility, core and shoulder stability and explosive and reactive power. Success in tennis requires keen hand-eye coordination (particularly in the relationship between the hand and racquet face). A slight deviation in the angle and position of the racquet face at the point of contact can be the difference between hitting a shot two inches inside the line or two inches outside the line.

Force production begins in the legs and is transferred throughout the body to the finer control muscles of the hand and wrist. Force is transferred through a kinetic chain involving many different body segments. Power is transferred in sequence from the feet in pushing off the ground to the lower legs, upper legs, hips, trunk, shoulders, upper arms, forearms, and hand(s). More body segments are engaged in an extended kinetic chain when the requirement is to generate high racquet head acceleration at the point of impact such as with the serve and groundstrokes. A reduced number of body segments operate more as a unit where more precision (and less racquet head acceleration) is required for strokes such as the volley.

All tennis strokes and movement patterns follow a strength curve with descent (eccentric), amortization and ascent (concentric) phases of energy distribution. Tennis force production includes a stretch-shortening cycle of eccentric and concentric contractions, loading and unloading of weight distribution, horizontal and vertical linear momentum, and angular momentum.

Footwork requires an explosive first step and an efficient, quick, and agile step pattern to the ball to facilitate the shot and in recovery after execution of the shot. It requires dynamic balance with a quiet upper body, head positioned within the shoulder triangle and centered over the hips, controlled center of gravity and a wide and low base of support.

# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning

Multidirectional movement in tennis requires concentric strength (particularly in the propulsion or push-off phase), eccentric strength (most exemplified in deceleration) and stabilization strength (strength to stabilize the musculature of the trunk and lower extremities). Efficient movement in tennis requires hitting from open and closed positions and technical mastery of many different footwork patterns and steps including split, adjustment, shuffle, crossover, skip, gravity, drop, scissors kick, carioca, and backpedal steps.

Tennis operates in multiple anatomical planes. In the sagittal plan, actions include flexion, extension and foot dorsiflexion and plantarflexion. Actions in the frontal plane include abduction, adduction, scapula elevation and depression and foot inversion and eversion. In the transverse plane, actions include rotation, hand pronation and supination and horizontal flexion and extension. Other multiplane actions include hand ulnar and radial deviation, thumb opposition and reposition and circumduction. Tennis requires execution of all five movement patterns – bending and lifting (e.g., squatting), single-leg movements (e.g., single-leg stance and lunging), pushing movements, pulling movement and rotational (spiral) movements.

Muscles engaged in the first link of the kinetic chain include the gastrocnemius and soleus muscles -of the lower legs. Power and energy are next transmitted utilizing the hamstring and quadricep muscle groups of the upper legs and then transferred to the core muscles via the glute and other hip extensor and flexor muscles through hip flexion, extension, and rotation. The abdominals, obliques, latissimus dorsi and erector spinae are the main core or trunk muscles engaged in the next link of the kinetic chain. The abdominal muscles consist of the rectus abdominis transverse abdominis muscles. The kinetic chain then extends to the upper body. The upper-body kinetic links include the major muscles of the chest, shoulders, upper back, and arms. The main chest muscles are the pectorals. The shoulder muscles include the deltoids and rotator cuff muscles, and a group of four muscles (supraspinatus, infraspinatus, teres minor and subscapularis) supporting the shoulder joint. The main upper back muscles are the rhomboid and trapezius muscles. The major muscles are the biceps and triceps in the upper arm and the flexor and extensor muscles in the lower arm or forearm. The fascial system (fibrous myofascial web) and other connective tissues (such as tendons and ligaments) also play an important role in the kinetic chain with proprioception (ability to sense and respond to stimuli arising within the body regarding position, motion and equilibrium) and the distribution and transfer of elastic energy.

Physical training to prepare for the complexity and variability of the game of tennis needs to include the following:

1. Dynamic stretching exercises (mimicking the movements patterns of tennis) to warm and prepare the body for more strenuous effort
2. Exercises to stabilize and strengthen the shoulder and the glide and ball-and-socket functions of the shoulder
3. Extended kinetic chain (whole body movement) exercises

# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning

4. Tennis-specific exercises with comparable work intervals and work-to-rest ratios
5. Exercises to stabilize and strengthen the core
6. Exercises to build foundational leg (lower body) strength
7. Exercises to build explosive power in the legs to enhance ground force (push-off) in the first kinetic chain link
8. Movement patterns to improve dynamic balance, coordination and agility
9. Movement patterns to develop speed and quickness (particularly in the first step to the ball), acceleration and deceleration
10. Adaptive and reactive movement patterns to simulate variability of play
11. Exercises to improve flexibility and range of motion
12. Unilateral (both contralateral and ipsilateral)/offset patterns and exercises to correct strength imbalances and increase core stability, strength and dynamic balance through anti-rotation, torsional buttressing of the core muscles to support offset weight loads and to maintain position, posture and balance
13. Other applicable exercises to address imbalances in muscle length tension relationship (inherent in the nature of the game with one-arm dominance and the requirement for a lower center of gravity)
14. Steady-state and interval-based cardio training to improve stamina and endurance
15. Static, myofascial (with foam roller or ball), proprioceptive neuromuscular facilitation (PNF) hold-relax, contract-relax and/or hold-relax with agonist contraction) and/or active isolated stretching (AIS)

There should be an emphasis on vertical-based exercises from both universal athletic and split-stance positions and compound (multi-joint) exercises (versus isolation exercises). A tennis conditioning program should encompass the five movement patterns - bending and lifting (e.g. squatting), single-leg movements (e.g. single-leg stance and lunging), pushing movements, pulling movement and rotational (spiral) movements and should be progressive with a linear and/or undulating progression in frequency, volume, load, repetitions, intensity and/or difficulty. The program should include scheduled days (times) for rest and recovery (active recovery) but not extended gaps in training with the risk for loss of gains (as per the theory of use and disuse). Ideally, the program should include a periodization schedule with a preparation phase, pre-competition phase and a competition phase.

### What does this all mean?

1. Tennis is a complex sport with many variables.
2. Tennis players should train for all contingencies.
3. Tennis is an anaerobic sport requiring a series of intermittent short explosive sprints.
4. Tennis players need a strong foundational level of strength to execute stroke and movement patterns.
5. Tennis players need an aerobic base to help with recovery and to sustain effort.

# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

Acknowledging the difficulty of access to weight equipment, a good starting point for a tennis-specific preparation phase program is to focus on bodyweight exercises and exercises utilizing (more easily attainable and affordable) resistance bands and loops, dumbbells, kettlebells, and medicine balls.

Options or components include:

1. Dynamic stretching
2. Planks and push-ups
3. Squats and squat-based exercises
4. Lunges/Split Squats (Split Leg Stance Patterns)
5. Pull-ups
6. Shoulder and Upper Extremity Strengthening and Stabilization Patterns
7. Core Exercises
8. Agility and Speed Drills and Patterns
9. Plyometrics
10. Post-Workout Stretching

### Component #1 Dynamic Stretching

#### Dynamic Stretching

Unlike static stretching, dynamic stretching requires the use of continuous movement patterns that mimic the exercise or sport to be performed (in this case tennis). The purpose of dynamic stretching is to improve flexibility for a given sport or activity and to warm and activate the body in preparation for more strenuous effort. An example of dynamic stretching would be a sprinter doing long, exaggerated strides to prepare for a race.

