

Long-Term Physical Development Program

1st Edition

A detailed program for the long-term physical development of
tennis players
(2005)



TENNIS
CANADA

COACHING
DEVELOPMENT

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Introduction:

The purpose of this program is to lay the groundwork for tennis coaches to implement a fitness program with their athletes. In this program you will find clearly identified stages of development which outline specific routines for tennis athletes depending on their age. The Stages of Development are:

1. FUNdamental
2. Learning to Train
3. Training to Train
4. Training to Compete
5. Training to Win

Each of these stages outlines specific needs that are essential in the athlete's overall development along with exercises to meet these needs.

Steps to Using this program

1) Fitness test:

To develop a base line for future testing and to identify areas of concern all participants in a fitness program should undergo a fitness test. The tests outlined in this manual were chosen specifically for tennis. Norms have been provided in appendix A to provide a source for comparison.

2) Stages of Development:

Identify the appropriate stage based on the ages of the kids in each particular program. Carefully read the recommendations for that stage including the number of hours of training.

3) Exercises:

1) Watch the DVD and choose exercises that are appropriate to your athlete's stage of development.

Or

2) Exercises can also be found at the end of each stage of development section in this manual.

Make sure that you include exercises from all areas (speed, coordination, flexibility etc.) of training and don't forget to include a warm-up and cool-down.

4) On Going Assessments:

Re-test your athletes on an ongoing basis in order to assess their progress and adapt their program to meet their changing needs.



Canadian testing protocol for ages 5-9

ANTHROPOMETRIC MEASUREMENT TESTS

HEIGHT MEASUREMENT

The subject stands straight facing evaluator. The measuring must be done without footwear. Firstly, attach the tape measure to the wall to assure that zero is at floor-level. The subject must rest head and back directly against the tape measure. Once placed correctly, subject must breathe in to maximum capacity while stretching neck upwards (keeping the head straight and parallel to the ground). As the subject holds their breath, gently place a ruler on top of their head. Once the ruler is placed in position, hold firmly against the wall while subject withdraws. Take the measurement directly under the base of the ruler. Desired precision is 0.1cm.

Sources : Physitest normalisé canadien

WEIGHT MEASUREMENT

The subject stands on the scale. The weight must be taken without footwear and with light clothing. The desired precision is 0.1 kg.

Sources : Physitest normalisé canadien

DOMINANT HAND IDENTIFICATION

This test is simply a matter of identifying if the child hits his forehand with his right hand or with his left. This also can be identified if a child throws a ball with his left or right hand.

Sources: Paul Dorochenko, fitness coach.

DOMINANT EYE IDENTIFICATION

This test requires a sheet of paper 8 1/2" x 11" with a hole the diameter of a pencil in the center. The subject holds the paper in both hands with outstretched arms. The subject must focus his sight on a distant object through the hole in the paper. While maintaining eye contact with the object, the subject bends his arm bringing the paper towards his face. The dominant eye will be the one that continues to look through the hole from start to finish.

Sources: Paul Dorochenko, fitness coach.

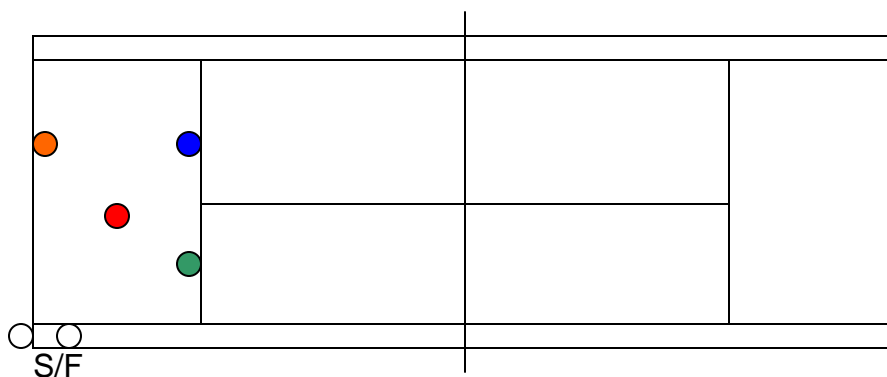
MOTOR SKILLS MEASUREMENT TESTS

1. SKIPPING ROPE WITH FEET TOGETHER (Co-ordination)

In this test the child skips for 30 seconds, the total number of jumps is counted. This test is performed twice, with a 30 second rest between each set. The best score from the two attempts is recorded.

Sources: Tennis Canada

2. SPECIFIC AGILITY (Atypical Speed)



At the signal the subject must run as fast as possible touching (with his racquet) 4 numbered cones placed at different distances from the starting point. The course is run in the following manner:

- At the signal run from starting point (S) and touch racquet to cone 1 (Orange), go back to starting point
- Then run to cone 2 (Red), then to cone 3 (Green), touching each cone with racquet. Return to starting point once again
- Finally, run and touch cone 4 (Blue) and cone 1 (Orange) and finish at starting point

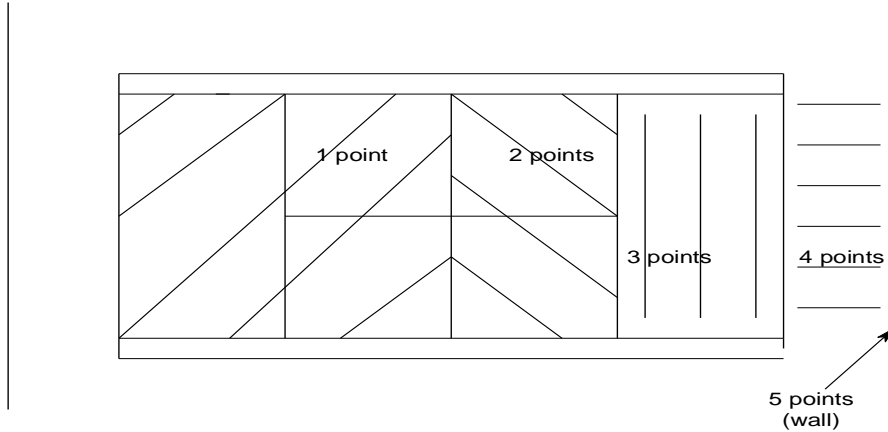
The course is timed with a chronometer. Subject is granted two attempts with at least 2 minutes of rest between tries. Desired precision is 0.10 sec. Record the better of the two attempts.

Sources : Fédération Suisse de tennis

3. BENT-ARM TENNIS BALL THROW WITHOUT SWING (Co-ordination)

Child throws a tennis ball as far as possible from a starting position behind the baseline. The child gets 3 throws, we take the total score of the best two throws (From a scale of 1 to 5 for each try).

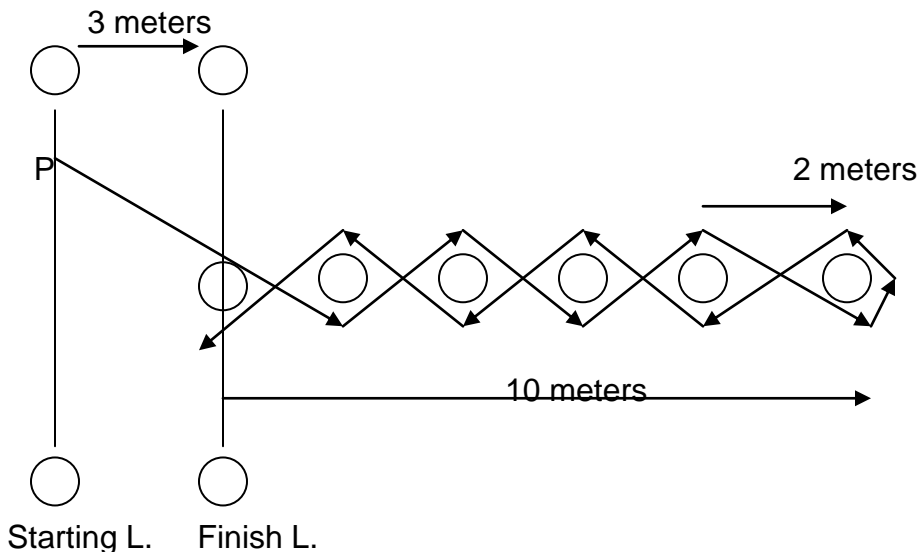
Sources: FFT



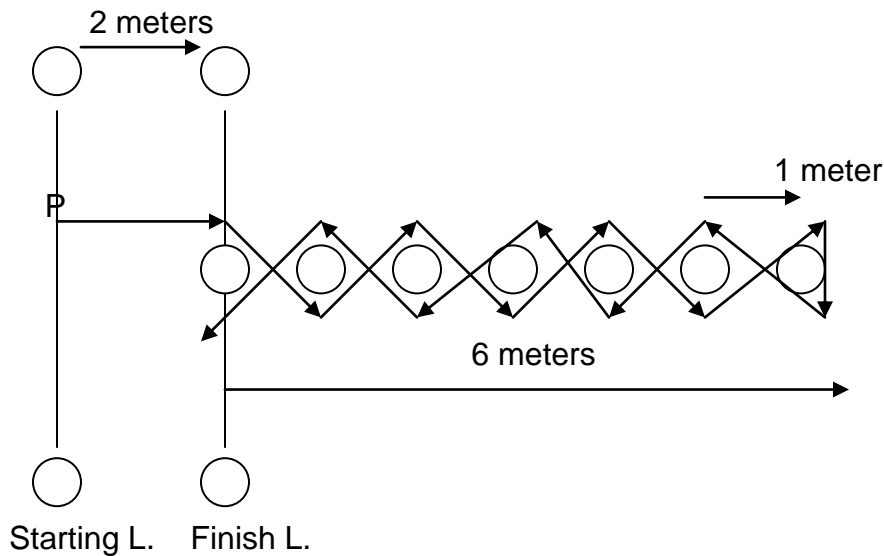
4. DRIBBLE-SLALOM-SOCCER (Eye-foot co-ordination)

Using a Type 3 soccer ball, the player places himself behind the starting line. At the signal he throws the ball in the air above the waistline. Controlling it with his foot, he starts the course. Stop the chronometer when the player and the ball pass the finish line. Check chronometer for the time passed from start to finish of course. Officially, the chronometer gets started from the moment the player touches the dropped ball with his foot. Every cone must be passed around for the time to be counted. The player gets 2 attempts. Take the best result. The desired precision is 0.10 sec.

Sources: Québec Soccer Federation



5. DRIBBLE-SLALOM-BASKETBALL (Hand-eye co-ordination) Mini-Basketball
 Ball in hand the player places himself behind the starting line. At the signal he starts the course. Stop the chronometer when the player and the ball pass the finish line. Check the chronometer for the time between the start and finish of the course. The chronometer gets started at the evaluator's signal. All the cones must be passed around for the time to be counted. The player gets 2 attempts. Take the best result. Desired precision is 0.10 sec.
 Sources: André Parent fitness coach



6. FLEXIBILITY TEST Sit and reach

The athlete is seated with knees extended and legs flat on the floor without shoes, (knees are held to make sure they do not come off the floor). The athlete leans forward with arms extended and we measure the distance from the fingertips to the toes. Hands are placed next to each other, with index fingers touching. Make sure the athlete holds the stretch without bouncing for two seconds. If the participant reaches past his toes the score is expressed as a positive score; if the participant can't reach their toes the distance is measured as a negative score. A subject who reaches exactly to his/her toes scores a 0. The position must be held for 2 seconds before reading the result. The player has 2 tries. Take the best result.
 Sources: Physiteste normalisé Canadien.



Canadian testing protocol 10-21

ANTHROPOMETRIC MEASUREMENT TESTS

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Sources : Physitest normalisé canadien

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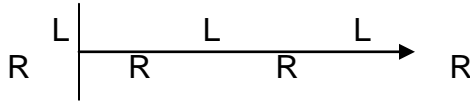
This test requires a sheet of paper 8 1/2" x 11" with a hole the diameter of a pencil in the center. The subject holds the paper in both hands with outstretched arms. The subject must focus his sight on a distant object through the hole in the paper. While maintaining eye contact with the object, the subject bends his arm bringing the paper towards his face. The dominant eye will be the one that continues to look through the hole from start to finish.

Sources: Paul Dorochenko, fitness coach.

1. MULTI-BOUNDS:

To measure leg power and body co-ordination

This test links 5 alternate bounds. The starting position is behind the starting line with one leg in front of the other.



The last contact could be done with one foot or both feet. We measure the distance between the starting line and the heel of the closest foot. Each player gets three tries. Measurements are to be expressed in meters.

2. VERTICAL JUMP:

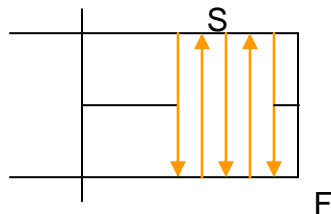
To measure leg power

Attach a tape measure to the wall. Have the athlete stand sideways to this wall with the closest arm extended. Ask the athlete to touch the wall as high as possible (without overstretching), mark the spot. Instruct the athlete to jump with his/her legs together (without a running start), reaching as high as he/she can on the tape measure. Athlete may bend knees, but may not take a step. The difference between standing reach and the highest point of the jump is the athlete's score. Each player gets three tries. It is recommended that the recorder stand on a chair or ladder. Measurements are to be expressed in centimeters.

3. TENNIS SPECIFIC SPRINTS:

To measure speed and agility

The athlete does 5 sprints between the court singles lines holding his/her racquet.

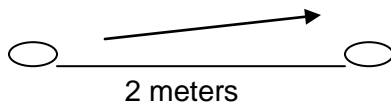


The participant starts (S) with both feet behind the line. The time starts on the athlete's first movement. On each sprint the opposite line must be crossed by one foot, all turns must be made facing the net. The test is finished when the athlete has completed his fifth sprint. The stopwatch is stopped when the finish line is crossed. Each player gets two tries. Scores are to be expressed in seconds.

4. BALL THROW:

To measure throwing ability

The athlete stands up between a 2 meter zone defined by 2 cones. The athlete must throw a ball as far as possible. A 200 gram ball is used with the 10 to 13 year olds. A 500 gram ball is used for 14 and over. The athlete can take a full 2 meter approach but cannot cross the line in front of him, and must keep his front foot on the ground when the ball is released. The throw is an over shoulder throw. We measure the distance of the throw in meters. Each athlete gets three tries and the best score is recorded.



5. SKIPPING TEST:

To measure total body co-ordination

The total number of “skips” an athlete completes in one minute. Each athlete gets one try. If you miss a jump keep going until the end of the full minute.

6. LUC LEGER OR BIP TEST:

To measure aerobic capacity

This is the standard Canadian test from Luc Léger.

7. SIT AND REACH:

To measure flexibility of the hamstring and lower back

The athlete is seated with knees extended and legs flat on the floor without shoes, (knees are held to make sure they do not come off the floor). The athlete leans forward with arms extended and we measure the distance from the fingertips to the toes. Hands are placed next to each other, with index fingers touching. Make sure the athlete holds the stretch without bouncing for two seconds. If the participant reaches past his toes the score is expressed as a positive score; if the participant can't reach their toes the distance is measured as a negative score. A subject who reaches exactly to his/her toes scores a 0. The position must be held for 2 seconds before reading the result. The player has 2 tries. Take the best result. Scores are expressed in centimeters.

8. BRACING WITH POSTERIOR TILT:

To measure core strength-endurance

The athlete starts face down on an exercise mat with their legs completely extended. From their toes, with the forearms propped and the elbows located under the shoulder joint, the athlete elevates their body into a straight line. This position is held as long as possible. If the athlete cannot maintain a straight line (pelvis going too low or too high), a warning is given and the position must be immediately corrected. At the second warning the test is stopped. Each athlete gets one try. Scores are expressed in seconds.

FUNDamental STAGE

Chronological Age: Females 6-8, Males 6-9

- FUNDamental movements and skills should be introduced through fun and games.
- FUNDamental sports skills should follow and include basic overall sports skills.
 - FUNDamental movement skills and FUNDamental sport skills = Physical literacy.
 - Physical literacy refers to competency in movement and sport skills.
 - Physical literacy should be developed before the onset of the adolescent growth spurt. (LTAD, 2005)
- ABC's of Athleticism: "AGILITY, BALANCE, CO-ORDINATION and SPEED".
- ABC's of Athletics: "RUNNING, CART-WHEELS, JUMPING, and THROWING".
- SPORTS: "SWIMMING, SOCCER, GYMNASTICS, SKATING and THROWING SPORTS (especially for girls)".
- It is important that children should play all sports that help them develop a basic skill base for tennis.
- It is very important at this stage to do the activity often but for a short period of time.
- Physical Activity: Year 1: 6 x 1h to 1h15 (6-7.5h) per week.
 Year 2: 6-7 x 1h to 1h15 (7.5-9h) per week.
 Year 3: 6-8 x 1h to 1h30 (9.5-12h) per week.

Year	1	2	3	Proposal
F	6 years	7 years	8 years	Mini Tennis Female 6 years 7 years 8 years Male 6-7 years 7-8 years 8-9 years
				Tennis 3-4 hrs 4-5 hrs 5-6 hrs O. Sports and 1.5 hrs 1.5 hrs 2 hrs
				Physical Education
M	6-7 years	7-8 years	8-9 years	Co-ordination 3 x 20 m 3-4 x 20 m 4 x 20-25 m Speed 3 x 10 m 3 x 15 m 3 x 15 m Flexibility 3 x 10 m 3 x 10 m 3 x 10 m
				Total: 6.5-7.5 hours 7.5-8.5 hours 9-10 hours
				Coach's responsibility. Parents' responsibilities.

FUNDamental FITNESS EXERCISE GUIDELINES

Performance Factors	Age	6-7	7-8	8-9	Proposal
Speed (Efforts of 8 seconds or less.)	F	3 x 10 m +	3 x 15 m +	3 x 15 m +	<p><i>Critical window of accelerated adaptation to speed training.</i></p> <p><i>Peak Speed Velocity (PSpV): includes linear, lateral, multi directional speed, change of direction, agility and segmental speed (i.e. the speed of the arm or foot).</i></p> <p>Quality of movement is vital. The volume and duration of training should be kept low. Activity is less than 5 seconds. Recovery time vital in work/rest ratio of 1: 5. Games and sports will help to develop speed. References: Balyi, LTA, DTB, FFT.</p>
	M	3 x 10 m +	3 x 15 m +	3 x 15 m +	
Strength- endurance	F	Sports and P. Ed. 1.5hrs	Sports and P. Ed. 1.5hrs	Sports and P. Ed. 2 hrs	<p>Strength gains during pre-adolescence are possible. Strength gains before puberty occur through improvements in motor coordination, and through morphological and neurological adaptations (Blinki and Marion 1994).</p> <p>Exercise and increased muscle activation will also increase strength. References: Balyi, ITF.</p>
	M	Sports and P. Ed. 1.5-hrs	Sports and P. Ed. 1.5hrs	Sports and P. Ed. 2 hrs	
Flexibility	F	3 x 10 m	3 x 10 m	3 x 10 m	<p>Introduction to the basics of flexibility training should be done through enjoyable games. Flexibility training should be done four to six times per week if flexibility needs to be improved.</p> <p>References: Balyi, LTA, DTB, FFT, ITF.</p>
	M	3 x 10 m	3 x 10 m	3 x 10 m	
Aerobic endurance (sub-maximal efforts)	F	Sports	Sports	Sports	<p>At this stage, the “trainability” of the aerobic system is good.</p> <p>Aerobic training should be in the form of games with an</p>

		<i>and</i> P. Ed. 1.5hrs	<i>and</i> P. Ed. 1.5hrs	<i>and</i> P. Ed. 2 hrs	aerobic component. Young athletes usually have a fairly short attention span, so a variety of games presented one after the other is ideal. Aerobic games on and off court should be emphasized. References: Balyi, LTA, DTB.
	M	<i>Sports and</i> P. Ed. 1.5hrs	<i>Sports and</i> P. Ed. 1.5hrs	<i>Sports and</i> P. Ed. 2 hrs	
ABC : agility, balance, coordination	F	3 x 20 m +	3-4 x 20m +	4x20-25m +	ABC – to teach players the basic skills with quality movements: running jumping, skipping, throwing, catching, bouncing, sliding, kicking, striking and climbing. Coordination – simple, leading to some complex. (Ex: combination of run and jump) Balance, rhythm, bi-lateral, space and time. References: Balyi, ITF, DTB, Gonzalez, Ochoa.
	M	3 x 20 m +	3-4 x 20m +	4x20-25m +	
Recovery	F	Everyday	Everyday	Everyday	Hydration - teach children to take fluid regularly, before, during and after practice. Nutrition – to develop sound nutritional habits with an emphasis on food selection and mealtimes. References: LTA, Angela Calder.
	M	Everyday	Everyday	Everyday	

Exercise 1: Running.

😊 Female: 6-7-8 Male: 6-7-8-9
FFT

Sources: LTA, DTB,

Purpose: To develop basic running skills.

Set-up: On a tennis court, or playing area.

- Running in straight line, nice and steady.
- Running in straight line without using your arms (the body is not stiff).
- Running in straight line with swinging straight arms.

- Holding an egg, one arm going back the other going forward.
- Head up, shoulders down and arms working holding an egg. Look ahead.
- Head up, shoulders down, arms working, body nice and tall, knees up.
- Running with everything together.
- Running relays.

Equipment: None

Duration: 10-15 minutes

Efforts: less then 5 sec.

Ratio: 1/5

Exercise 2: Skipping (without skipping rope).

 **Female: 6-7-8 Male: 6-7-8-9**

Sources: LTA, DTB,

FFT

Purpose: To develop footwork, coordination, rhythm and balance.

Set-up: On a tennis court, or playing area.

- Skipping nice and steady.
- Skipping without using your arms (the body is not stiff).
- Skipping and really using your arms.
- Skipping using your arms but not allowed to lift the knees very high.
- Skipping and really lifting your knees high. Skipping with your back straight, lifting your arms and trying to go very high.
- Skipping side ways.
- Skipping side ways following the coach's rhythm.
- Skipping side ways following rhythm variations.
- Skipping sideways with the body nice and tall.
- Skipping sideways and turning 180 degrees every 3 steps.
- Skipping sideways and clapping hands over the head.
- Skipping sideways clapping hands over the head while turning 180 degrees every 3 steps.

Equipment: None

Duration: 5-10 minutes

Efforts: less then 5-7 sec.

Ratio: 1/4

Exercise 3: Skipping rope.

 **Female: 6-7-8 Male: 6-7-8-9**

Sources: LTA, DTB,

FFT

Purpose: To develop leg strength, coordination, rhythm, balance and aerobic endurance.

Set-up: On a tennis court, or playing area.

- Skipping nice and steady for 25-100 in a row.

Equipment: Skipping rope.

Duration: 2-5 minutes

Efforts: 25 to 100 reps.

Exercise 4: Bouncing.

 **Female: 6-7-8 Male: 6-7-8-9**

Sources: LTA, DTB,

FFT

Purpose: To develop mental, physical rhythm and spatial awareness.

Set-up: On a tennis court, or playing area.

- Bouncing a volleyball or soccer ball 20 times (Staying in place).
- Bouncing a volleyball or soccer ball 20 times, alternating right hand, left hand (Staying in place).
- Bouncing a tennis ball 20 times (Staying in place).
- Bouncing a tennis ball 20 times, alternating right hand, left hand (Staying in place).
- Running forward and bouncing a volleyball or soccer ball with the right hand, then switching for the left hand. Repeat sequence but change the volleyball or soccer ball for a tennis ball.
- Running forward and bouncing a volleyball or soccer ball alternating right and left hands, then changing for a tennis ball.
- Running backward and bouncing a Volleyball or soccer ball alternating right and left hands, then changing for a tennis ball.
- Running sideways and bouncing a volleyball or soccer ball alternating right and left hands, then changing for a tennis ball.
- Bouncing a volleyball or soccer ball through a slalom course. Then changing for a tennis ball.

Equipment: Volleyball, soccer ball, tennis ball.

Duration: 5-10 minutes

Efforts: less than 15 sec.

Ratio: 1/3

Exercise 5: Strength and support.

 **Female: 6-7-8 Male: 6-7-8-9**

Sources: LTA, DTB,

FFT

Purpose: To develop basic strength and body control.

Set-up: On a tennis court, or playing area.

- Wiggly worms
- Big steps.
- Side steps

- Walking hips twists backward.
- Calf springs.
- Split jumps and hop scotch.
- Split jump combinations and split jump crossovers.
- Crab-walking, crawling. (Not on video)
- Working with Swiss balls and Medicine balls 200gr-1Kg. (Not on video)

Equipment: Mats, Swiss balls and medicine balls.

Duration: 5-10 minutes

Efforts: less then 10-15 sec.

Ratio: 1/5

6: Balance.

😊 **Female:** 6-7-8 **Male:** 6-7-8-9

Sources: LTA, DTB,

FFT

Purpose: To develop balance and functional strength.

Set-up: On a tennis court, or playing area.

- Walking forward with arms straight out holding a sand bag or tennis balls in each hand.
- Walking forward the same way step with the left leg and balance on the left leg then step on the right side and balance on the right leg.
- Standing on leg with a sand bag or something on the top of your head, then switching to the other leg.
- Standing on leg with a sand bag or something on the top of your head, moving your arms around. Making rotation with the trunk. Closing the eyes. Shuffling and walking forward. Shuffling and walking backward.
- Walking on lines forward and backward.
- Holding an arabesque on one foot.
- Fast run towards the net and stop very close to it without touching it.
- Working with Medicine balls, balls, fit discs, wobble boards. (Not on video)

Equipment: Sand bags, beam, Medicine balls, wobble boards, fit discs.

Duration: 5-10 minutes

Efforts: less then 10 sec.

Ratio: 1/3

Exercise 7: Throwing.

😊 **Female:** 6-7-8 **Male:** 6-7-8-9

Sources: LTA, DTB,

FFT

Purpose: To develop coordination.

Set-up: On a tennis court, or playing area.

- Overhead toss (volleyball or soccer ball).
- Chest pass (volleyball or soccer ball).
- One hand throw with the right hand (handball).

- One hand throw with the left hand (handball).
- Backward over your head (volleyball or soccer ball).
- Forward under your legs (volleyball or soccer ball).
- Backward under your legs (volleyball or soccer ball).
- Precision throws with tennis ball.
- Precision throws with different kind of balls. (Not on video)
- Throwing ball with a racquet.

Equipment: Handball, volleyball, soccer ball, tennis ball, different balls, bats, racquets.

Duration: 5-10 minutes

Efforts: less than 10 sec.

Ratio: 1/4

Exercise 8: Catching.

😊 **Female:** 6-7-8 **Male:** 6-7-8-9

Sources: LTA, DTB,

FFT

Purpose: To develop hand-eye coordination and spatial awareness.

Set-up: On a tennis court, or playing area.

- Two players facing each other, throwing and making 10 catches each.
- Catching 10 passes with the right hand, 10 with the left hand.
- Two players facing each other running sideways throwing and catching on the move.
- Two players facing each other running sideways throwing and catching on the move with one hand behind the back.
- Moving along the wall, throwing and catching the ball off the wall.
- Throwing the ball to the wall, turning and catching after one or no bounces.
- Catching the ball after one bounce, no bounce or several bounces.
- Blocking games with the hand or the racquet.
- Catching with a racquet.