#### Dynamic Stretching Movement Patterns (Applicable for Tennis)

- Small Arm Circles Fingers Up
- Small Arm Circles Fingers Down
- Left and Right Arm and Back Arm Swings
- Alternating Arm Crossover Swings
- Bow Draw Torso Twist (Transverse Plane) Rotations
- Bow Draw Torso Twist Variation with Released Arm
- Alternating Toe Touches
- Jumping Jacks
- Crossover Jacks
- Walking Leg Kicks (Feet to Hands)
- Walking Knees to Armpits
- Walking High Knee Pulls (Hugs)
- Walking Quad Pulls
- Side Shuffles (Low Profile)
- Walking Lunges
- Walking Lunges with Elbow Knee Pushouts
- Walking High Knee Hug Lunges
- Skipping
- High Knee Skipping
- Carioca
- High Knee Carioca
- Butt Kicks
- Butt Kick Pulls
- Inchworms
- Bear Crawl

# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### Component #2 Planks and Push-Ups

#### Plank (Body Weight) Progressions

- Low Plank Hold
- High Plank Hold
- Single Leg Plank Hold
- Single Arm Plank Hold
- Single Leg Arm and Leg Hold
- Low to High (Military) Planks
- Plank Leg Raises
- Plank Arm Raises
- Plank Leg and Arm Raises
- Side Plank Hold
- High Side Plank Hold
- Side Plank Leg Raise Hold
- Side Plank Leg and Arm Raise Hold
- Side Plank Kick
- Side Plank Tree Pose
- Side Plank Side Bend (with Legs Crossed)
- Side Plank Elbow to Knee
- Side Plank Hand to Toes
- Side Plank Two Way Elbow to Knee followed by Hand to Toes
- Side Plank Alternating Elbow to Knees
- Side Plank Oblique Twist (Hand Behind Head, Elbow to Floor)
- Side Plank Leg Raise
- Side Plank Leg Raises (with Arm Up)
- Side Plank Leg Raise and Arm Reach
- Side Plank with Hip Drop/Dip
- Side Plank Elbow to Knee
- Side Plank with Rotational Reach
- Side Plank Hip Dip with Rotational Reach
- Side Plank Mountain Climbers
- Side Plank Side Plank to Table-Top Kick
- Side Plank Adductor Lift
- Side Plank Clams
- Reverse Plank
- Plank Jacks
- Spider-Man Planks
- Shoulder Tap Planks
- T Planks
- Alternating T Planks (Low and High)
- Bear Crawl Planks
- Mountain Climbers
- Downward Dog (Pike) Planks
- Spider Walk Planks
- Single Leg Planks
- Hip Swivel (London Bridge) Planks
- Medicine Ball Pass Planks
- Lateral Walk
- Plank Leg and Arm Raises Resistance Band Rows
- Inchworms
- Plank to Squat (Squat Thruster)
- Plank Skiers
- Around the World Planks
- Groiners
- Froggers
- Alligator Walks
- Rolling Planks
- Plank Sit Throughs
- Plank Kick Throughs
- Mule Kicks

# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### Component #2 Planks and Push-Ups Continued

#### Push-Up Progressions

- Incline Push-Ups
- Wall and Wall Bounce Push-Ups
- Hands Free Push-Ups
- Standard Push-Ups
- Decline (Elevated Feet) Push-Ups
- Single-Leg Push-Ups
- Dive Bomber Push-Ups
- Pike Push-Ups
- Close Grip Push-Ups
- Wide Grip Push-Ups
- Diamond Push-Ups
- Scapula Push-Up with Protraction and Retraction
- Loop Band Push-Ups
- Weighted Push-Ups
- Plyometric Push-Up (Hands off Ground, Clap Hands)
- Plank Jack Push-Ups
- T Plank Push-Ups
- Dumbbell (DB) T Plank Push-Ups
- Spider-Man Push-Ups
- Jumping Spider-Man Push-Ups
- Shoulder Tap Push-Ups
- DB Renegade Push-Ups
- Pike Push-Ups
- Alligator Walk Push-Ups
- Bear Crawl Push-Ups
- Medicine Ball Pass (One-Arm) Push-Ups
- Around the World Push-Ups
- Around the World Explosive Push-Ups
- DB Side Plank with Extension
- Pseudo Planche Push-Ups
- Staggered Hand Push-Ups
- Rotational Push-Up
- X Push-Ups



# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### Component #2 Planks and Push-Ups Continued

To get started, begin with proper execution of a push-up-and low and high plank and then work on volume (multiple reps). If you can do one, you can two, if you can do two, you can do three... The proper technique is:

- Feet and ankles dorsiflexed
- Knees aligned with hips, ankles and feet
- Knees horizontally aligned
- Ankles, knees, and shoulders aligned
- Torso neutral and aligned with hips
- Braced torso centered over base of support
- Neutral lumbar spine
- Shoulders Level and horizontally aligned
- Neutral head position
- Neutral scapula
- Stable shoulders with torque generated through hands (spread floor apart with hands)



Additionally, for push-ups...

- Neutral scapula with fluid-controlled movement against rib cage
- Arms extended with palms directly under shoulders and arms tucked to sides in up position
- Arms flexed with upper arms parallel, or slightly below parallel to ground with elbows tucked to sides and cubital fossa (inside of elbow) facing forward in down position





# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### Component #3 Squats

#### Squat (Body Weight)

- Squat
- Bench (Chair) Squat
- Wall Squat
- Back to Wall Squat
- Arm Driver Squat
- Prisoner Squat
- Arms Overhead Squat
- Squat Jump
- Squat to Tuck Jump
- In and Out Squat Jump
- Squat Hold
- Squat Pulses
- Knees (Kneeling) to Squat (Up and Down)
- Knees (Kneeling) to Squat Jump
- Squat with Alternating Unilateral Arm Press
- Squat Rocks - Heels to Toes
- Squat Scissor Jump
- 180° (Surfer or Switch) Squat Jump
- Squat Jump to Double Lunge Jump Matrix
- One Leg Squat
- Pistol Squat
- Levitation Squa
- Shrimp Squat
- Box Jumps
- Burpees
- Burpees with Kick Throughs
- Squat Thruster (Plank to Squat with Hands to Prayer Position)

#### Squats with Dumbbells (DB) or Kettlebells

- DB Goblet Squat
- DB Two-Arm and One-Arm Overhead Squat
- DB Arm Driver Overhead Squat
- DB Squat Overhead Thrust/Press
- DB Squat Unilateral Overhead Thrust/Press
- DB Squat with Hammer Curl and Overhead Press
- DB Squat Jump
- DB Sumo Squat
- DB Sumo Squat with High Pull
- DB Simba Squat

#### Squats with Medicine Balls

- Medicine Ball Goblet Squat
- Medicine Ball Two-Arm and One-Arm Overhead Squat
- Medicine Ball Arm Driver Overhead Squat
- Medicine Ball Squat Overhead Thrust (Press)
- Medicine Ball Squat Unilateral Overhead Thrust (Press)
- Medicine Ball Squat Wall Ball
- Medicine Ball Squat Jump
- Medicine Ball Sumo Squat
- Medicine Ball Sumo Squat with High Pull
- Medicine Ball Simba Squat

#### Squats with Resistance Band

- Resistance Loop Band Squat (with hands supporting loop band in rack position)
- Resistance Loop Band (Around Thighs) Squats
- Squat Resistance Band Row
- Squat Resistance Band Unilateral Row
- Resistance Band Squat Overhead Thrust (Press)

# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### Component #3 Squats (Continued)

Begin with proper execution of the squat and then work on volume (multiple reps). The proper technique is:

- Feet neutral with no more than 12% turn-out
- Feet flat and stable heels (driving up and down through weight of heels)
- Knees aligned with hips.
- Knees over feet
- Knees push out with depth
- Hips flexed and horizontally aligned
- Torso and tibia are parallel (with tibia and torso as vertical as possible)
- Lumbar spine remains neutral and centered over base of support
- Head neutral (with eyes fixed forward)



# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### Component #4 Lunges/Splits Squat (Split Leg Stance Patterns)

#### Lunge Progressions (Body Weight)

- Forward Lunge
- Reverse Lunge
- Side or Lateral Lunge
- Diagonal Lunges
- Curtsy or Drop Lunge
- Lunge Spectrum
- Split Squat (Static Lunge)
- Bulgarian Squat (Elevated Foot Split Lunge)
- Lunge Pulses
- Speed Skaters
- Lunge Jump
- Double Lunge to Squat Jump
- Side Lunge to Curtsy Lunge
- Side Lunge to Leg Lift
- Side Lunge to Tuck Jump
- Reverse Lunge to High Knee Up
- Walking Lunge
- Box Step-Ups
- Forward Lunges with Upper Body Twist (Rotation)
- Diagonal Lunge with Upper Body Twist (Rotation)
- Pendulum Forward to Reverse Lunge
- Reverse Lunge to Explosive Knee Drive

#### Lunges with Dumbbells (DB) or Kettlebells

- DB Goblet Split Squat (Static Lunge)
- DB Suitcase Split Squat
- DB Walking Lunges
- DB Bulgarian Split Squat
- DB Walking Lunges with Hammer Curl and Overhead Press
- DB Suitcase Split Squat
- DB Waiter Carry Single Arm (Offset/Unilateral) Split Squat
- DB Rack Position Single Arm (Offset, Unilateral) Walking Lunges with Overhead Press

- DB Box Step Ups

#### Lunges with Resistance Bands and Loops

- Reverse Lunge with Bilateral Resistance Band Row
- Reverse Lunge with Single Arm, Unilateral Resistance Band Row
- Forward Lunge with Resistance Band Fly
- Forward Lunge with Resistance Band Bilateral Chest Press
- Forward Lunge with Resistance Band Single Arm (Unilateral/Offset) Chest Press
- Resistance Band Split Squat
- Resistance Band Bulgarian Split Squat
- Resistance Band Split Squat with Bilateral Overhead Press
- Resistance Band Split Squat with Single Arm (Unilateral/Offset) Overhead Press

#### Lunges with Medicine Ball (MB)

- MB Goblet Split Squat (Static Lunge)
- MB Split Squat Overhead Press
- MB Walking Lunges with Arm Driver Twist (Rotation)
- MB Reverse Lunge to Explosive Knee Drive Reverse with Side Throw to Partner or Wall
- MB Upward Toss, Lunge and Catch
- Walking Lunges with MB and Alternating Side Bounce and Catch
- Split Squat with MB Throw to Partner or Wall
- MB Split Squat Wall Balls
- Lunge Switches/Jumps with MB Wall Balls

#### Lunge Derivative (Single-Leg Deadlifts)

- Single Leg Deadlift (with/without) Resistance Band
- Single-Leg Deadlift Hop
- Single Leg Deadlift to Knee Drive
- Single-Leg Deadlift with Hands Behind Head

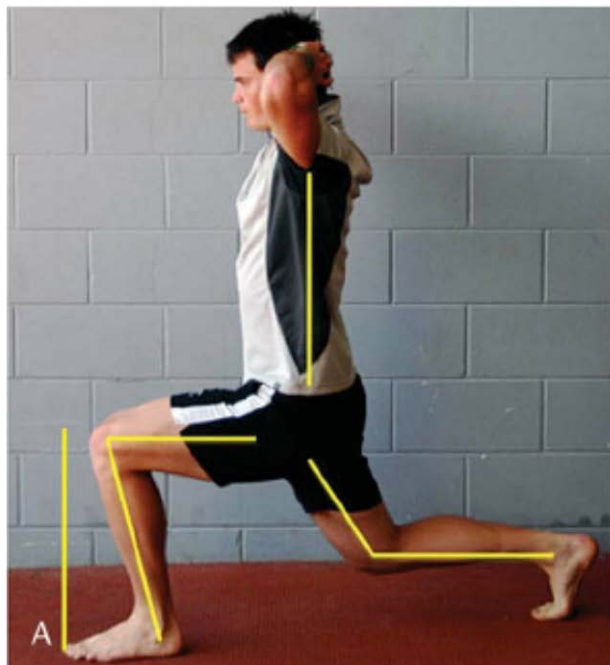
# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### Component #4 Lunges/Split Squats (Split Leg Stance Patterns) Continued

To get started, begin with proper execution of a basic lunge patterns and then work on volume (multiple reps). The proper technique is:

- Front foot flat and stable
- Back foot on the ball of foot with toes flexed
- Knees Aligned with hip and feet
- Front knee directly over the lead ankle (some allowances depending on body structure)
- Hips flexed and horizontally aligned
- Torso vertical with shoulders directly above hips
- Lumbar spine remains neutral
- Torso remains centered over base of support



# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### Component #5 Pull-Ups

#### Grip Options

- Supinated grip (chin-up)
- Pronated (pull-up)
- Neutral
- Mixed (or alternate) grip with one hand supinated and one hand pronated
- “Suicide” grip (no thumbs)
- Thumbs over bar/thumbs under bar
- Commando
- One-arm supinated
- One-arm pronated
- Narrow and progressively more narrow grips (until hands touch)
- Wide and progressively wider (spacing between hands) grips

#### Bar Options

- Standard
- Floating or swinging “trapeze-type” bar
- Rings
- Ropes
- Towel looped over bar
- Perpendicular bars for neutral grip
- V-bar draped over bar

#### Basic Technical Options

- Create constant tension by not quite fully extending arms (constant tension pull-ups)
- Fully extend and relax arms and pause at the bottom (“dead hang” pull-ups)
- “Cheat” by keeping everything tight to bar (less range of motion)
- Use gymnastic hip snap to create momentum and swing (“kipping” or “butterfly” pull-ups)
- With supinated grip extend down and out away from bar and then pull up and in bringing forehead to bar to perform a bicep pull-up



# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### Component #5 Pull-Ups Continued

#### Other Options and Progressions

- Start with chin level with bar (either by doing a standard pull-up or by stepping up onto a box) and then hold this position for X number of seconds (static hold)
- Start with chin level with bar (either by doing a standard pull-up or by stepping up onto a box) and then slowly lower down from top to bottom in X number of seconds (eccentric pull-up)
- Hang suspended for as long as possible after completing pull-up repetitions
- Place your head behind bar
- Raise up to place your chin progressively higher above the bar (until your chest reaches level of bar)
- Extend one arm out across bar in an archer pose (as your chin reaches bar)
- Release your grip off bar as your chin draws level to bar (plyo pull-up)
- Release and regrip the bar from a supinated to pronated grip as your chin draws level with bar (plyo-variation grip)
- Release and regrip bar from left hand supinated/right hand pronated mixed grip to a right hand supinated/left hand pronated mixed grip (plyo-variation grip)
- Use a band (looped around bar and under one or both knees or feet) to assist with pull-up (band assisted pull-ups)
- Hold your chin level with bar for X number of seconds or for a specific count in time at the top of each pull-up
- Pull-up jumps (jump up to bar, do one or more pull-up, jump down and repeat)

Just like push-ups, if you can do one pull-up, you can do two and if you can two, you can do three, etc. If unable to do pull-ups, start at chin level and hold this position for as long as possible and then after dropping down continue to hang onto the bar with arms fully suspended for as long as possible.

# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### Component #6 Shoulder and Upper Extremity Strengthening and Stabilization Patterns

#### Resistance Band and Loop

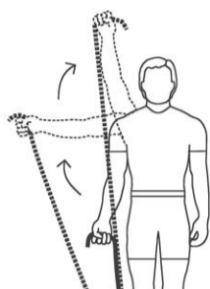
- Single-Arm Shoulder Abduction to 90°
- Single-Arm Shoulder Flexion to 90°
- Single-Arm Shoulder Extension from 90° to 45° Extension
- Bilateral (Two-Arm) External Rotation with Shoulder at 0° Abduction and Elbow at 90° Flexion with Neutral Grip (Scapular Retraction)
- Bilateral (Two-Arm) External Rotation with Shoulder at 0° Abduction and Elbow at 90° Flexion with Supinated Grip (Scapular Retraction)
- Single-Arm External Rotation with Shoulder at 0° Abduction and Elbow at 90° Flexion
- Single-Arm Internal Rotation with Shoulder at 0° Abduction and Elbow at 90° Flexion
- Single-Arm Internal Rotation with Shoulder at 90° Abduction and Elbow at 90° Flexion
- Single-Arm External Rotation with Shoulder at 90° Abduction and Elbow at 90° Flexion
- Shoulder Scaption from 0° to 90°
- Band Pull Apart (Bilateral Reverse Fly with Shoulder at 90°)
- Split Stance Fly
- Forward Lunge Fly
- Lat Pulldown
- Straight-Arm Lat Pulldown
- Bilateral Universal Athletic Stance Row
- Bilateral Split Stance Row
- Single-Arm (Unilateral, Offset) Universal Athletic Stance Row
- Single-Arm (Unilateral, Offset) Split Stance Row
- Squat Bilateral Row
- Squat Single-Arm (Unilateral, Offset) Row
- Split Squat Bilateral Row
- Split Squat (Reverse Lunge) Alternating Leg Bilateral Row
- Split Squat Single-Arm (Unilateral, Offset) Row
- Bilateral Chest Press
- Alternating Arm Chest Press
- Single-Arm (Unilateral, Offset) Chest Press
- Bilateral Chest Press with Forward Lunge
- Single-Arm (Unilateral, Offset) PNF D2 (Diagonal Low to High)
- Single-Arm (Unilateral, Offset) PNF D1 (Diagonal High to Low)
- Overhead Press
- Serratus Press
- Ulnar and Radial Deviation
- Pronation and Supination
- Triceps (Elbow) Kickback
- Concentration Curl
- Bent-Over Row
- Band Pull Apart (Reverse Fly)
- Diagonal Lift
- Diagonal Chop



# FAIRFAX HIGH SCHOOL TENNIS

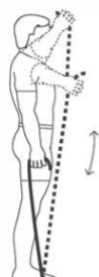
## Tennis Conditioning Program

### Resistance Band Exercise Patterns



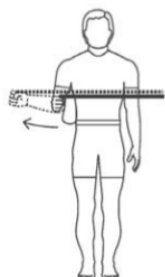
#### Shoulder Abduction\*

- Stand on elastic.
- Begin with arm at side, elbow straight, holding elastic, palm forward.
- Raise arm upward, out to side and over head.
- Slowly return to starting position.