Equipment: Handball, volleyball, soccer ball, tennis ball, different balls, racquets.

Duration: 5-10 minutes

Efforts: less than 10 sec.

Ratio: 1/4

Exercise 9: Jumping.

😊 **Female:** 6-7-8 **Male:** 6-7-8-9

Sources: LTA, DTB,

FFT

Purpose: To develop basic strength.

Set-up: On a tennis court, or playing area.

- Two legs jumps. (High, long, sideways etc.)
- One leg hops (right and left).

- Hop, step then stop.
- Clock jumps.
- Different course drills using hoops.

Equipment: Hoops.

Duration: 5-10 minutes

Efforts: less than 5-7 sec.

Ratio: 1/5

Exercise 10: Agility.

😊 Female: 6-7-8 Male: 6-7-8-9

Sources: LTA, DTB,

FFT

Purpose: To develop footwork, leg speed and ability to change direction.

Set-up: On a tennis court, or playing area.

- Running forward and backward around a cone.
- Running sideways around a cone.
- Running forward and backward around two cones making a figure 8.
- Running sideways around two cones making a figure 8.
- Using a hoop, moving around it half way, changing direction many times.
- Slalom courses.

Equipment: Slide, hoops, cones, mini hurdles etc.

Duration: 5-10 minutes

Efforts: less than 10-15 sec.

Ratio: 1/4

Exercise 11: Kicking.

😊 Female: 6-7-8 Male: 6-7-8-9

Sources: LTA, DTB,

FFT

Purpose: To develop general coordination.

Set-up: On a tennis court, or playing area.

- Kicking different ball sizes with the right foot.
- Kicking different ball sizes with the left foot.
- Blocking with the right foot, with the left.

Equipment: Soccer balls and different ball sizes.

Duration: 5-10 minutes

Efforts: less than 15 sec.

Ratio: 1/4

Exercise 12: Reaction.

😊 Female: 6-7-8 Male: 6-7-8-9

Sources: LTA, DTB,

FFT

Purpose: To develop reaction speed.

Set-up: On a tennis court, or playing area.

- Working with a Z-ball.

- Ball release.
- Goalie drill.

Equipment: Tennis ball, Z-ball, sand bag, foam balls and racquets,

Duration: 5-10 minutes **Efforts:** less than 10 sec. **Ratio:** 1/3

Exercise 13: Orientation.

😊 **Female:** 6-7-8 **Male:** 6-7-8-9
FFT

Sources: LTA, DTB,

Purpose: To develop spatial awareness.

Set-up: On a tennis court, or playing area.

- Working with balloons (Hands).
- Working with balloons (Foot and racquet).

Equipment: Balloons, racquets, mats, balls.

Duration: 5-10 minutes **Efforts:** less than 15 sec. **Ratio:** 1/4

Exercise 14: Sports and games. (Not on video but important)

😊 **Female:** 7-8 **Male:** 7-8-9
FFT

Sources: LTA, DTB,

Purpose: To develop speed and agility, decision making ability, strength, balance and aerobic endurance.

Set-up: On a tennis court, or playing area.

- Dodge ball (adapted). (Not on video)
- 10 passes (adapted). (Not on video)
- Games using different ball sizes like balloons, tennis balls, to Swiss balls. (Not on video)
- Soccer, basketball (adapted). (Not on video)
- Tag. (Not on video)
- Teams relay. (Not on video)
- Sprint competitions. (Not on video)
- Skating, biking, swimming, gymnastics. (Not on video)

Equipment: Different ball sizes. **Duration:** 5-30 minutes.

Exercise 15: Coordination (complex).

😊 **Female:** 7-8 **Male:** 7-8-9
FFT

Sources: LTA, DTB,

Purpose: To develop general coordination.

Set-up: On a tennis court, or playing area.

- Running and jumping.
- Running and throwing.
- Jumping and throwing.
- Jumping and catching.
- Blocking the ball with one foot and kicking with the other.
- Jumping and hitting the ball. (Not on video)
- Bouncing and performing different patterns. (Not on video)
- Bouncing and walking on a beam. (Not on video)
- Bouncing and moving around obstacles. (Not on video)
- Bouncing different balls. (Not on video)
- Walking on the lines with racquet and balls. (Not on video)
- Someone bouncing a ball and the partner attempts to bounce the ball to the same rhythm. (Not on video)
- Increasing the speed of execution of the movements.

Equipment: All of the previous equipment.

Duration: 5-10 minutes

Efforts: less than 5-15 sec.

Ratio: 1/4

Exercise 16: Flexibility.

 **Female: 6-7-8 Male: 6-7-8-9**

Sources: LTA, DTB,

FFT

Purpose: To develop individual and sport-specific flexibility.

Set-up: On a tennis court, or playing area.

- Flexibility training should be done through enjoyable games.

Equipment: Use your imagination.

Duration: 5-10 minutes

Efforts: less than 10 sec.

Ratio: 1/3

Learning to train Stage

Chronological Age: Females 8-11, Males 9-12

-This is the major motor learning stage. One of the most important periods of motor development for children is between the ages of eight to twelve.
(Balyi and Hamilton, 1996; Rushall, 1998; Viru et al...1998)

-The fundamental skills earlier described should be taken to a higher level at this stage. Basic tennis skills should be mastered, but participation in other sports is still encouraged.

-Young athletes at this stage learn how to train. The main emphasis is on mastery of basic sport-specific skills. For this reason, a larger amount of time is spent training rather than competing. (Balyi)

- If the fundamental motor skills are not developed between the ages of eight to twelve, skills cannot be fully recaptured at a later time although carefully planned and early remedial programmes can contribute with limited success. (Balyi, 2001a; Rushall, 1998)

- Training: 70% competition: 30%. (Balyi)

- 7-9 sessions of 1-2 h. Maximum length of session duration is 2 hours

Year	4	5	6	Proposal			
F	8-9 years	9-10 years	10-11years	Female	8-9 years	9-10 years	10-11 years
				Male	9-10 years	10-11 years	11-12 years
				Tennis	8-10 hrs	10-12 hrs	12-13 hrs
				O. Sports and	2 hrs	2 hrs	2 hrs
				Physical Education			
				Co-ordination	4 x 25 m	4 x 25 m	4 x 20 m
				Speed	3 x 15 m	2 x 15 m	2 x 15 m
				m			
M	9-10 years	10-11years	11-12years	Flexibility	5 x 10-15 m	5 x 15 m	5 x 15 m
				Strength	1 x 15 m	2 x 15 m	3 x 15 m
				Endurance	1 x 15 m	2 x 15 m	3 x 15 m
				Total:	14-16 hours	16-18 hours	18-19 hours
				Coach's responsibility.		Parents' responsibilities.	

LEARNING TO TRAIN FITNESS EXERCISE GUIDELINES

Performance Factors	Age	8-9	9-10	10-11	11-12	Proposal
Speed (Efforts of 8 seconds or less.)	F	3 x 15 m + <i>Sports and</i> P. Ed. 2 hrs	2 x 15 m + <i>Sports and</i> P. Ed. 2 hrs	2 x 15 m + <i>Sports and</i> P. Ed. 2 hrs	N.A.	<p><i>In this stage emphasize:</i></p> <p><i>Reaction speed, speed of coordination,</i></p> <p><i>linear/ multi directional speed, acceleration, short sprints, agility, specific tennis drills and segmental speed.</i></p> <p>Activity is less than 8 seconds. Recovery time vital in work/rest ratio of 1: 5 Games and sports should be used to develop speed. (ITF, LTA, DTB, FFT.)</p>
	M	N.A.	3 x 15 m + <i>Sports and</i> P. Ed. 2 hrs	2 x 15 m + <i>Sports and</i> P. Ed. 2 hrs	2 x 15 m + <i>Sports and</i> P. Ed. 2 hrs	
Strength- endurance	F	1 x 15 m	2 x 15 m	3 x 15 m	N.A.	<p>The strength-endurance is developed through:</p> <p>partner, own body weight,</p> <p>200-500 gr. balls, with 1-2Kgs Medicine balls, Swiss balls and rubber band exercises.</p> <p>Core stability is introduced during this stage. (FFT, LTA, ITF)</p>
	M	N.A.	1 x 15 m	2 x 15 m	3 x 15 m	

Explosive-strength (Starting-power, power) Explosive-strength End.	F	<i>Sports and</i> P. Ed. 2 hrs	<i>Sports and</i> P. Ed. 2 hrs	<i>Sports and</i> P. Ed. 2 hrs	N.A.	Games and sports should be used to develop explosive-strength. (ITF, LTA, DTB, FFT.)
	M	N.A.	<i>Sports and</i> P. Ed. 2 hrs	<i>Sports and</i> P. Ed. 2 hrs	<i>Sports and</i> P. Ed. 2 hrs	Example, explosive movements in soccer: <ul style="list-style-type: none"> > Kicking hard > All out Sprints
Flexibility	F	5 x 10-15 m	5 x 15 m	5 x 15 m	N.A.	The introduction of stretching in warm up must be through dynamic flexibility, it is important that this becomes a part of their regular routine. (USTA, LTA, ITF, FFT)
	M	N.A.	5 x 10-15 m	5 x 15 m	5 x 15 m	Static or passive flexibility should be added at the end of the training session.
Aerobic endurance (Continuous training sub-maximal efforts)	F	<i>Sports and</i> <i>P. Ed.</i> 2 hrs + Cool Down 1 x 15 m	<i>Sports and</i> <i>P. Ed.</i> 2 hrs + Cool Down 2 x 15 m	<i>Sports and</i> <i>P. Ed.</i> 2 hrs + Cool Down 3 x 15 m	N.A.	Aerobic games on and off court should be emphasized. Aerobic training should be in the form of different sports, games and relays.
	M	N.A.	<i>Sports and</i> <i>P. Ed.</i> 2 hrs + Cool Down 1 x 15 m	<i>Sports and</i> <i>P. Ed.</i> 2 hrs + Cool Down 2 x 15 m	<i>Sports and</i> <i>P. Ed.</i> 2 hrs + Cool Down 3 x 15 m	Aerobic stamina should be introduced through the cool-down at the end of workouts. (With moderation)
ABC: agility, balance, coordination	F	4 x 25 m + Sports and P. Ed. 2 hrs	4 x 25 m + Sports and P. Ed. 2 hrs	4 x 20 m + Sports and P. Ed. 2 hrs	N.A.	ABC – The basic skills of: running, jumping, skipping, throwing, catching, sliding, kicking, striking should be taken to a higher level with quality movements.
	M	N.A.	4 x 25 m + Sports and P. Ed. 2 hrs	4 x 25 m + Sports and P. Ed. 2 hrs	4 x 20 m + Sports and P. Ed. 2 hrs	Coordination drills should become more complex and include both static and dynamic movements as well as specific footwork. (Balyi, ITF, LTA, FFT, DBT, Gonzalez, Ochoa)

Recovery	F	Everyday	Everyday	Everyday	N.A.	Hydration – teach children to take fluid regularly, before, during and after practice. Nutrition – to inform about food and mealtimes, which will help them train better. Cool-down is introduced at the end of workouts. (Calder, LTA, ITF)
	M	N.A.	Everyday	Everyday	Everyday	

Warm-up

😊 Female 8-11 Male 9-12
USTA

Sources: LTA,

Purpose: To increase body temperature, to prime the cardiovascular system and get the heart and lungs ready to engage in vigorous activity, to improve joint range, to help to engrain proper movement patterns and to wake up the nervous system.

Set-up: On a tennis court or playing area.

- 5 minutes of jogging, biking, skipping rope or using specific activities that focus on agility and change of direction (with balls or not).
- 5 minutes of dynamic stretching like arm swings, lunges, trunk twists, etc.

Equipment: Broomsticks, balls, skipping rope.

Speed and agility

Exercise 1: Ball drops.

😊 Female 8-11 Male 9-12

Sources: FFT, USTA

Purpose: To develop reaction speed, starting ability and agility.

Set-up: On the tennis court or playing area

- The coach stands in front of the player with one ball in each hand and arms extended to the side.
- The coach drops either one of the balls and you try to catch it before it bounces a second time.
- The coach should vary his positioning with reference to the player.
- Change the starting positions. Feed more than one ball.

Equipment: Use different balls to get different types of bounces.

Sets/reps/rest: 2 to 3 sets of 6 to 10 reps. rest: 90 sec. between sets.

Exercise 2: The ball and the wall.

😊 **Female 8-11 Male 9-12**

Sources: FFT, UST

Purpose: To develop reaction speed, starting ability and agility.

Set-up: On playing area with a wall

- The player faces a wall and the coach stands behind him. The distance to the wall will vary depending on the player's skill level. Start at 3 meters and move closer as the player's skill improves.
- The coach throws a ball against the wall and the player has to catch it before the second bounce or volley it.
- The player stands with his back facing the wall with a ball in his hand. Using an underhanded position he throws the ball behind him to the wall. As soon as he throws the ball the player must turn around and catch the ball without bounce.
- The coach calls which hand will catch the ball. (Not on video)

Equipment: Tennis balls.

Sets/reps/rest: 2 to 3 sets of 6 to 10 reps. rest: 90 sec. between sets.

Exercise 3: The ball and the partner.

😊 **Female 8-11 Male 9-12**

Source: FFT

Purpose: To develop reaction speed and agility.

Set-up: On a tennis court (use a service square) or playing area


- The two players are inside a service square.
- The partner throws a ball inside the square and the player has to catch it before the second bounce then return the ball to the partner. Repeat the action for 6 to 10 repetitions. When the exercise is completed switch rolls.
- Each player throws a ball inside the square and each player has to catch the opponent's ball before the second bounce then throws again until 6 to 10 repetitions are completed.