#### Scaption (Abduction in Scapular Plane)

- Stand on elastic.
- Begin with arm at side, elbow straight, holding elastic, thumb up.
- Raise arm in a position halfway between the front and side, over head.
- Slowly return to starting position.

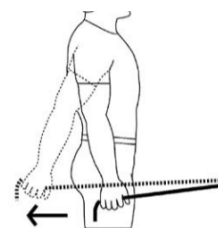


#### Shoulder External Rotation

- Attach elastic to secure object at waist level.
- Place pillow between elbow and body.
- Grasp elastic in hand, elbow bent to 90 degrees.
- Rotate arm outward and return.
- Slowly return to start position and repeat.

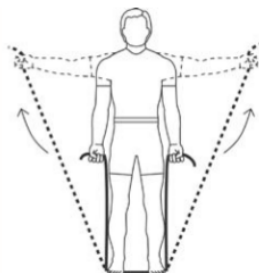
#### Shoulder Extension

- Secure elastic at waist level as shown.
- Grasp elastic and pull arm backwards keeping elbow straight.
- Slowly return to start position.



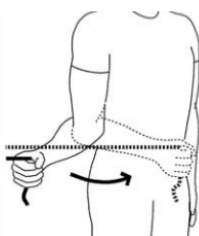
#### Lateral Raise

- Stand on elastic.
- Hold elastic in both hands.
- Begin with arms at sides.
- Position palms forward.
- Keep elbows straight and lift arms to shoulder level.
- Slowly lower and repeat.



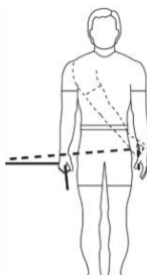
#### Shoulder Internal Rotation

- Secure elastic at waist level.
- Sit or stand with involved side to elastic, elbow at 90 degrees, arm at side.
- Grasp elastic and pull hand inward, across body, as shown.
- Slowly return to start position and repeat.



#### Shoulder Adduction

- Attach elastic to secure object at waist level.
- Grasp elastic in hand.
- Pull arm inward, keeping elbow straight.
- Slowly return to start position and repeat.



#### Shoulder Diagonal D2 Flexion\*

- Attach elastic to secure object at floor level.
- Begin with arm crossed over trunk, holding elastic, palm inward, at opposite hip.
- Raise arm up and diagonally across, ending with palm facing forward.
- Slowly return to start position and repeat.



#### Front Raise\*

- Secure elastic at waist level as shown.
- Grasp elastic and pull arm backwards keeping elbow straight.
- Slowly return to start position.



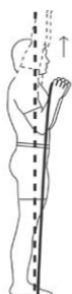
#### Shoulder Flexion\*

- Stand on elastic.
- Begin with arm at side, elbow straight, thumb up.
- Grasp elastic.
- Raise arm in front over head, keeping elbow straight.
- Slowly return to starting position.

# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### Resistance Band Exercise Patterns Continued

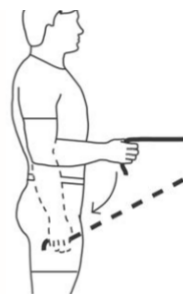


#### Overhead Press\*

- Stand on elastic.
- Grasp elastic in hands, arms at side, elbows bent, as shown.
- Push arms up and overhead.
- Slowly return to start position and repeat.

#### Elbow Extension

- Attach elastic to secure object at waist level.
- Grasp elastic, thumb up, elbow bent, as shown.
- Straighten elbow, keeping elbow at side.
- Slowly return to starting position.



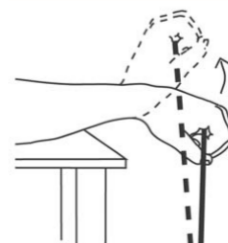
#### Shoulder Diagonal D2 Extension\*

- Attach elastic to secure object above head level.
- Begin with arm up and out from side as shown.
- Grasp elastic, palm forward and pull down and across.
- End with hand at opposite hip, palm inward.
- Slowly return to start position and repeat.



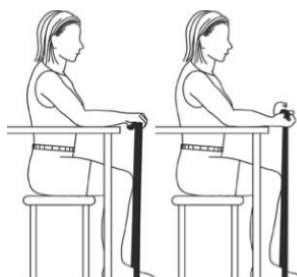
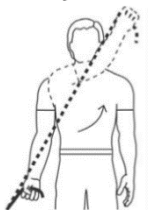
#### Wrist Extension

- Secure elastic under foot.
- Grasp elastic with hand.
- Place forearm on table with hand off edge of table, palm down as shown.
- Move wrist upward.
- Slowly return to starting position.



#### Shoulder Diagonal D1 Flexion\*

- Secure elastic to secure object at floor level.
- Sit or stand, arm at side.
- Grasp elastic in hand, palm forward.
- Lift arm upward and across body to opposite shoulder, bending elbow, ending with palm inward.
- Slowly return to start position and repeat.



#### Supination

- Secure elastic near floor.
- Support forearm on table or armchair.
- Position hand palm down with elastic crossing over thumb as shown.
- Rotate hand to palm up, elastic should resist this movement.
- Slowly return to start position.

#### Pronation

- Secure elastic near floor.
- Support forearm on table or armchair.
- Position hand palm up with elastic crossing under thumb as shown.
- Rotate hand to palm down, elastic should resist this movement.
- Slowly return to start position.



#### Elbow Flexion\*

- Stand on elastic
- Grasp elastic in hand, palm up, arm straight.
- Pull upward, bending at elbow.
- Slowly return to start position and repeat.



#### Wrist Flexion

- Secure elastic under foot.
- Grasp elastic in hand.
- Place forearm on table with hand off edge of table, palm up, as shown.
- Move wrist upward.
- Slowly return to starting position.

# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### Resistance Band Exercise Patterns Continued



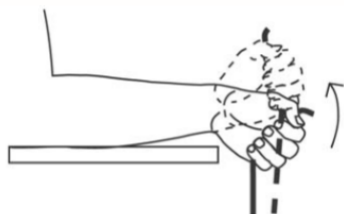
#### Ulnar Deviation

- Sit and secure ends of the band under your feet, creating a loop in the middle.
- Keep elbow at side, grasp middle loop of band, keeping thumb forward.
- Keep elbow next to side and move wrist backward.
- Hold and slowly return and repeat.



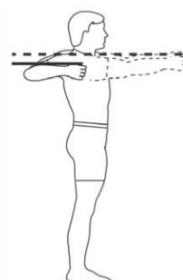
#### Concentration Curl\*

- Attach elastic to secure object at floor level.
- Grasp elastic in hands, palms up, arms straight.
- Pull upward, bending at elbows.
- Keep trunk straight
- Slowly return to start position and repeat.



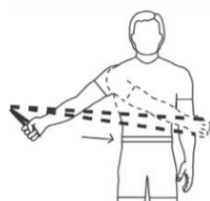
#### Radial Deviation

- Secure elastic under foot.
- Support forearm on table or knee as shown.
- Hold elastic in hand, thumb up.
- Move hand upward.
- Return to start position and repeat.



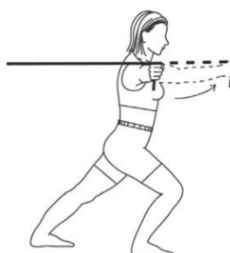
#### Chest Press

- Attach elastic to secure object at shoulder level.
- Sit or stand as shown.
- Hold elastic in hands, arms out from side, elbows bent, as shown.
- Push forward, straightening elbows.
- Slowly return to start position and repeat.



#### Horizontal Adduction\*

- Attach elastic to secure object at shoulder level.
- Grasp elastic in involved hand and pull inward, across body, as shown.
- Keep elbow straight and do not twist at waist.
- Slowly return and repeat.

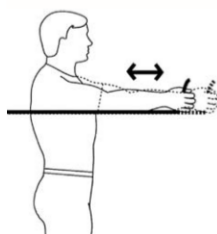


#### Chest Flies

- Secure middle of elastic to stationary object at shoulder level.
- Face away from attachment in a staggered step, one leg in front of other as shown.
- Grasp bands at shoulder level with your elbows straight.
- Keep elbows straight and pull inward with palms inward.
- Slowly return and repeat.

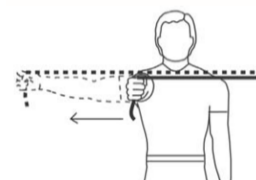
#### Serratus Press

- Attach elastic to secure object at shoulder height.
- Face away, grasp elastic in hand with elbow straight, arm in front, as shown.
- Push arm forward.
- Slowly return to start position.



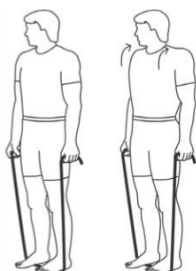
#### Horizontal Abduction\*

- Attach elastic to secure object at shoulder level.
- Grasp elastic with hand, as shown.
- Pull arm outward, keeping elbow straight.
- Do not twist at waist.
- Slowly return to start position and repeat.



#### Elbow Kick Back\*

- Hold elastic in hand of involved arm.
- Place one end of elastic under opposite foot.
- Slightly bend hips and support upper body with other arm as shown.
- Pull up on elastic, raising elbow to shoulder height.
- Extend elbow backward, contracting Triceps.
- Slowly return to start position and repeat.



#### Shrug\*

- Stand, arms at sides.
- Stand on elastic as shown, holding elastic in hands.
- Raise shoulders upward towards ears, and roll backwards.
- Keep elbows straight.
- Slowly return to start position.

# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### Resistance Band Exercise Patterns Continued

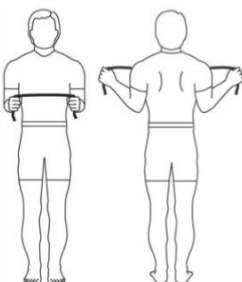
#### Dynamic Hug

- Begin with band wrapped around upper back, holding each end in hands.
- Abduct shoulders to 60 degrees and bend elbows to 45 degrees.
- Keep shoulders elevated and push arms forward and inward in a hugging motion.
- When hands touch, hold, slowly return to start position and repeat.



#### Scapular Retraction

- Hold arms at sides with elbows bent, holding ends of elastic in each hand.
- Squeeze shoulder blades together by moving hands outward slightly.
- Slowly return to starting position.



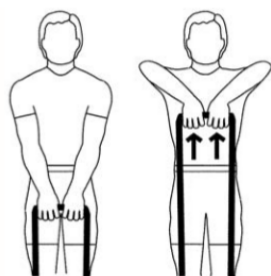
#### Lat Pull Down\*

- Attach elastic overhead to secure object.
- Grasp elastic in hands as shown.
- Pull down, bending elbows, squeezing shoulder blades together.
- Slowly return to start position and repeat.



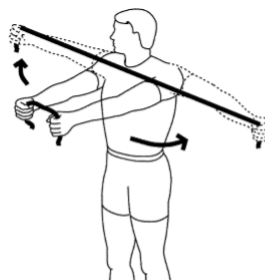
#### Bent Over Row\*

- Secure elastic under opposite foot.
- Hold elastic in involved arm.
- Slightly bend hips and knees and support upper body with other arm as shown.
- Pull up on elastic, raising elbow to shoulder height.
- Slowly return to start position and repeat.



#### Upright Row\*

- Stand on elastic.
- Grasp elastic in both hands in front of hips, elbows straight.
- Lift upward toward chin, bending elbows.
- Keep hands close to chest.
- Slowly lower and repeat.



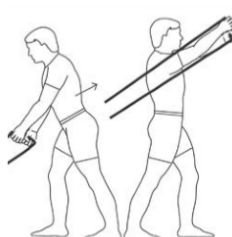
#### Reverse Flies\*

- Grasp elastic in hands, elbows straight, as shown.
- Move arms away from each other, out to sides.
- Slowly return to start position.



#### Seated Row

- Attach elastic to secure object.
- Grasp elastic in hands.
- Sit in chair with back unsupported, maintaining proper posture.
- Keep elbows near sides, elbows bent.
- Squeeze shoulder blades together, pulling arms back.
- Slowly return to start and repeat.

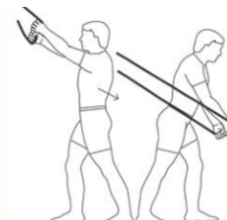


#### Diagonal Lift\*

- Secure elastic at floor level.
- Grasp elastic in both hands.
- Bend at hips (knees if needed) and rotate trunk, pulling upward and across as shown, keeping back in neutral position.
- Slowly return and repeat.

#### Diagonal Chop\*

- Secure elastic above head.
- Grasp elastic in both hands.
- Pull downward and across, rotating trunk, bending at hips and knees as needed, but keeping back neutral, as shown.
- Slowly return and repeat.



# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### Component #7 Core Exercises

#### Prone Position (Lying Face Down)

- Supermans
- Supermans with Heel Touch
- Swimmers
- Snow Angels
- T's, Y's, W's, O's and I's
- Back Extension with Hands Under Chin

#### Supine Position (Lying or Positioned Face Up)

- McGill Curl
- Leg Raises
- Leg Kicks
- Leg Marches
- Curl Ups
- Dead Bug
- Sit Up to Hip Up
- Knee Drops
- Windshield Wipers
- Back Bridge
- Supine Toe Touches
- Human Pullover

#### Quadruped Position (Hands and Knees)

- Donkey Kicks
- Leg Raises
- Fire Hydrants
- Bird Dog
- Bird Dog Resistance Band Rows
- Shoulder Blade Squeeze/Tailbone Tuck
- Mountain Climbers
- Cat and Camel

#### Hollow Core

- Hollow Hold
- Hollow Rocks
- DB Single Arm (Offset, Unilateral) Press

# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### Component #7 Core Exercises (Continued)

#### Glute Bridge

- Leg Raises
- Hip Dips
- Marches
- DB Fly
- DB Bilateral Press
- DB Single Arm (Offset, Unilateral) Press
- DB Pullover

#### Planks

(See Reference Component #2)

#### Anti-Rotation

Anti-rotation exercises work to build core stability and strength by training the primary core muscles to resist force and prevent rotation and torque. Anti-rotation exercises include torsional buttressing, unilateral, unilateral loaded and force resistance moves.

- Resistance Band Pallof Press
- Resistance Band Half Kneeling Pallof Press
- Resistance Band Kneeling Pallof Press
- Resistance Band Lateral Pallof Press
- Resistance Band Reverse Lunge Pallof Press
- Resistance Band Squat Pallof Press
- Resistance Band Anti-Rotation Chop
- Bird Dog
- Bird Dog from High Plank Position
- Resistance Band Bird Dog High and Low Plank Position Row
- Plank One Arm Pull Through
- Resistance Band Plank Row
- Shoulder Tap/DB Renegade Plank
- Plank Medicine Ball Pass
- Single-Arm (Unilateral/Offset) Resistance Band or Cable Squat Row
- Single-Arm (Unilateral) Resistance Band Chest Press
- Single-Arm (Unilateral) DB Rack, Waiter, Suitcase Carries
- Single-Arm (Unilateral) Wall Push-Up
- DB Single-Arm (Unilateral) Inverted Row
- DB Suitcase Deadlift
- DB Suitcase Squat



# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

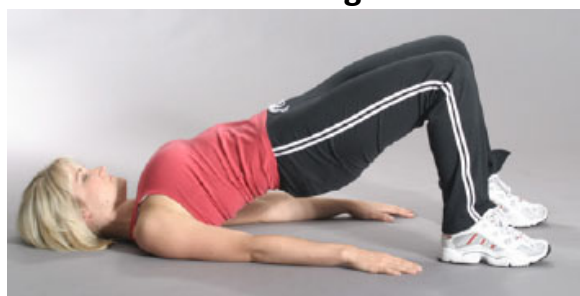
### Component #7 Core Exercises (Continued)



**McGill Curl-Up**



**Bird Dog**

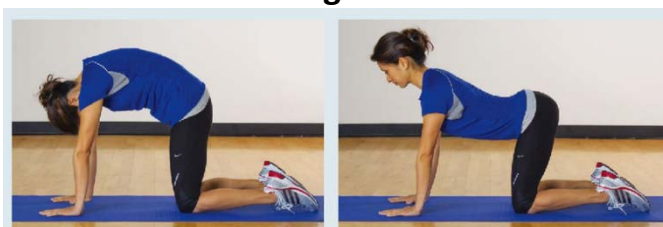


**Glute Bridge**



Single-leg glute bridge progression

**Glute Bridge Variation**



**Cat and Camel**



**I's, Y's W's, O's**



# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### Component #8 Agility and Speed Drills and Patterns

#### Cone and Line Drills

- Slalom Cone Run
- Cone Pattern Variations (L, M, X etc.)
- Spider Drill
- Alley Jumps
- Ball Drops
- Shadow Training
- Pro Agility (5-10-5)
- Illinois Agility
- Line Twists
- Court Line Suicides
- Forward and Backward Line Hops
- Single Leg Forward and Backward Line Hops
- Lateral Line Hops
- Single Leg Lateral Line Hops
- Scissors Line Drill
- Forward and Backward Line Hops (Traveling Laterally)
- Lateral Line Hops (Traveling Forward and Backward)
- Traveling Scissors
- 180° Hops
- 180° Traveling Hops
- In and Out Circles
- Line Jacks
- High Knees Heisman
- Diagonal Skaters to High Knees