- Each player throws a ball inside the square and each player has to catch the opponent's ball before it bounces, then throws again until 6 to 10 repetitions are completed.
- The partner throws a ball inside the square and the player has to catch it before the second bounce. After the catch the player immediately throws the ball and the partner has to catch it before the second bounce. The drill continues until each player has caught 6 to 10 balls. (Not on video)

Equipment: Tennis balls.

Sets/reps/rest: 2 to 3 sets of 6 to 10 reps. rest: 90 sec. between sets.

Exercise 4: Sprint duel.

 **Female 8-11 Male 9-12**

Source: FFT

Purpose: To develop reaction speed, starting ability.


Set-up: On the tennis court or on playing area between two lines, 10 meters apart

- Two players facing each other with 1 meter apart. The player (A) with his back to the finish line decides when the sprint starts. The player (A) should pass the finish line before the other player (B) touches him.
- The player (A) is behind the single line and the player (B) is on his right side (1m.) behind the double line. The player (B) decides when the sprint starts. The first player to pass the finish line is the winner.

Equipment: none.

Sets/reps/rest: 2 to 3 sets of 4 to 5 reps. rest: 90 sec. between sets and 30 sec. between reps.

Exercise 5: Ball drop catches.

 **Female 8-11 Male 9-12**

Sources: USTA, FFT,

DTB

Purpose: To develop segmental speed reaction and hand-eye coordination.

Set-up: On a tennis court or playing area


- Stand facing your coach. The coach should hold both arms straight in front of his body, with a ball in each hand. With your hands to your head, keep your eyes in line with the balls. As the coach drops a ball (randomly rather than alternately), try to catch it before it bounces.

- As a progression, the coach drops both balls and you must catch both before they bounce.

Equipment: Tennis balls.

Sets/reps/rest: 2 to 3 sets of 6 to 10 reps. rest: 30 sec. between sets.

Exercise 6: Ladder.

 **Female 8-11 Male 9-12**
LTA

Sources: USTA, FFT,

Purpose: To develop agility, balance and basic strength.


Set-up: On a tennis court or playing area

- Running through the ladder with one step in each space.
- One foot hops, right and left, changing sequences.
- Side shuffle.
- Cross over.
- Alternate splits.
- Two feet in and out.
- Precision first than speed second. (Very important)
- Running through the ladder with two steps in each space. (Not in video)
- One foot hops out, in. (Not on video)

Equipment: Ladder

Sets/reps/rest: 2 to 3 sets of 3 to 5 exercises rest: 20 sec. between reps and 60-90 sec. between sets.

Exercise 7: Mini-hurdle races.

 **Female 8-11 Male 9-12**

Source: FFT

Purpose: To improve running technique, to make players aware of the importance of pelvis positioning in order to clear the hurdles and to improve the action of the foot on the ground.

Set-up: On a tennis court or on an open and flat space


- Over a 10 to 15 meters distance, place small cones, then medium cones and finally low hurdles in succession.

- Leave a space of 0.6-1 meter between the cones or hurdles depending on the player's height and the desired level of difficulty.
- Use different situations going forward, backward, sideways, etc.

Equipment: 4-6 small soft cones, 10-15 cm height + 4-6 cones 20-30 cm height + 4 to 6 hurdles 30-50 cm height.

Sets/ reps/ rest: 2 to 3 sets of 4 to 5 reps. rest: 20-30 sec. for reps and 90 sec. for sets.

Exercise 8: Agility courses.

 **Female 8-11 Male 9-12**

Source: FFT

Purpose: To improve running technique, ability to change direction and speed.

Set-up: On a tennis court or on an open and flat space


- Over a 10 to 15 meters distance, place small cones, hoops or low hurdles to make different course designs.
- Organize different situations working shuffle steps, running around cones, changing rhythm, etc.

Equipment: 4-6 small cones, 4-6 hoops and 4 to 6 low hurdles.

Sets/ reps/ rest: 2 to 3 sets of 4 to 5 reps. rest: 20-30 sec. for reps and 90 sec. for sets.

Strength

Exercise 1: Bracing with posterior tilt.

 **Female 8-11 Male 9-12**

Sources: FFT, DTB

Purpose: To develop core strength.


Set-up:

- Lying on the stomach on an exercise mat with the legs completely extended on your toes with the forearms propped with the elbows located under the shoulder joint. Hold the position.

Equipment: Mat

Sets/ reps/rest: 1 to 3 sets of 10-15 to 90 sec. rest: 30-120 sec. between sets.

Exercise 2: Bracing with lateral tilt.

 **Female 8-11 Male 9-12**

Sources: FFT, DTB

Purpose: To develop core strength.


Set-up:

- Lying on the side, one leg is lying on top of the other. One arm is propped up, with the elbow located under the shoulder joint. From this position, slowly press into the mat on the forearm and at the same time, keep the body stiff. Hold the position then switch side.

Equipment: Mat

Sets/ reps/rest: 1 to 3 sets of 10 to 30 sec. rest: 30-90 sec. between sets.

Exercise 3: Bracing with anterior tilt (superman).

 **Female 8-11 Male 9-12**

Sources: FFT, DTB

Purpose: To develop core strength.


Set-up:

- Lying on your stomach on an exercise mat with arms fully extended overhead. Lift both arms and both legs simultaneously. Hold this position for 1 to 5 seconds and return to the starting position,

Equipment: Mat

Sets/ reps/rest: 1 to 3 sets of 5 to 10 reps of 1 to 5 sec. rest: 30-120 sec. between sets.

Exercise 4: Bracing (Shoulder/Upper Body).

 **Female 8-11 Male 9-12**

Sources: FFT, DTB

Purpose: To develop core strength.


Set-up:

- Lying on the back, with stretched legs, with the forearms propped. Slowly push backward into the mat with the forearms, and at the same time, keep the body straight. Hold this position.
- In addition, one leg can be raised from the floor.

Equipment: Mat

Sets/ reps/ rest: 1 to 3 sets of 10 to 60 sec. rest: 30-120 sec. between sets.

Exercise 5: Chest pass.

 **Female 8-11 Male 9-12**

Sources: FFT, USTA, DTB,

LTA

Purpose: To develop strength of the upper body.


Set-up:

- Stand 2 to 3 meters from the coach. Hold the medicine ball in front of the chest.
- Pass the ball to the coach. When you receive the ball from your coach, try to catch and release it back to your coach as quickly as possible.

Equipment: Medicine balls from 500g to 1-2kg.

Sets/ reps/ rest: 1 to 3 sets of 6 to 10 reps. rest: 60-90 sec. between sets.

Exercise 6: Overhead toss.

 **Female 8-11 Male 9-12**

Sources: FFT, USTA, DTB,

LTA

Purpose: To develop power of the upper body.


Set-up: Stand 2 to 3 meters from the coach. Hold the medicine ball directly over your head.

- Toss the ball to the coach. When you receive the ball from your coach, try to catch and release it back to your coach as quickly as possible.

Equipment: Medicine balls from 500g to 1kg.

Sets/ reps/ rest: 1 to 3 sets of 6 to 10 reps. rest: 60-90 sec. between sets.

Exercise 7: Side throws.

 **Female 8-11 Male 9-12**

Sources: USTA, LTA

Purpose: To develop power of the upper body.


Set-up: Stand 2 to 3 meters from the partner, facing sideways. Hold the medicine ball with both hands at shoulder height.

- Throw the ball to your partner using the chest pass technique and a trunk rotation. When you receive the ball from your partner, try to catch and release it back to your coach as quickly as possible.

Equipment: Medicine balls from 500g to 1kg.

Sets/reps/rest: 1 to 3 sets of 6 to 10 reps. rest: 60- 90 sec. between sets.

Exercise 8: Forehand and backhand throws.

 **Female 8-11 Male 9-12**

Sources: USTA, LTA

Purpose: To develop power of the upper body.


Set-up: Stand 2 to 3 meters from the partner. Hold the medicine ball with both hands at your forehand side

- Step and turn, just as you would to hit your forehand or backhand, taking the ball back like a racquet. Pass the ball to your partner, mimicking a crosscourt forehand or backhand groundstroke. When you receive the ball from your partner, try to catch and release it back to your partner as quickly as possible.

Equipment: Medicine balls from 500g to 1kg.

Sets/reps/rest: 1 to 3 sets of 6 to 10 reps. rest: 60- 90 sec. between sets.

Exercise 9: Lunges.

 **Female 8-11 Male 9-12**

Sources: USTA, LTA

Purpose: To develop the strength of the lower body, trunk and to develop dynamic balance.


Set-up:

- Stand with your feet 20cm apart, your hands on your hips.
- Take a large step forward and position your body over your front leg. Bend your front knee so it is in line with or slightly in front of the ankle joint and does not project beyond a line drawn up from the front of your shoe. Return to the starting position by pushing your weight backward and straightening your front leg. Keep your trunk erect during the exercise by looking straight ahead and keeping your chest out. You can do 5 to 6 reps with the same legs then switch, or alternate legs.

Equipment: barbell, dumbbells, medicine balls.

Sets/reps/rest: 1 to 2 sets of 5 to 6 reps each side. rest: 30-60 sec. between sets.

Exercise 10: Push-ups.

 **Female 8-11 Male 9-12**

Sources: USTA, LTA

Purpose: To develop the strength of the upper body.

Set-up:

- Hands placed shoulder-width apart with your body in a straight line from your toes to your head.
- Slowly lower yourself down until your upper arm is parallel to the ground. Push yourself upward until the elbows are completely straight and round back outward like a cat. This rounding motion at the end of the push-up is very important and increases the work by the muscles that stabilize your shoulder blade.

Equipment: none

Sets/ reps/ rest: 1 to 2 sets of 10-15 reps., rest: 60-120 sec. between sets.

Other possibilities: working with Swiss balls, balance boards, rubber bands, partners and other abdominal exercises like crunches and trunk rotations with moderation. (Not on video)

Flexibility

Stretching method 1: ballistic and dynamic

😊 Female 8-11 Male 9-12

Sources: LTA, USTA

Characteristics:

- Involves explosive rebounding in order to elongate the target muscles.

Benefits:

- Performed before a match or training they can achieve good, tennis-specific muscular and neural activation.

Practical application:

- In tennis, the warm-up usually consists of dynamic flexibility. Static stretching can be added at the end of the workout or as needed.

Equipment: Mats.

See warm-up

Stretching method 2: static.

😊 Female 8-11 Male 9-12

Sources: LTA, USTA

Characteristics:

- The player stretches individually. Without rebounds the position is maintained for 20-30 seconds (2 sets). During the second set of the exercise the amplitude of the stretch is increased slowly.

Benefits:

- As performed with little movement the stretch reflex is inhibited.
- Useful for increasing the ROM.
- They induce muscular relaxation and require a low level muscular effort.

Practical application:

- Extremely easy to perform, even during a match.
- Players can self-adjust the tension of the stretch.
- Should be performed during the cool-down, post-training or post-match.

Equipment: Mats.

Aerobic endurance

Aerobic endurance: should be developed through games, relays and sports. (Not on video)

Cool down: light biking or light jogging must be introduced, one to three times a week for 15 minutes.

Coordination

Exercise 1: Running techniques.

😊 Female 8-11 Male 9-12

Source:

LTA

Purpose: To develop general balance and coordination.

Set-up: On a tennis court or playing area

- Walking straight legs from the heel to the toes.

- Walking straight legs from the heel to the toes and lifting the other leg up.
- Skipping, power skipping, side skipping.
- High knees, butt kicks, pull-through.
- Drum major, carioca

Equipment: None.

Sets/ reps/rest: 2 to 3 sets of 3 to 5 exercises rest: 60 sec. between sets.

Exercise 2: Precision throws.

😊 Female 8-11 Male 9-12
DTB

Sources: FFT, USTA, LTA,

Purpose: To develop spatial and temporal orientation and to develop throwing and catching abilities at different speed levels.

Set-up: On a tennis court or playing field

- 2 groups of 3-5 players 3-5 meters apart, 2 players one on each group are partners.
- The first group is called the throwing group and the second group is called the catching group.
- The player without the throwing ball starts running/sprinting in one direction his partner must throw the ball in his direction with precision, the running player must catch the ball at different heights when running. After a rotation they switch groups.

Equipment: Different kind of balls or objects like, tennis ball, handball, rugby ball, football or Frisbee.

Sets/ reps/rest: 2 to 3 sets of 4 to 6 reps. rest: 90 sec. between sets.

Exercise 3: Ladder.

😊 Female 10-11 Male 11-12
CAN

Sources: FST,

Purpose: To develop coordination, balance and agility.


Set-up: On a tennis court or playing area

- Side shuffles + dribbling a basketball.
- Crossover + making rotations with a ball around your body.
- Etc. (an agility task + an upper body task)
- Precision first than speed second.

Equipment: Ladder

Sets/reps/rest: 2 to 3 sets of 3 to 5 exercises rest: 20-30 sec. between reps and 60-90 sec. between sets.

Exercise 4: Skipping rope.

 **Female 8-11 Male 9-12**

Sources: USTA, FFT, LTA

Purpose: To develop general coordination, differentiation, balance, strength, and aerobic endurance.

Set-up: On a tennis court or playing area


- Working every situation possible.
- One foot, two feet, split steps, crossover steps.
- Long steps, shorts steps, combined long and shorts steps.
- Going fast and slow, relays, making doubles.
- Going sideways, forward, backward.
- 100-300 reps nice and steady, etc.

Equipment: Skipping ropes.

Sets/reps/rest: 3 to 5 sets of 30-60 sec. rest: 60-90 sec. between sets.

See the warm-up

Exercise 5: Hoops.

 **Female 8-11 Male 9-12**

Source: DTB

Purpose: To develop rhythm and general coordination.


Set-up: On a tennis court or playing area

- The coach rolls a hoop and player runs with one foot in and one foot out.
- The players passing a ball to each other through the rolling hoop.
- Etc.