#### Ladder Drills

- One in the Hole
- Two in the Hole
- Lateral Two in the Hole
- Lateral One in the Hole
- Cha-Cha
- Ickey Shuffle
- Carioca
- Crossover In and Two Steps Out
- Hopscotch

- Ali Shuffle
- Slaloms
- Cherry Pickers
- 180's
- Two In, Two Out (Traveling Laterally)

#### Sprint Drills

- Ankling
- A Skip
- B Skip
- C Skip
- Power Skip
- Push-Up Start
- Rolling Start
- Mountain Climber Start
- Straight Legs
- High Knees
- Bounding
- Backward Running
- Boom Booms - Leg Switches
- Squat Runs
- Triple Jump
- Wall Steps and Runs
- Squat and Split Squat Runs w/ or w/o DB

#### Sprint Intervals

1:3 - 1:5 work to recovery ratios; 5 - 30 second sprints at high intensity (e.g., 10 second sprint at high intensity followed by 30 second slow jog or walk, repeat 12 times for total time of eight minutes or 20 second sprint at high intensity followed by one minute slow jog or walk, repeat six times for total time of eight minutes)

#### Stairs

- Two-Foot Stair Jump
- Stair Sprints
- Two-Step Stair Climb

#### Hill Repeats

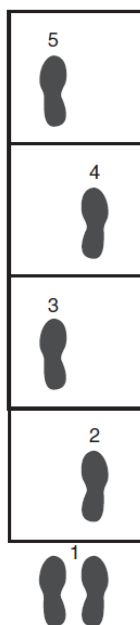
#### Jumping Rope and Jumping Rope Patterns

# FAIRFAX HIGH SCHOOL TENNIS

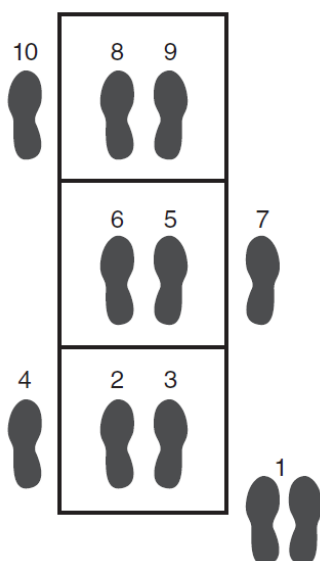
## Tennis Conditioning Program

### Ladder Drill Diagrams

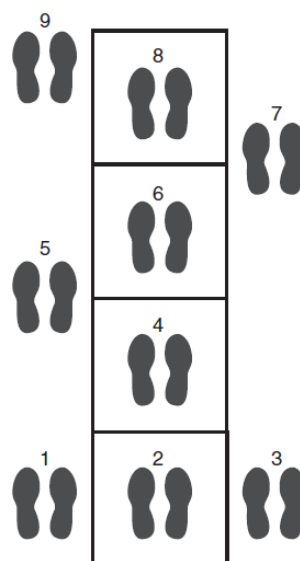
One in the Hole



Ickey Shuffle



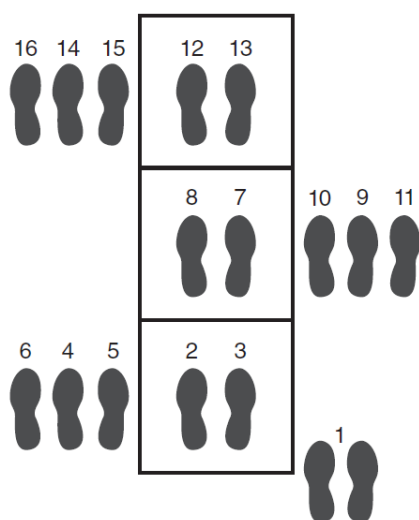
Slaloms



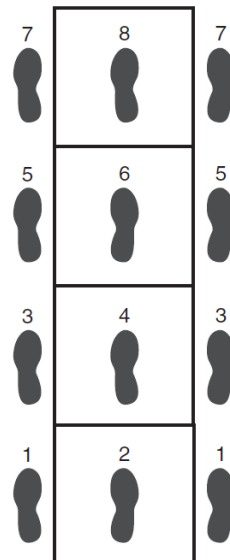
Two in the Hole



Cha-Cha



Hopscotch

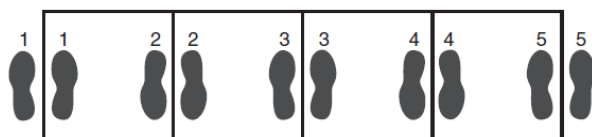


# FAIRFAX HIGH SCHOOL TENNIS

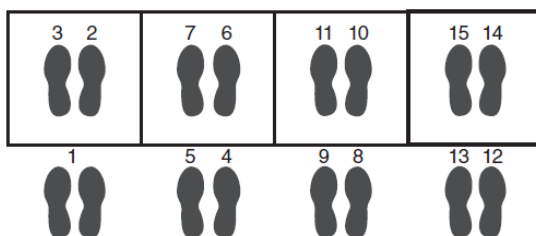
## Tennis Conditioning Program

### Ladder Drill Diagrams

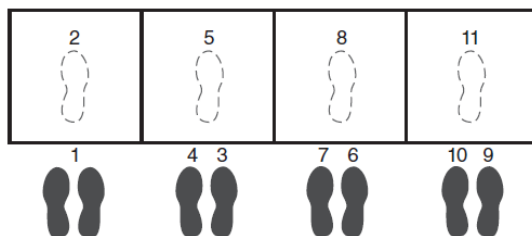
#### 180's



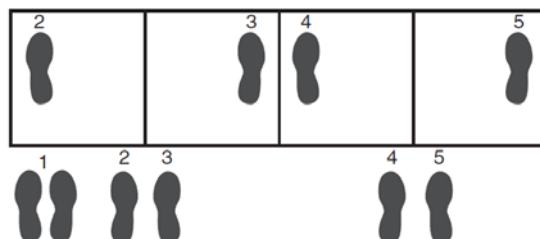
#### Two In, Two Out (Traveling Laterally)



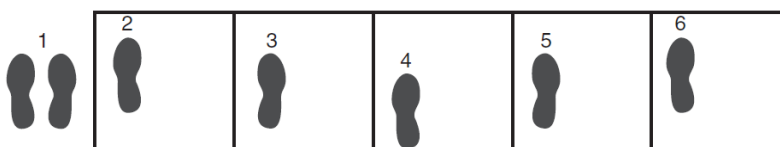
#### Lateral One in the Hole (Tap Foot in Hole)



#### Ali Shuffle



#### Carioca



#### Lateral Two in the Hole

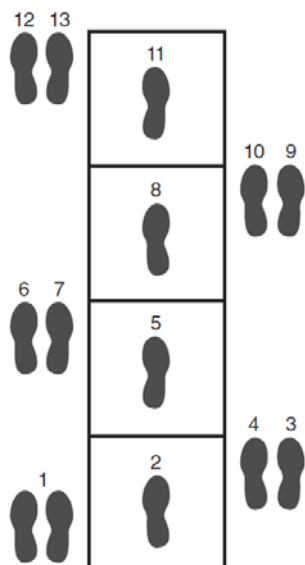


# FAIRFAX HIGH SCHOOL TENNIS

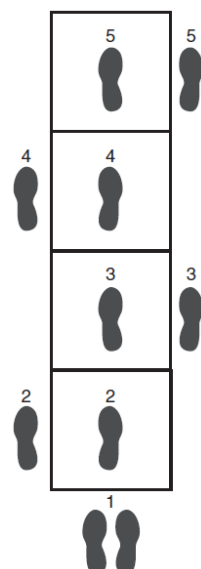
## Tennis Conditioning Program

### Ladder Drill Diagrams

#### Crossover In and Two Steps Out



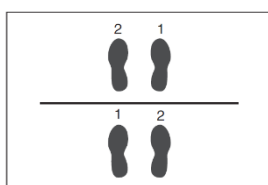
#### Cherry Pickers



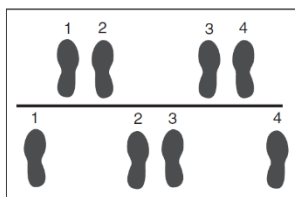
(Cherry Picker Note: Touch ground in box in front of foot with hand opposite foot in box before hopping to next ladder rung.)