Equipment: Hoops

Sets/reps/rest: 2 to 3 sets of 3 to 5 reps. rest: 20 sec. between reps and 60-90 sec. between sets.

Exercise 6: Coordination (complex).

 **Female: 8-11 Male: 9-12**

Sources: LTA, DTB,

FFT

Purpose: To develop general coordination.

Set-up: On a tennis court, or playing area

- Running stopping and catching.
- Running catching and stopping.
- Running catching and stopping at the same time.
- Jumping throwing and sprinting.
- Running jumping and throwing.
- Running jumping and catching.
- Blocking the ball with one foot and kicking with the other with an open stance or closed stance.
- Increasing the speed of execution of the movements. Precision first.
- Bouncing and performing different patterns. (Not on video)
- Bouncing and walking on a beam. (Not on video)
- Bouncing and moving around obstacles. (Not on video)
- Bouncing with different implements. (Not on video)
- Jumping catching and sprinting. (Not on video)
- Jumping and hitting the ball. (Not on video)

Equipment: All of the previous equipment.

Duration: 5-10 minutes **Efforts:** less than 15 sec.

Ratio: 1/3

Sports and games

(Not on video, but important)

Exercise 1: Soccer.

😊 Female 8-11 Male 9-12

Sources: FFT, USTA, LTA, DTB

Purpose: To develop explosive-strength, agility, balance, coordination, aerobic and muscular endurance, to develop decision-making ability and to develop team spirit.

Set-up: On a soccer field or playing area

- 2 teams of 3 to 5 players
- 2 half times of 15-20 minutes with a break of 5-10 minutes (passive rest, hydrate).
- On a soccer field, a playing area or a tennis court (30-50 m x 20-30 m).
- Use cones for goals.
- Use soccer rules.

Equipment: Soccer balls, cones, t-shirts for team identifications.

Exercise 2: Hands-squash.

😊 Female 8-11 Male 9-12

Source: Tennis

Canada

Purpose: To develop agility, balance and coordination, to develop decision-making ability, to develop bilateralism, to develop aerobic endurance and to develop the ability to recover quickly.

Set-up: On a squash court or racquetball court.

- 2 players.
- 2 sets of 10-15 points, 5 minute breaks between sets.
- Use hands only, no backhand allowed, forehand with right and left hands.
- Walls can be used at anytime except on the serve.
- You can use the squash court lines as limits.

Equipment: Mini-tennis balls, foam balls.

Exercise 3: 10 passes (Passes à dix).

Female 8-11 Male 9-12

Source: FFT

Purpose: To develop reaction speed, agility, balance and coordination, to develop decision-making ability, to develop aerobic endurance, catching ability and to develop team spirit.

Set-up: On a tennis court or playing area.

- 2 teams of 4-6 players.
- 2 sets of 3 to 5 points, 5 minute breaks between sets.
- To score 1 point you have to complete 10 passes in a row.
- When you catch the ball you can't move (walk or run), you have 5 sec. to pass the ball.
- At anytime you can't touch an opponent when you are in defense.
- If the ball hits the ground before 10 completions the offensive team loses the ball control.
- You can't pass to someone who has just completed the last pass to you.
- You can use half or full tennis court as limits.
- Defense is one on one.

Equipment: T-shirts for team identifications, Basketball, volleyball, handball etc.

Other possibilities: Biking, swimming, basketball, hockey, relays, dodge ball, ice wall, etc. (Not on video)

Training to train

Chronological Age: Females 11-14, Males 12-15

-This stage is the foundation of aerobic and strength fitness for the female players and the foundation of aerobic fitness for males. At this stage, both males and females should also further develop speed capacities.

-Athletes internalize the advanced training techniques of physical, technical and recovery activities. The large majority of players will reach puberty during this stage. The onset of Peak Height Velocity (PHV) should be used as a reference point to design programs for the pubertal athlete/player. (Balyi)

-It is very important that biological age and differences between boys and girls are now taken into account in determining the physical work. The physical training loads given therefore assume the player is average (i. e. not an early or late maturer). Biological and chronological age can be 4 years apart (2 years higher or 2 years lower).(LTA)

- Athletes who miss this stage of training will never reach their full potential, regardless of the remedial programs they may participate in (SportMap, 2001). The reason why so many athletes plateau during the later stage of their careers is primarily because of an overemphasis on competition instead of on training, during this important period in their athletic development.

- Training: 60% competition: 40%. (Balyi)

- 9-12 sessions of 1h-2h30. Maximum length of session duration is 2h30.

Year	7	8	9	Proposal																								
F	11-12years	12-13years	13-14years	<table border="0"> <tr> <td>Female</td> <td>11-12 years</td> <td>12-13 years</td> <td>13-14 years</td> </tr> <tr> <td>Male</td> <td>12-13 years</td> <td>13-14 years</td> <td>14- 15 years</td> </tr> <tr> <td>Tennis</td> <td>13-14 h</td> <td>14-15 h</td> <td>15-16 h</td> </tr> <tr> <td>O. Sports</td> <td colspan="3">1 hr</td> </tr> <tr> <td>Co-ordination</td> <td>3 x 20 m</td> <td>3 x 20 m</td> <td>3 x 20 m</td> </tr> <tr> <td>Speed</td> <td>3 x 20 m</td> <td>3 x 20 m</td> <td>2 x 30 m</td> </tr> </table>	Female	11-12 years	12-13 years	13-14 years	Male	12-13 years	13-14 years	14- 15 years	Tennis	13-14 h	14-15 h	15-16 h	O. Sports	1 hr			Co-ordination	3 x 20 m	3 x 20 m	3 x 20 m	Speed	3 x 20 m	3 x 20 m	2 x 30 m
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TRAINING TO TRAIN FITNESS EXERCISE GUIDELINES

Performance Factors	Age	11-12	12-13	13-14	14-15	Proposal
Speed (Efforts of 8 seconds or less)	F	3 x 20 m + Sports 1 x 1hr	3 x 20 m	2 x 30 m	N.A.	This stage represents the second window of accelerated adaptation to speed training. Speed training priorities should be: Reaction speed, speed of coordination, linear/ multi directional speed, acceleration, short sprints, agility, specific tennis drills and segmental speed. Activity less than 8 seconds with a work/rest ratio of 1: 5. Speed training should be done after the warm-up. Running technique exercises should be introduced at this stage. (ITF, LTA, FFT.)
	M	N.A.	3 x 20 m + Sports 1 x 1hr	3 x 20 m	2 x 30 m	
Strength- endurance	F	3 x 20 m or Explosive- Strength	3 x 25 m or Explosive- Strength	3 x 30 m or Explosive- Strength	N.A.	The strength-endurance is developed through own body weight, light weights, core stability, medicine balls, Swiss balls, circuit training and injury prevention. (FFT, LTA)
	M	N.A.	3 x 20 m or Explosive- Strength	3 x 25 m or Explosive- Strength	3 x 30 m or Explosive- Strength	Emphasis is on technique for the weight exercises. The optimal period to start the strength training is immediately after the Peak Height Velocity (PHV) for the females and 12-18 months after PHV for the males. (Balyi)

Explosive-strength (starting-power, power) Explosive-strength End.	F	Through Sprints Sports Circuit Training	Through Sprints Circuit Training	Through Sprints Circuit Training	N.A.	The development of explosive-strength is done through resistance sprints, sports and horizontal jumps. The upper body work is done through exercises with Medicine Balls of 1-2 Kg.
	M	N.A.	Through Sprints Sports Circuit Training	Through Sprints Circuit Training	Through Sprints Circuit Training	The athlete must be able to repeat quality sprints and efforts (Explosive-strength endurance). (FFT)
Flexibility	F	6 x 20 m <i>Including Warm-up</i>	6 x 20 m <i>Including Warm-up</i>	6 x 20 m <i>Including Warm-up</i>	N.A.	The warm-up routine should consist of dynamic stretching. (USTA, LTA, ITF, FFT)The flexibility is developed at the end of workouts through static or passive stretching.
	M	N.A.	6 x 20 m <i>Including Warm-up</i>	6 x 20 m <i>Including Warm-up</i>	6 x 20 m <i>Including Warm-up</i>	
Aerobic endurance (continuous training sub-maximal efforts)	F	2-3 x 20 m + 3 x 15 m C. Down	1-2 x 25 m + 4 x 15 m C. Down	1-2 x 30 m + 5 x 15 m C. Down	N.A.	Aerobic endurance both on and off court should be emphasized. The athlete must be capable of maintaining sub-maximal efforts for 20-30 minutes.
	M	N.A.	2-3 x 20 m + 3 x 15 m C. Down	1-2 x 25 m + 4 x 15 m C. Down	1-2 x 30 m + 5 x 15 m C. Down	
Aerobic- Anaerobic endurance	F	0-1 x 20 m	1-2 x 25 m	1-2 x 30 m	N.A.	Introduction of intermittent work through sub-maximal efforts.

(intermittent or interval efforts, maximal efforts)						
	M	N.A.	0-1 x 20 m	1-2 x 25 m	1-2 x 30 m	
ABC: agility, balance, coordination	F	3 x 20 m + Sports 1 x 1hr	3 x 20 m	3 x 20 m	N.A.	<p>Prioritize refining the basic skill of; running, jumping, throwing, catching and to develop the complex specific tennis skills. Coordination - Complex Drills, dynamic balance 4-6 times per week. Specific footwork drills. Be patient with growing kids. (ITF, LTA, FFT, DBT)</p>
	M	N.A.	3 x 20 m + Sports 1 x 1hr	3 x 20 m	3 x 20 m	
Recovery	F	Everyday	Everyday	Everyday	N.A.	<p>Important stage for the introduction of physical therapies like active and passive rest, hydro therapies and sport massage. (Calder)</p> <p>Hydratation, Nutrition, Cool Down, Massage, Hydro therapies be included in the players daily training routine.</p>
	M	N.A.	Everyday	Everyday	Everyday	

Warm-up

😊 Female 11-14 Male 12-15
USTA

Sources: LTA,

Purpose: To increase body temperature, to prime the cardiovascular system and get the heart and lungs ready to engage in vigorous activity, to improve joint range, to help to engrain proper movement patterns and to wake up the nervous system.


Set-up: On a tennis court or playing area.

- 5-7 minutes of jogging, biking, skipping rope or using specific activities that focus on agility and change of direction (with balls or not).
- 7-8 minutes of dynamic stretching like arm swings, lunges, trunk twists, etc.

Equipment: Balls.

Speed and agility

Exercise 1: Ball drops.

 Female 11-14 Male 12-15

Sources: FFT, USTA

Purpose: To develop reaction speed, starting ability and agility.


Set-up: On the tennis court or playing area

- The coach stands in front of the player with one ball in each hand and arms extended to the side.
- The coach drops either one of the balls and you try to catch it before it bounces a second time.
- The coach should vary his positioning with reference to the player.
- Change the starting positions. Feed more than one ball.

Equipment: Use different balls to get different types of bounces.

Sets/reps/rest: 2 to 3 sets of 6 to 10 reps. rest: 90 sec. between sets.

Exercise 2: Sprint duel.

 Female 11-14 Male 12-15

Sources:

FFT

Purpose: To develop reaction speed, starting ability and agility.

Set-up:

- On the tennis court or on playing area between two lines, 20 meters apart.
- Two players holding flags stand side by side, about one meter apart, and move towards the coach, jogging along.
- The coach indicates one side and the players have to start running in that direction.
- The farthest player (i.e. he who is on the opposite side to which the coach indicates) has to catch his partner's flag before the finish line.

Equipment: cones, pairs of flags.

Sets/reps/rest: 2 to 3 sets of 4 to 6 reps. rest: 90 sec. between sets and 30 sec. between reps.

Exercise 3: Colour balls.

😊 Female 11-14 Male 12-15

Sources:

FFT

Purpose: To develop the player's reaction and adaptation ability to a visual signal and to improve body movement, speed, and movement technique.

Set-up:

- On the tennis court or on playing area.
- Four speed activities, each with a distinctive colour, are arranged in the shape of a cross. Here, it is the responsibility of coaches to devise activities according to the physical and technical strengths and limitations of their players.
- Players react to the colour of the ball that the coach feeds and perform the corresponding circuit.

Equipment: Cones, slats, sticks, hurdles, ladder, use balls of different colours.

Sets/ reps/rest: 2 to 3 sets of 4 to 5 reps. rest: 30 sec. for reps and 90 sec. for sets.

Exercise 4: Mini-hurdle races.

😊 Female 11-14 Male 12-15

Sources: FFT

Purpose: To improve running technique, to make players aware of the importance of pelvis positioning in order to clear the hurdles and to improve the action of the foot on the ground.


Set-up:

- On a tennis court or on an open and flat space
- Over a 10 to 25 meters distance, place small cones, then medium cones and finally low hurdles in succession.
- Leave a space of 0.6-1 meter between the cones or hurdles depending on the player's height and the desired level of difficulty.

Equipment: 8 small soft cones, 10-15 cm height + 8 cones 20-30 cm height + 4 to 6 hurdles 30-50 cm height.

Sets/reps/rest: 2 to 3 sets of 4 to 5 reps. rest: 30 sec. for reps and 90 sec. for sets.

Exercise 5: Forward and backward sprints.

 **Female 11-14 Male 12-15**

Sources:

FFT

Purpose: To develop forward and backward speed.


Set-up: On a tennis court or playing area.

- 2 cones 3 to 5 meters apart.
- The player starts to sprint between the 2 cones running forward and backward during 7 sec.

Equipment: 2 cones

Sets/reps/rest: 1 to 3 sets of 4 to 5 reps. rest: 30 sec. for reps and 90 sec. for sets.

Exercise 6: Ball throws.

 **Female 11-14 Male 12-15**

Sources:

FFT

Purpose: To develop arm speed, to respect the basic principles of throwing technique.


Set-up: On a tennis court or playing area.

- Two players play points by throwing a ball, over-arm to each other.
- Players put the ball in play diagonally and are allowed to go the net.
- Players should throw the ball back without moving.

Equipment: 2-4 mini handball type balls (size 0), or smaller balls.

Sets/reps/rest: 2 to 3 sets of 3 to 5 points rest: 90-120 sec. between sets.

Exercise 7: Figure eight.

 **Female 11-14 Male 12-15**

Sources: FFT,

FST

Purpose: To develop lateral movement, agility, and to improve the action of the foot on the ground.


Set-up: On a tennis court or playing area.

- 2 cones 1.5 to 3 meters apart.
- The player stands in the middle and behind the 2 cones.
- He moves to his right side and starts to shuffle laterally to weave a figure eight around the cones going to his left and right side alternately. No crossover steps are allowed.

Equipment: 2 cones.

Sets/reps/rest: 1 to 2 sets of 3 to 5 reps. of 7 sec. rest: 60 sec. between reps and 180 sec. between sets.

Exercise 8: Agility courses.

 Female 11-14 Male 12-15

Sources:

FFT

Purpose: To improve running technique, ability to change direction and speed.

Set-up: On a tennis court or on an open and flat space

- Over a 10 to 15 meters distance, place small cones, hoops or low hurdles to make different course designs.
- Organize different situations working shuffle steps, running around cones, changing rhythm, etc.


Equipment: 4-6 small cones, 4-6 hoops and 4 to 6 low hurdles.

Sets/reps/rest: 2 to 3 sets of 4 to 5 reps. rest: 30 sec. for reps and 90 sec. for sets.

Strength

* Possibility to work strength and explosive-strength by circuit training.

Exercise 1: Step-ups.

 Female 11-14 Male 12-15

Sources: FFT, USTA,

LTA

Purpose: To develop the strength of the lower body and balance

Set-up:


- Stand with your hands aside.

- Using a stool or gym step of approximately 0.3m high. Step onto the object with one foot and bring your other leg up until your knee is at waist level. Hold your leg there for a count of three and return to the starting position. Alternate legs; for 6 to 12 reps.

Equipment: a stool or gym step 0.3m high.

Sets/reps/rest: 2 to 3 sets of 6 to 12 reps rest: 60-120 sec. between sets.

Exercise 2: Push-ups.

 Female 11-14 Male 12-15

Sources:

USTA

Purpose: To develop the strength of the upper body.


Set-up:

- Hands placed shoulder-width apart with your body in a straight line from your toes to your head.
- Slowly lower yourself down until your upper arm is parallel to the ground. Push yourself upward until the elbows are completely straight and round back outward like a cat. This rounding motion at the end of the push-up is very important and increases the work by the muscles that stabilize your shoulder blades.

Equipment: none

Sets/reps/rest: 2 to 5 sets of 15-25 reps rest: 60-120 sec. between sets.

Exercise 3: Seated row.

 Female 11-14 Male 12-15

Sources:

USTA

Purpose: To develop the strength of the upper body.


Set-up:

- Stand up with your knees slightly flexed and your hands holding rubber tubing. Secure the rubber tubing, about waist high to something solid.
- While keeping the upper body erect and not leaning forward, pull band handles toward the chest and upper abdomen area. Keep the elbows close to your sides. Slowly return to start position.

Equipment: Rubber tubing.

Sets/reps/rest: 2 to 3 sets of 10 reps rest: 60-120 sec. between sets.

Exercise 4: Swiss ball 1 (cross body rear deltoid raise).

 **Female 13-14 Male 14-15**

Sources: Canada

Purpose: To develop the strength in the back of the shoulder and to stabilize the shoulder blades.


Set-up:

- Lie sideways over the ball, with the ball placed in your armpit and to the side of your chest. This lateral position must be maintained throughout the movement.
- Begin the movement by setting your abdominal muscles and drawing in your navel. With your arm extended and pointing toward the floor, begin to raise your arm away from your body.

Equipment: Swiss balls, dumbbells.

Sets/reps/rest: 2 to 3 sets of 10 reps. rest: 60-120 sec. between sets.

Exercise 5: Swiss ball 2 (dumbbell press).

 **Female 13-14 Male 14-15**

Sources:

Canada

Purpose: To develop the strength of the upper body (whole pectoral area).

Set-up:

- Hold the dumbbells that you will be pressing. From a seated position on the ball, slowly walk out until your head and shoulders are supported by the ball. Place your feet slightly farther than hip-width apart to provide a safe initial base of support.
- Begin by setting your abdominal muscles. Then, press your arms upward until your hands are directly above your eyes.

Equipment: Swiss balls, dumbbells.

Sets/reps/rest: 2 to 3 sets of 10 reps. rest: 60-120 sec. between sets.

Exercise 6: Swiss ball 3 (wall squat).

😊 Female 13-14 Male 14-15

Sources:

Canada

Purpose: To develop the strength of the lower body. The wall squat unloads some of your body weight, which helps athletes prepare to progress to free-weight squats.

Set-up:

- Stand facing away from a wall. Place a stability ball against the wall at low back height. Plant your feet 12 inches in front of your body with a shoulder-width stance, toes pointing forward.
- Leaning into the ball, lower your body until your knees are flexed at a 90-degree angle. Hold this position for two seconds. As you squat, the ball will move to your mid-and upper-back region. Note your feet—your weight should be on your heels, not your toes, and your knees should not be out past your toes. Except to check your knee position, keep your head and eyes up. Extend your legs to elevate your body back to the setup position.

Equipment: Swiss balls.

Sets/reps/rest: 2 to 3 sets of 10 reps. rest: 60-120 sec. between sets.

Exercise 7: Swiss ball 4 (jackknife).

😊 Female 13-14 Male 14-15

Sources: Canada

Purpose: To develop core and shoulders stabilization.


Set-up:

- Standing behind the ball, crouch down and place your abdomen on top of the ball. Roll forward until your hands reach the ground in front of the ball. Walk your hands out until only your feet remain atop the ball. Contract the core to hold strong link—your body should be in a straight, firm line from head to foot.
- Hold your push-up position and retain a strong core. Keep your torso facing square to the ground. Bend at the knees and pull the ball up toward your torso, as if to draw your knees in to your chest. Keep the speed of movement under control. Extend your legs to move the ball back to the start position. At the end of each repetition, your body should be linked by strong contractions forming one level, straight line.

Equipment: Swiss balls

Sets/reps/rest: 2 to 3 sets of 10 reps. rest: 60-120 sec. between sets.

Exercise 8: Bracing with posterior tilt.

 **Female 11-14 Male 12-15**

Sources: FFT,

DTB

Purpose: To develop core strength.


Set-up:

- Lying on the stomach on an exercise mat with the legs completely extended on your toes with the forearms propped with the elbows located under the shoulder joint. Hold the position.
- In addition, one leg can be raised.

Equipment: Mat

Sets/reps/rest: 2 to 3 sets of 30 to 90 sec. rest: 30-120 sec. between sets

Exercise 9: Bracing with lateral tilt.

 **Female 11-14 Male 12-15**

Sources: FFT,

DTB

Purpose: To develop core strength.

Set-up:

- Lying on the side, one leg is lying on top of the other. One arm is propped up, with the elbow located under the shoulder joint. From this position, slowly press into the mat on the forearm and at the same time, keep the body stiff. Hold the position then switch side.
- In addition, one leg can be raised.

Equipment: Mat

Sets/reps/rest: 2 to 3 sets of 20 to 60 sec. rest: 30-120 sec. between sets.

Exercise 10: Bracing with anterior tilt (superman).

😊 Female 11-14 Male 12-15

Sources: FFT,

DTB

Purpose: To develop core strength.

Set-up:

- Lying on your stomach on an exercise mat with arms fully extended overhead. Lift both arms and both legs simultaneously. Hold this position.

Equipment: Mat

Sets/reps/rest: 2 to 3 sets of 10 reps. of 1 to 5 sec. rest: 60-120 sec. between sets.

Exercise 11: Crunch.

😊 Female 11-14 Male 12-15

Sources:

USTA

Purpose: To develop strength of the abdominal muscles.


Set-up:

- Lie on the back with the knees bent and feet flat on the floor. Hold your hands behind the head with the elbows to the sides, or crossed resting on top of your chest. Refrain from pulling the head forward with hands.
- Curl the upper body from the floor, including the head and the shoulders, until you can feel the abdominal muscles contracting. The upper body should be off the ground by about three inches at the shoulder blades. Lower until the shoulder blades touch the ground and repeat.

Equipment: Mats.

Sets/reps/rest: 2 to 3 sets of 15-20 reps. rest: 60-90 sec. between sets.

Exercise 12: Russian twist.

 **Female 11-14 Male 12-15**

Sources:

USTA

Purpose: To develop strength of the abdominal muscles.

Set-up:


- Secure feet against the floor, with the knees bent and the body leaning back at a 45-degree angle. Hold the arms straight out from the shoulders so they are parallel with the thighs. Holding a racquet increases the resistance of the exercise.
- Rotate side to side, turning the shoulders until the arms are at 90-degree angle with the body. Make a full twist to the opposite side. Over and back makes one repetition.

Equipment: Mats.

Sets/reps/rest: 2 to 3 sets of 15-20 reps rest: 60-90 sec. between sets.

Explosive-strength

Exercise 1: Resistance running.

 **Female 13-14 Male 14-15**

Sources: FFT, USTA,

LTA

Purpose: To develop the power of the lower body, to improve stride frequency, to improve bracing ability.

Set-up: On the length of a tennis court or a playing area


- The runner has a belt around his waist, which is connected to a pulley system by a rope. His partner, located behind him, controls his running speed. He should attempt to sprint over a distance of 20 meters as quickly as possible in spite of the tension provided by the rope.
- To perform the drill without the pulley, but with your coach or a partner facing you, they should place their hands on your shoulders.

Start to sprint, trying to push your coach or partner backwards. After six to ten steps they should move aside so you can accelerate forwards over a distance of 5 meters. **Female 11-12 Male 12-13**

Equipment: Cones, belts, a climbing rope approximately 40 meters long, a pulley or specific elastic.

Sets/ reps/rest: 2 to 3 sets of 4 to 5 reps. rest: 1 min. between reps and 3 min. between sets.

Exercise 2: Two-footed slalom jumps.

 **Female 13-14 Male 14-15**

Sources: USTA,

LTA

Purpose: To develop elastic strength in the ankle, and dynamic balance.


Set-up: On a tennis court or playing area.

- Stand on one side of a line. Jump two-footed to the other side of the line and then back. Repeat this pattern, making between three and five contacts on each side of the line. Focus on quick ground contact. After the final ground contact, finish with a split step.

Equipment: A line, cones, hurdles.

Sets/ reps/rest: 2 to 3 sets of 6 to 10 reps. rest: 1 min. between sets.

Exercise 3: Single leg push-off.

 **Female 13-14 Male 14-15**

Sources: USTA,

LTA

Purpose: To condition the athlete to push into the ground.

Set-up: On a tennis court or playing area.

- To start, the player places one foot on a sturdy box, 20-40cm high. By pushing-off with the "up" leg, he will jump as high as possible. The player should then land softly on the same leg with which he pushed off, with the front of the foot making contact on the surface of the box. Repeat for the required number of repetitions and then switch to the other leg. Use the arms to help "lift" the body from the ground.

Equipment: A sturdy box.

Sets/ reps/rest: 2 to 3 sets of 5-6 reps. each leg, rest: 90 sec. between sets.

Exercise 4: Split squat jump or lunges jump.

😊 Female 13-14 Male 14-15

Sources: USTA,

LTA

Purpose: To improve hip flexibility and hip flexor power.

Set-up: On a tennis court or playing area.

- The player assumes a split squat position with one foot forward and the other projected to the rear. Hands can be placed on the hips. In this position the front knee will be bent at 90 degrees and the rear knee will be almost touching the ground. The player will jump as high as he can and switch the position of the legs before landing. Focus on the landing and maintain the torso in an upright posture.

Equipment: none

Sets/reps/rest: 2 to 3 sets of 5-6 reps. each leg, rest: 90-120 sec. between sets.

Exercise 5: Horizontal jumps working with hoops.

😊 Female 11-14 Male 12-15

Sources:

FFT

Purpose: To improve leg power, coordination and balance.

Set-up: On a tennis court or playing area

- Working on different possibilities.

Equipment: Hoops

Sets/reps/rest: 2 to 5 sets of 6-10 reps. each leg, rest: 90-120 sec. between sets.

Exercise 6: Specific shots with medicine ball and elastic.

😊 Female 13-14 Male 14 to 15

Sources: FFT, USTA,

LTA

Purpose: To develop specific overall power.

Set-up: On a tennis court or playing area

- The player reproduces forehand, backhand, volley and smash patterns with a medicine ball in his hands. The coach holds the player by specific elastic. The elastic is attached at the player's waist.
- The player reproduces backhands. The player reproduces volleys. The player reproduces smashes. Everything together alternatively or randomly.

Equipment: Medicine balls from 1 to 3 kg. specific elastic.

Sets/reps/rest: 2 to 3 sets of 6 to 10 reps. rest: 90-120 sec. between sets.

Exercise 7: Figure eight with medicine ball throws.

😊 Female 11-14 Male 12 to 15

Sources: FFT, USTA,

LTA

Purpose: To develop power of the upper body, lateral movement, agility, and rhythm.

Set-up: On a tennis court or playing area.