### Basic Line Drill Diagrams

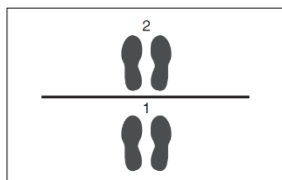
#### Scissors



#### Traveling Scissors

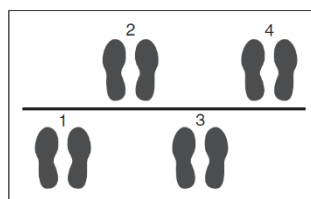


#### Forward/Backward Hops

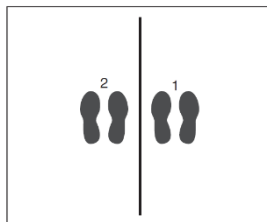


#### Traveling

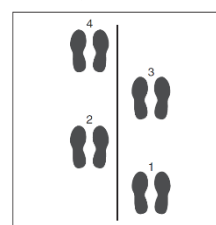
#### Forward/Backward Hops



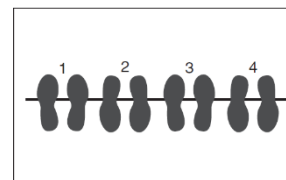
#### Lateral Line Hops



#### Traveling Lateral Hops



#### Traveling 180° Hops

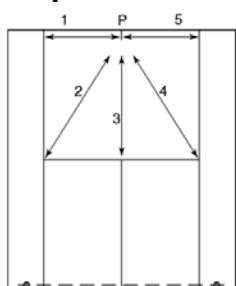


# FAIRFAX HIGH SCHOOL TENNIS

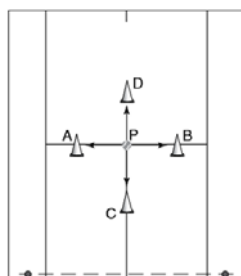
## Tennis Conditioning Program

### Basic Court Line and Cone Drills

**Spider Drill**

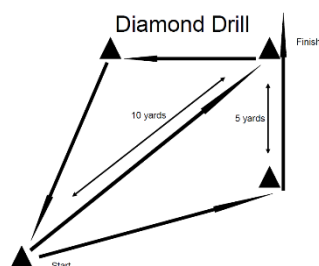
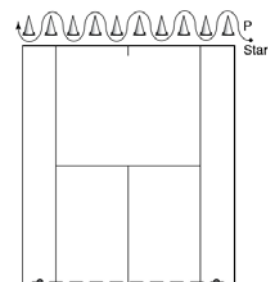


**Cross Cone Drill**

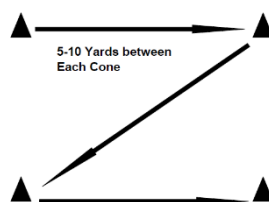


Shuffle between cones A and B until command to sprint to cone C(D) then D(C).

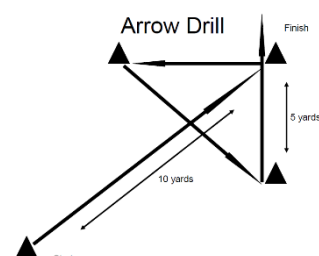
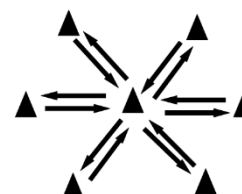
**Lateral Slalom Cone Drill**



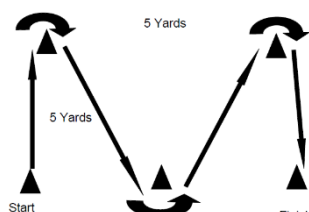
**Z Drill**



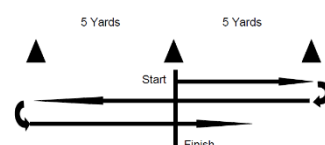
**6 Cone Wheel Drill**



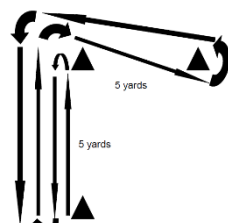
**M Drill**



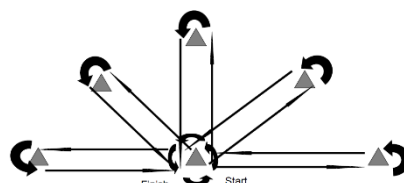
**Pro Agility**



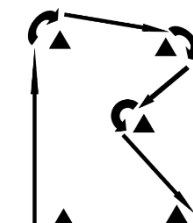
**L Drill**



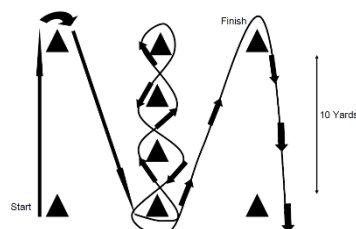
**Sunburst**



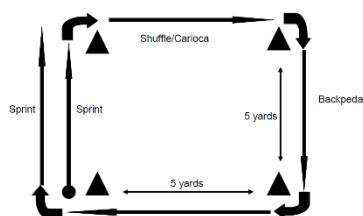
**R Drill**



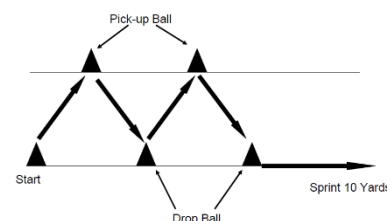
**Illinois Agility**



**4 Cone Drill 1**



**Tennis Ball Shuttle**



# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### How to rate intensity and exertion when performing running, sprint, line and cone drills

Rate of Perceived Exertion (RPE), Heart Rate Training Zones, % Maximum Heart Rate (MHR), % Functional Threshold Power (FTPw) and %Functional Threshold Pace (FTP)



RPE #	Intensity	Heart Rate Training Zone	% MHR	%FTPw or %FTP
10	Max Effort Activity Feels almost impossible to keep going. Completely out of breath. Unable to talk. Fast twitch muscle fiber recruitment	<b>Zone 6 Anaerobic Capacity Training</b> Neuromuscular/Power, Anaerobic Capacity	94 – 100%	More than 120%
9	Very Hard Activity Pace and intensity are challenging and difficult to sustain. Can barely breath and speak a single word. Fast twitch muscle fiber recruitment	<b>Zone 5 Lactate Tolerance and Aerobic Capacity Training</b> VO2 Max/Speed, Speed Endurance, Aerobic Capacity	89 – 94%	105-120%
7 - 8	Vigorous Activity Intensity is difficult. Pace is uncomfortable. Short of breath. Conversation is difficult. F.O.G muscle fiber recruitment	<b>Zone 4 Lactate Threshold Training</b> Anaerobic Threshold, Muscular Endurance	82 – 89%	90 – 104%
5 - 6	Moderate Activity Pace and intensity are moderate. Breathing is heavy and more labored. Can hold short conversation. F.O.G muscle fiber recruitment	<b>Zone 3 Tempo Endurance Training</b> Stamina/Tempo, Intensive Endurance	75 – 82%	75 – 89%
3 - 4	Light Activity Breathing rate increases slightly. Pace and intensity remain comfortable and conversation is still possible. Slow twitch muscle fiber recruitment	<b>Zone 2 Aerobic Endurance Training</b> Aerobic Threshold, Extensive Endurance	65 – 75%	55- 74%
1 - 2	Very Light Activity Pace, intensity, and breathing are comfortable and relaxed. Slow twitch muscle fiber recruitment	<b>Zone 1 Active Recovery</b> Recovery, Basic Endurance	60 – 75%	Less than 55%

#### Anaerobic Threshold

A level of effort above which an athlete will fatigue quickly and below which can be sustained for longer duration (>1 hour). Can be defined by heart rate (Lactate Threshold Heart Rate or LTHR) for all sport types, power (Functional Threshold Power Wattage or FTPw) for rowing, running, and cycling, and pace (FTP or T-Pace) for swimming and running.

# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### Component #9 Plyometrics

#### Plyometrics

- Plyometric Push-Ups (Hands up, Hand Clap)
- Box Jumps
- Wall Bounce Push-Ups
- Explosive Box Jumps
- Lateral (Side) Box Jumps
- Box Shuffle (Lateral Direction)
- Split Squat (Lunge) Jumps
- Split Squat (Lunge) Jumps with Medicine Ball Wall Balls
- Squat Jumps
- Tuck Jumps
- Squat to Lunge Jumps
- Squat to Tuck Jumps
- Forward Bounds
- Triple Jump
- Long or Broad Jumps
- Plank to Squat
- Burpees
- Burpees to Tuck Jumps
- Plyometric Jacks
- Single-Leg Deadlift Jumps
- Squat Ins and Outs
- Jumping Spider-Man Push-Ups
- Single-Leg X Hops
- Single-Leg Box Hops
- Plank Skiers
- Medicine Ball Press Jacks
- Medicine Ball Alternating Rotational Wall Throws
- Shuffle Medicine Ball Wall Chest Press
- Plyometric Pull-Ups (Hand Release)
- Kneeling Squat Jump
- Squat Thruster (Plank to Squat)
- Box Blasts
- Depth Drop
- Depth Drop to Box Jump



# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### Component #10 Post-Workout Stretching

#### Static Stretches

- World's Greatest Stretch
- Crescent to Hamstring Stretch
- Seated Hamstring Glute and Spinal Twist Complex
- Cross-Body Shoulder Stretch with Extended Arm
- Cross-Body Shoulder Stretch with Bent Arm
- Pectoralis Split-Stance Doorway Stretch
- Standing Bent-Over T Stretch
- Standing Hamstring Stretch
- Piriformis Figure 4 Stretch
- Lunge with Spinal Twist
- Wrist Flexors and Extensors
- Standing Calf Stretch
- Butterfly Groin Stretch
- Hip Flexor Stretch
- Standing Quadriceps "Stork" Stretch
- Scorpion Stretch
- 90°/90° Stretch
- Frog Stretch
- Hamstring Stretch
- Spinal Twist
- Anterior Deltoid Stretch
- Squat Adductor Stretch
- Oblique Stretch
- Pretzel Stretch
- Reclining Bound Angle Pose
- Knees to Chest
- Upper Trapezius Stretch
- Quadruped Thoracic Rotation Stretch
- Child's Pose
- Handcuff Drill
- Thread the Needle
- T-Spine Windmill Stretch
- Elbow-Out Rotator Stretch
- Overhead Triceps and Shoulder Stretch
- Reverse Shoulder Stretch
- Iron Cross Stretch
- Eagle-Arm Stretch
- Side-Lying Thoracic Rotation
- Cow Face Pose
- Pigeon Pose

#### Myofascial Release (Foam Rolling)

#### Proprioceptive Neuromuscular Facilitation (PNF)

- Hold-Relax
- Contract-Relax
- Hold-Relax with Agonist Contraction)

#### Active Isolated Stretching (AIS)

**Note:** The program can benefit with the use of free weights and free-weight-based benches, racks, plate-loaded equipment, and accessories (for both barbells and dumbbells) and single and multi-function selectorized machines (if available). The first exercise to add to the program with access to free weights would be the deadlift. The deadlift is one of the three primary lower extremity and posterior compound exercises most beneficial to tennis players (with the other two being lunges and squats).

# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### World's Greatest Stretch

#1



#2



#3



#4



#5



#6



### Crescent to Hamstring Stretch

#1



#2



#3



#4



# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

Seated Hamstring Glute and Spinal Twist Complex

#1



#2



#3



Myofascial Release

# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### Other Components (Options)

The program can benefit with the use of free weights and free-weight-based benches, racks, plate-loaded equipment and accessories (for both barbells and dumbbells) and single and multi-function selectorized machines (if available). The first exercise to add to the program with access to free weights would be the deadlift. The deadlift is one of the three primary lower extremity and posterior compound exercises most beneficial to tennis players (with the other two being lunges and squats).

#### Deadlift Options

- Conventional
- Sumo
- Stiff Legged
- Single-Leg, Stiff-Legged



The TRX also provides additional applicable options for tennis-specific training.

#### TRX Patterns

- |                                |                          |
|--------------------------------|--------------------------|
| • Split Squats                 | • Power Pulls            |
| • Reverse Lunge                | • High Bicep Curls       |
| • Reverse Lunge with High Knee | • Triceps Extensions     |
| • Forward Lunge                | • Flyes                  |
| • Pendulum Lunges              | • Lunge with Flyes       |
| • Rows                         | • Push-Ups               |
| • Deep Squat with Row          | • Suspended Leg Push-Ups |
| • Deep Squat with Reverse Fly  | • Atomic Push-Ups        |

# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### Introductory General Individual Workout

1. Walking High Knee Hugs (10 Strides, 2 – 3 Sets)
2. Walking High Knee Hug Lunges (10 Strides, 2 – 3 Sets)
3. Bear Crawl (10 Reps, 2 – 3 Sets)
4. Low Planks (20 – 30 Seconds, 2 – 3 Sets)
5. Rolling Planks (20 Reps or 10 Reps Each Side, 2 – 3 Sets)
6. Jack Planks (10 Reps, 2 - 3 Sets)
7. Spider-Man Planks (10 Reps, 2 - 3 Sets)
8. Push-Ups (5 – 20 Reps, 2 – 3 Sets)
9. Jack Plank Push-Ups (5 – 10 Reps, 2 Sets)
10. Spider-Man Plank Push-Ups (5 – 10 Reps, 2 – 3 Sets)
11. Pull-Ups (2 – 10 Reps, 2 - 3 Sets)
12. Air Squats (10 – 20 Reps, 2 – 3 Sets)
13. Split Squats (10 – 20 Reps Each Leg, 2 – 3 Sets)
14. Glute Bridge Hip Dips (10 Reps, 2 – 3 Sets)
15. Glute Bridge Leg Raises (10 Reps Each Leg, 2 – 3 Sets)

### Introductory General Group Supervised Workout

1. Dynamic Warm-Up (5 - 10 Minutes)
  - a. Small Arm Circles Fingers Up
  - b. Small Arm Circles Fingers Down
  - c. Alternating Arm Crossover Swings
  - d. Bow Draw Torso Twist (Transverse Plane) Rotations
  - e. Walking Leg Kicks (Feet to Hands)
  - f. Walking High Knee Pulls
  - g. Inchworms
2. Glute Bridge Hip Dips, 10 – 20 Reps, 2 Sets
3. Glute Bridge Leg Raises, 10 – 20 Reps with Each Leg, 2 Sets
4. Low Planks, 20 to 60 Seconds, 2 Sets
5. High Planks, 20 to 60 Seconds, 2 Sets
6. Military Low to High Planks, 10 Reps, 2 Sets
7. Alternating High T Planks, 10 Reps, 2 Sets
8. Push-Ups, 10 – 30, 2 Sets
9. T Plank Push-Ups, 10 Reps, 2 Sets
10. Air Squats, 10 – 30, 2 Sets
11. Medicine Ball Goblet Squats, 10 Reps, 2 Sets
12. Medicine Ball Partner Toss and Catch Squats, 15 Reps, 2 Sets
13. Resistance Band Bilateral Universal Athletic Stance Row, 15 Reps, 2 Sets
14. Resistance Band Squat Rows, 15 Reps, 2 Sets
15. Resistance Band Pull Apart (Bilateral Reverse Fly with Shoulder at 90°), 15 Reps, 2 Sets
16. Single-Arm (Unilateral, Offset) PNF D2 (Diagonal Low to High), 15 Reps Each Arm, 2 Sets
17. Single-Arm External Rotation with Shoulder at 0° Abduction and Elbow at 90° Flexion, 15 Reps Each Arm, 2 Sets
18. Single-Arm Internal Rotation with Shoulder at 0° Abduction and Elbow at 90° Flexion, 15 Reps Each Arm, 2 Sets
19. Split Stance Fly, 15 Reps Each Arm, 2 Sets
20. Spider Drill
21. Lateral Slalom Cone Drill
22. World's Greatest Stretch

# FAIRFAX HIGH SCHOOL TENNIS

## Tennis Conditioning Program

### T-Plank Fitness Challenge

The challenge is to do 10 (10 to each side) rolling T planks, followed in succession by 10 (10 to each side) high T planks and then 10 (10 to each side) high T planks combined with 10 push-ups (one push-up after each left and right side plank) in a time of less than two minutes. The challenge has two parts. The first challenge is to do one complete set in less than two minutes. The second challenge is to continue to do complete sets every two minutes (two minutes to complete a set and two minutes to recover) until you cannot do a complete set or until you cannot do a complete set in less than two minutes. For this second part to the challenge, the objective is to see how many complete sets you can do every two minutes until fatigue no longer allows you to continue.

This challenge shows how you can make a basic exercise progressively more complex and difficult to accomplish.

I have included below a link to a video demonstrating the challenge. It shows me performing one set (albeit not with the best form particularly in raising my left arm).

[https://youtu.be/My\\_0GWNLaHo](https://youtu.be/My_0GWNLaHo)

There are a lot of things you can do at home to get in the best possible shape. Use the tennis conditioning reference material in the Fairfax High School Tennis Handbook as a roadmap.

**Good luck!**