- 2 cones 1.5 to 3 meters apart.
- The player stands in the middle and behind the 2 cones with a medicine ball in his hands. The coach is facing the player with a 1.5 to 2.5 meters split.
- The player starts the action with a split step then he moves to his right side, when he passes the right cone he throws the ball to the coach and goes back to his initial position as fast as possible while the coach throws the ball back to him. After the catch the player does the same pattern to his left side to complete the figure eight.
- Emphasis is on footwork and on throwing techniques.
- Use different kinds of strokes (open or closed stances).
- The player is attached at the waist by specific elastic. F 13-14 M 14-15
- Two players doing the drill together.

Equipment: Cones and medicine balls from 1 to 3 kg. specific elastic.

Sets/reps/rest: 2 to 3 sets of 6 to 10 reps. rest: 90- 120 sec. between sets.

Flexibility

Stretching method 1: ballistic and dynamic.

😊 Female 11-14 Male 12-15

Sources: LTA,

USTA

Characteristics:

- Involves explosive rebounding in order to elongate the target muscles.

Benefits:

- Performed before a match or training they can achieve good, tennis-specific muscular and neural activation.

Practical application:

- In tennis: can be used to good effect in the warm-up. Dynamic flexibility exercises may also be used additionally or alternatively.

Equipment: Mats.

See Warm-up

Stretching method 2: static.

😊 Female 11-14 Male 12-15

Sources: LTA,

USTA

Characteristics:

- The player stretches individually. Without bouncing, the position is maintained for 20-30 seconds (2 sets). During the second set of the exercise the amplitude of the stretch is increased slowly.

Benefits:

- As performed with little movement the stretch reflex is inhibited.
- Useful for increasing the ROM.
- They induce muscular relaxation and require a low level muscular effort.

Practical application:

- Extremely easy to perform, even during a match.
- Players can self-adjust the tension of the stretch.
- Should be performed during the cool-down, post-training or post-match.

Equipment: Mats.


Aerobic endurance

Aerobic endurance: is always trainable but make aerobic a priority after the onset of PHV. (Peak high velocity)

Age 10-11 for females and 12-13 for males.

* Note that aerobic trainability is dependent on the maturation levels of the athlete. For this reason, the timing of training emphasis differs depending on whether athletes are early, average, or late maturers.

Exercise 1: Basic endurance training. (Not on video)

 **Female 11-14 Male 12-15**
USTA


Sources: DTB,

Purpose: To develop basic aerobic endurance.

Set-up: Running, cycling, inline-skating or swimming.

- Continuous work for 20-30 minutes, 2 to 3 times a week.
- Intensity is moderate.

Exercise 2: Intermittent training 1.

 **Female 11-14 Male 12-15**
FFT, DTB

Sources:

Purpose: To develop aerobic endurance in a general way.


Set-up: Running, cycling.

- Intermittent efforts (10-20, 15-15, 20-20, 30-30) for 6 to 8 minutes,
1 to 3 sets with 3-4 minutes rest, 1 to 2 times a week.
- Intensity is moderate (F 11-12 M 12-13) to a little difficult (F 13-14 M 14-15)

Cool down: light biking, light jogging or light swimming must
Be developed three to five times a week for 15 minutes plus
10-15 minutes of stretching.

Coordination

Exercise 1: Precision throws.

 **Female 11-14 Male 12-15**
DTB

Sources: FFT, USTA, LTA,

Purpose: To develop spatial and temporal orientation and to develop throwing and catching abilities at different speed levels.

Set-up: On a tennis court or playing field


- 2 groups of 3-5 players 3-5 meters apart, 2 players one on each group are partners.

- The first group is called the throwing group and the second group is called the catching group.
- The player without the throwing ball starts running/sprinting in one direction his partner must throw the ball in his direction with precision, the running player must catch the ball at different heights when running. After a rotation they switch groups.

Equipment: Different kinds of balls or objects like, tennis ball, handball, rugby ball, football or Frisbee.

Sets/reps/rest: 2 to 3 sets of 4 to 6 reps. rest: 90 sec. between sets.

Exercise 2: Combined passes.

 Female 11-14 Male 12-15

Sources:

FFT

Purpose: To develop differentiation between upper and lower body, to develop rhythm and peripheral vision.


Set-up:

- On a tennis court or a playing area.
- 2 players facing each other 3 to 4 meters apart.
- One player holds a ball in his hand (handball type) the other puts a soccer ball on the ground just in front of him.
- At the coach's signal the players exchange balls for 30 sec., the handball in the air and the soccer ball on the ground; balls can't be stopped for the exercise duration.

Equipment: Handball, soccer ball, tennis ball, basketball.

Sets/reps/rest: 3-5 sets of 30 sec. rest: 30-60 sec. between sets.

Exercise 3: As soon as the ball bounces.

 Female 11-14 Male 12-15

Sources:

FFT

Purpose: To develop differentiation between upper and lower body, to develop bilateralism and to develop spatial and temporal orientation.

Set-up:

- On a tennis court or playing field.
- 2 players facing each other 2 to 3 meters apart.
- The first player holds a soccer ball in his hands then he drops the ball to the ground and kicks it as soon as the ball bounces on the court to his partner. The partner catches the ball with his hands then drops it


to the ground and kicks it the same way, as soon as the ball bounces on the court to the first player.

- The drill must go on for 20-30 sec.
- As the players improve, the rhythm between the catches and the kicks must be increased.

Equipment: Soccer ball or different balls.

Sets/ reps/rest: 3-5 sets of 20-30 sec. rest: 30-60 sec. between sets.

Exercise 4: Toss and Kick.

 **Female 11-14 Male 12-15**

Sources: Tennis

Canada

Purpose: To develop lateral movement, agility, foot-eye coordination, dynamic balance, spatial and temporal orientation.


Set-up:

- On a tennis court or playing area.
- The coach is 2 meters in front of the player.
- The coach tosses a soccer ball to either side of you. Shuffle laterally with small steps, retrieve the ball, and kick it back to your coach. Then change direction to retrieve the ball coming to the opposite side and kick it back to your coach. Drill continues for 4 to 10 repetitions. With or without bounces. Then you can mix with cross over steps.
- Same exercise with a volleyball. (Change kicks for volleyball techniques).

Equipment: Soccer ball, volleyball.

Sets/ reps/rest: 2 to 5 sets of 6 to 10 reps. rest: 30-60 sec. between sets.

Exercise 5: Double contact.

 **Female 11-14 Male 12-15**

Sources:

DTB

Purpose: To develop tactile sense, hand-eye coordination, spatial and temporal orientation.

Set-up: On a tennis court


- Two players stand opposite each other at the net and toss the ball to each other over the net as a volley. On the first contact, the ball is played high short, and on the second contact tossed to the partner.
- The ball is played high in such a way that it has to be returned to the partner from a difficult position (left of the body, between the legs, while turning the body, behind the back, with the other side of the racquet, etc.).

- The ball is purposely met in a difficult position (left of the body, between the legs, behind the body, with the other side of the racquet, etc.) and returned from another difficult position.
- All three of these exercises are also performed with the "wrong" hand.
- The ball is played high with one hand, the racquet changes hands, and the ball is returned with this hand.
- All forms of the exercises can also be played as a competition in service area.

Equipment: Tennis balls, racquets.

Sets/reps/rest: 2 to 3 sets of 6 to 10 reps rest: 30-60sec. between sets.

Exercise 6: Coordination drill on court 1.

 Female 11-14 Male 12-15

Sources:

FFT

Purpose: To develop rhythm, orientation, differentiation, reaction and balance


Set-up: On a tennis court or playing field

- Players A and B stand on either side of the net. They each have a ball in one hand. Player A throws the ball to player B, who himself tosses his ball into the air over his head. B catches the ball of player A and throws it back to him. Player B then catches the ball he had thrown into the air and so on. The balls should never fall to the ground.
- Same drill but A and B work with one ball in each hand (2 balls are thrown).

Equipment: Tennis balls.

Sets/reps/rest: 2-5 sets of 6-10 reps., rest: 30-60 sec. between sets.

Exercise 7: Coordination drill on court 2.

 Female 11-14 Male 12-15

Sources: FFT

Purpose: To develop rhythm, orientation, differentiation, reaction and balance.


Set-up: On a tennis court

- Players A and B stand on either side of the net. They each have a ball: player A holds his ball in his hand, while the ball of player B is on his racquet. Player A throws his ball to player B, who himself sends his ball into the air with his racquet. B returns the ball to player A by playing a volley. Player B then hits the ball he had thrown into the air again with his racquet and so on. The balls should never fall to the ground.

Equipment: Tennis balls, racquets.

Sets/reps/rest: 2-5 sets of 6-10 reps., rest: 30-60 sec. between sets.

Exercise 8: Coordination drill on court 3.

 **Female 11-14 Male 12-15**

Sources:

FFT

Purpose: To develop rhythm, orientation, differentiation, reaction and balance.


Set-up: On a tennis court

- Players A and B stand in a service box on either side of the net. They each hold their racquet in one hand and a basketball in the other. They have to rally in a service box using their tennis racquet while dribbling at the same time. They have to bounce the basketball at least once between each shot.
- Same exercise, but with added complexity. This time, between each shot, the players have to change the racquet (and therefore the ball) from one hand to the other.

Equipment: Tennis balls, racquets, basketballs.

Sets/reps/rest: 2-3 sets of 7-10 points, rest: 90-120 sec. between sets.

Exercise 9: Coordination drill on court 4.

 **Female 11-14 Male 12-15**

Sources:

FFT

Purpose: To develop rhythm, orientation, differentiation, reaction and balance.

Set-up: On a tennis court

- Players A and B stand in a service box on either side of the net, holding their racquets in their hands. Prior to hitting the ball, players have to say "1" (meaning 'one bounce') or "0" (meaning 'volley'). The opposing player therefore has to let the ball bounce once or play it as a volley. Players should moderate the pace of their shot in this drill as playing too fast compromises its objective. Players should hit the ball relatively high over the net.

Equipment: Tennis balls, racquets.

Sets/reps/rest: 2-3 sets of 7-10 points, rest: 90-120 sec. between sets.

Exercise 10: Coordination drill on court 5.

😊 Female 11-14 Male 12-15

Sources:

FFT

Purpose: To develop rhythm, orientation, differentiation, reaction and balance.

Set-up: On a tennis court

- Players A and B stand in a service box on either side of the net. They should throw the ball with their hand, always with an upward movement. The players are not allowed to let the ball bounce and should throw from where they caught the ball. They should try to lob each other as well as play very short balls (drop-shots). They are not allowed to catch and throw the ball with the same hand twice in a row.
- Same drill, but this time with the racquet. At first it is not compulsory to switch hands after each shot.

Equipment: Tennis balls, racquets.

Sets/reps/rest: 2-3 sets of 7-10 points, rest: 90-120 sec. between sets.

Exercise 11: Coordination drill on court 6.

😊 Female 11-14 Male 12-15

Sources:

FFT

Purpose: To develop rhythm, orientation, differentiation, reaction and balance.

Set-up: On a tennis court

- In both service boxes, without racquets, players A and B face each other on either side of the net. Player A throws the ball to the ground on his side of the net. Player B has to catch the ball before it touches the ground. Player B then throws the ball back by sending it to the ground on his side and so on. Players should catch the ball with one hand only and use the same hand to throw the ball back.
- Same drill, but this time with the racquet. Players should alternate the hand with which they hold the racquet (i.e. play two forehands).

Equipment: Tennis balls, racquets.

Sets/reps/rest: 2-3 sets of 7-10 points, rest: 90-120 sec. between sets.

Exercise 12: Coordination drill on court 7.

😊 Female 11-14 Male 12-15

Sources:

FFT

Purpose: To develop rhythm, orientation, differentiation, reaction and balance.

Set-up: On a tennis court

- In both service boxes, without racquets, players A and B face each other on either side of the net. They play using their right hands only. Player A throws the ball to the ground on his side of the net. Player B is required to let the ball bounce once. Then, he throws the ball back by sending it to the ground on his side, and so on. Players are only allowed to use their right hand to catch and throw the ball. They can then repeat the exercise using their left hands.
- Same drill, but this time with the racquet. They hit forehands only or backhands only.

Equipment: Tennis balls, racquets.

Sets/reps/rest: 2-3 sets of 7-10 points, rest: 90-120 sec. between sets.

Exercise 13: Swiss ball (kneel on ball).

😊 Female 11-14 Male 12-15

Sources:

Canada

Purpose: To develop balance, orientation and core stability

Set-up:

- Begin by placing the stability ball close to a sturdy piece of equipment that you can hold on to if necessary. Place the ball in front of you and kneel over the ball. You will need to hold on to something solid as you get into the actual on-ball position. Make sure that your abdominal muscles are set, and attempt to be as tall as possible.
- If you perform this exercise perfectly, there will be no movement. Therefore, that should be your goal. Maintain as straight a body position as possible without falling off the ball.


Equipment: Swiss balls

Sets/reps/rest: 2-3 sets of 30-120 sec. rest: 90-120 sec. between sets.

Sports and games

(Not on video, but important)

Exercise 1: Soccer.

 **Female 11-14 Male 12-15**

Sources: FFT, USTA, LTA, DTB


Purpose: To develop explosive-strength, agility, balance, coordination, aerobic and muscular endurance, to develop decision-making ability and to develop team spirit.

Set-up:

- 2 teams of 3 to 5 players
- 2 half times of 15-20 minutes with a break of 5-10 minutes (passive rest, hydrate).
- On a soccer field, a playing area or a tennis court (30-50 m x 20-30 m).
- Use cones for goals.
- Use soccer rules.

Equipment: Soccer balls, cones, t-shirts for team identifications.

Exercise 2: Frisbee-football.

 **Female 12-14 Male 13-15**

Sources: Tennis Canada,

FFT


Purpose: To develop reaction speed, explosive-strength, agility, balance and coordination, to develop decision-making ability, to develop aerobic endurance, catching ability and to develop team spirit.

Set-up:

- One playing field, 20-50 m x 20-50 m or more depending on player numbers, with a scoring zone.
- 2 teams of 3 to 5 players.
- 4 quarters of 8 minutes, 5 minute breaks between quarters.
- When you complete a pass (catch the Frisbee) you can't run or walk, you have 5 seconds to pass the Frisbee to a partner.
- To score a touch down you must catch a pass in the end zone.
- When in defense you can't touch an opponent.
- If the Frisbee touches the ground the offensive team loses control.
- Defense is one on one.

Equipment: Frisbee, cones and t-shirts for team identifications.

Exercise 3: Soccer-squash.

 **Female 12-14 Male 13-15**

Sources: Tennis

Canada


Purpose: To develop agility, balance and coordination, to develop decision-making ability, to develop aerobic endurance and to develop the ability to recover quickly.

Set-up:

- Squash court or racquetball court.
- 2 players.
- 2 sets of 10-15 points, 5 minute breaks between sets.
- Use soccer rules (ball can not be touched by arms).
- Walls can be used at anytime except on the serve.
- You can use the squash court lines as limits.

Equipment: Mini-tennis ball, foam ball.

Exercise 4: Hands-squash.

 **Female 11-14 Male 12-15**

Sources: Tennis

Canada

Purpose: To develop agility, balance and coordination, to develop decision-making ability, to develop bilateralism, to develop aerobic endurance and to develop the ability to recover quickly.

Set-up:

- Squash court or racquetball court.
- 2 players.
- 2 sets of 10-15 points, 5 minute breaks between sets.
- Use hands only, no backhand allowed, forehand with right and left hands.
- Walls can be used at anytime except on the serve.
- You can use the squash court lines as limits.

Equipment: Mini-tennis balls, foam balls.

Other possibilities: Biking, swimming, basketball, ping-pong, racquetball, badminton, volleyball, tennis-volleyball, rugby, dodge ball, ice wall, etc. (Not on video)

Training to compete

Chronological Age: Females 14-17, Males 15-18

- During the previous two stages, athletes learn how to train properly. One of the major objectives of this stage is to learn how to compete under diverse circumstances, in environments that are: hot, dry, humid, cold or at high altitudes etc. Athletes also learn how to cope with jet lag, extended travel and different diets.
- The foundation of an “optimal individual taper” procedure should be laid down early in this stage.

-This stage of development is introduced after the goals and objectives of the learning to train and training to train stages have been achieved. Remedial programmes should be immediately implemented if shortcomings have been identified. The earlier the remedial programmes are implemented the better the results they will produce. Physical evaluation tests are important to determine the individual strengths and weaknesses.

-During this stage, high intensity individual and sport-specific training is provided to athletes year round. Special emphasis is placed on optimum preparation. Optimal Periodization of the training factors will ensure that short and long-term priorities of training will not contribute to interference.

-Sports are recreational activities only.

- Training: 40% competition: 60%. (Balyi, Bompa)

- 9-12 sessions of 1-2 h30. Maximum length of session duration is 2h30.

Year	10	11	12	Proposal
F	14-15years	15-16years	16-17years	<p>Female 14-15 years 15-16 years 16-17 years</p> <p>Male 15-16 years 16-17 years 17-18 years</p> <p>Tennis 16-20h 18-22 h 18-24 h</p> <p>Coordination 3 x 20 m 3 x 20 m 3 x 20 m</p> <p>Speed 2-3 x 30-45 m 2-3 x 30-45 m 2-3 x 30-45 m</p> <p>Strength 2-3 x 45-60 m 2-3 x 45-60 m 2-3 x 45-60 m</p>
M	15-16years	16-17years	17-18years	<p>Flexibility 6 x 20 m 6 x 20 m 6 x 20 m</p> <p>Endurance 3 x 30-40 m 3 x 30-45 m 3 x 30-50 m</p> <p>6 x 15 m CD 6 x 15 m CD 6 x 15 m CD</p> <p>Total: 24-30 hours 26-32 hours 28-32 hours</p> <p>Coach's responsibility.</p>

TRAINING TO COMPETE FITNESS EXERCISE GUIDELINES

Performance factors	Age	14-15	15-16	16-17	17-18	Proposal
	Speed (efforts of 8 seconds or less)	F	2-3 x 30-45 m	2-3 x 30-45 m	2-3 x 30-45 m	N.A.
M		N.A.	2-3 x 30-45 m	2-3 x 30-45 m	2-3 x 30-45 m	Develop the following : Reaction speed, speed of coordination, linear/ multi directional speed, acceleration, short sprints, agility, specific tennis drills and segmental speed.
Strength- endurance	F	2-3 x 30 m	3 x 15-20 m	3 x 15-30 m	N.A.	<p>Strength-endurance gains are developed by using light to medium loads, core stability, injury prevention and with longer training and preparation matches.</p>
	M	N.A.	2-3 x 30 m	3 x 15-20 m	3 x 15-20 m	Isometric work can also be done at this stage. (FFT, LTA)

Maximum strength	F	N.A.	1-2 x 30 m or expl. strength	1-2 x 30 m or expl. strength	N.A.	The development of the maximum strength is done through: repeated efforts, isometric and stato-dynamic exercises and by the mix-method not maximum efforts. (FFT)
	M	N.A.	N.A.	1-2 x 30 m or expl. strength	1-2 x 30 m or expl. Strength	
Explosive-strength (starting-power, power) Explosive-strength End.	F	1-2 x 15 m + Sprints	1-2 x 30 m or Max. strength + Sprints	1-2 x 30 m OR Max. strength + Sprints	N.A.	The development of explosive-strength is done through resistance sprints and plyometrics. The upper body work is done through exercises with Medicine Balls of 1-2-3-4 Kg. and light weights. The explosive- strength endurance is done through intermittent work. (FFT)
	M	N.A.	1-2 x 15 m + Sprints	1-2 x 30 m or Max. strength + Sprints	1-2 x 30 m OR Max. strength + Sprints	
Flexibility	F	6 x 20 m	6 x 20 m	6 x 20 m	N.A.	The warm-up routine should consist of dynamic stretching. (USTA, LTA, ITF, FFT)The flexibility is developed at the end of workouts through static or passive stretching.
	M	N.A.	6 x 20 m	6 x 20 m	6 x 20 m	
Aerobic endurance (continuous training sub-maximal efforts)	F	1-3 x 30-40 m + 6 x 15 m C. Down	1-3 x 30-45 m + 6 x 15 m C. Down	1-3 x 30-50 m + 6 x 15 m C. Down	N.A.	Aerobic training on and off court should be emphasized. The athlete must be capable of maintaining sub-maximal effort for 30-40 minutes. A good cardio base is used for active rests. (ITF, LTA) Very important for the clay season preparation. (LTA)
	M	N.A.	1-3 x 30-40 m + 6 x 15 m C. Down	1-3 x 30-45 m + 6 x 15 m C. Down	1-3 x 30-50 m + 6 x 15 m C. Down	

Aerobic-Anaerobic end. (intermittent or interval efforts, maximal efforts)	F	0-2 x 30-40 m	0-2 x 30-45 m	0-2 x 30-50 m	N.A.	Aerobic activities on and off court should be emphasized. It is very important for the hard and indoor season preparation. The intermittent training allows you to integrate fitness including both strength and speed with maximal aerobic power to tennis.
	M	N.A.	0-2 x 30-40 m	0-2 x 30-45 m	0-2 x 30-50 m	
ABC: agility, balance, coordination	F	3 x 20 m	3 x 20 m	3 x 20 m	N.A.	During this stage the priority is to maintain the basic skills: running, jumping, throwing, catching. The complex specific tennis skills should be refined with tennis specific exercises. Coordination could be introduced in the warm-up. (LTA, FFT)
	M	N.A.	3 x 20 m	3 x 20 m	3 x 20 m	
Recovery	F	Everyday	<i>Everyday</i>	Everyday	N.A.	Important stage for the introduction of relaxation techniques like breathing exercises, muscle relaxation, meditation, music, visualisation and floatation. (Calder) Recovery routines such as: hydration, cool downs, massages, hydro-therapies, meditation and yoga should be maintained.
	M	N.A.	Everyday	<i>Everyday</i>	Everyday	

Warm-up

😊 Female 14-17 Male 15-18
USTA

Sources: FFT,

Purpose: To increase body temperature, to prime the cardiovascular system and get the heart and lungs ready to engage in vigorous activity, to improve joint range, to help to engrain proper movement patterns and to wake up the nervous system.


Set-up: On a tennis court or playing area for 20-25 minutes

- Using FFT techniques
- Using USTA techniques (Not on video)

Equipment: Tennis balls, soccer balls, medicine balls, rubber tubing

Speed and agility

Exercise 1: Ball drops.

 Female 14-17 Male 15-18

Sources: FFT, USTA

Purpose: To develop reaction speed, starting ability and agility.

Set-up: On the tennis court or playing area

- The coach stands in front of the player with one ball in each hand and arms extended to the side.
- The coach drops either one of the balls and you try to catch it before it bounces a second time.
- The coach should vary his positioning with reference to the player.
- Change the starting positions. Feed more than one ball.

Equipment: Use different balls to get different types of bounces.

Sets/reps/rest: 2 to 3 sets of 6 to 10 reps. rest: 90 sec. between sets.

Exercise 2: Colour balls.

Female 14-17 Male 15-18



Sources: FFT

Purpose: To develop the player's reaction and adaptation ability to a visual signal and to improve body movement, speed, and movement technique.

Set-up:

- On the tennis court or on playing area.
- Four speed activities, each with a distinctive colour, are arranged in the shape of a cross. Here, it is the responsibility of coaches to devise activities according to the physical and technical strengths and limitations of their players.
- Players react to the colour of the ball that the coach feeds and perform the corresponding circuit.

Equipment: Cones, slats, sticks, hurdles, ladder, use balls of different colours.

Sets/reps/rest: 2 to 3 sets of 4 to 5 reps. rest: 30 sec. for reps and 90 sec. for sets.

Exercise 3: Mini-hurdle races.



Female 14-17 Male 15-18

Sources:

FFT

Purpose: To improve running technique, to make players aware of the importance of pelvis positioning in order to clear the hurdles and to improve the action of the foot on the ground.

Set-up: On a tennis court or on an open and flat space

- Over a 10 to 25 meters distance, place small cones, then medium cones and finally low hurdles in succession.
- Leave a space of 0.6-1 meter between the cones or hurdles depending on the player's height and the desired level of difficulty.
-

Equipment: 8 small soft cones, 10-15 cm height + 8 cones 20-30 cm height + 4 to 6 hurdles 30-50 cm height.

Sets/reps/rest: 2 to 3 sets of 4 to 5 reps. rest: 30 sec. for reps and 90 sec. for sets.

Exercise 4: Ball throws.



Female 14-17 Male 15-18

Sources:

FFT

Purpose: To develop arm speed, to respect the basic principles of throwing technique.

Set-up: On a tennis court or playing area.

- Two players play points by throwing a ball, over-arm to each other.
- Players put the ball in play diagonally and are allowed to go the net.
- Players should throw the ball back without moving.

Equipment: 2-4 mini handball type balls (size 0), or smaller balls.

Sets/reps/rest: 2 to 3 sets of 3 to 5 points rest: 90-120 sec. between sets.

Exercise 5: Agility courses.



Female 14-17 Male 15-18

Sources:

FFT

Purpose: To improve running technique, ability to change direction and speed.


Set-up: On a tennis court or on an open and flat space

- Over a 15 to 20 meters distance, place small cones, hoops or low hurdles to make different course designs.
- Organize different situations working shuffle steps, running around cones, changing rhythm, etc.

Equipment: 6-8 small cones and 6-8 low hurdles.

Sets/reps/rest: 2 to 3 sets of 4 to 5 reps. rest: 30 sec. for reps and 1:30 for sets.

Exercise 6: Roll and Toss.

 **Female 14-17 Male 15-18**
FFT

Sources: FTS, USTA,

Purpose: To develop lateral movement, stride frequency, and agility.


Set-up: On a tennis court or playing area.

- Coach kneels 1m in front of the player. The player is on the baseline.
- The coach rolls a ball to either side of player. Player shuffles laterally with small steps, retrieves the ball, and tosses it back to the coach. Player then changes direction to retrieve the ball coming to the opposite side and tosses it back to the coach. Drill continues for 4 to 10 repetitions.

Equipment: Tennis balls.

Sets/reps/rest: 2 to 5 sets of 4 to 10 reps. rest: 30-90 sec. between sets.

Exercise 7: Stride-length, stride-frequency.

 **Female 14-17 Male 15-18**
USTA

Sources: FFT,

Purpose: To improve running technique in straight line, rhythm and to improve the action of the foot on the ground.

Set-up: On the tennis court or playing area.

- Slates 0.8-1.0m apart for frequency, slates 1.3-2.0m apart for length.
- The player runs with one step between slates.

Equipment: 8 to 12 slates

Sets/reps/rest: 1 to 2 sets of 3 to 5 reps rest: 60 sec. between reps and 180 sec. between sets.

Exercise 8: The exchange.

😊 Female 14-17 Male 15-18

Sources:

USTA

Purpose: To develop specific movement skills, starting ability and to improve the action of the foot on the ground.

Set-up:

- Place two cones on the center of the baseline, one on the service line.
- Start on the baseline, pick up one of the cones and prepare to sprint to the service line. On "go" sprint to the service line and exchange cones. Place the first cone down before picking up the second one. Repeat this action by sprinting back to the baseline and exchanging the cones there.

Equipment: 3 cones.

Sets/reps/rest: 1 to 2 sets of 3 to 5 reps rest: 60 sec. between reps and 180 sec. between sets.

Exercise 9: Shuffle split.

😊 Female 14-17 Male 15-18

Sources:

USTA

Purpose: To develop specific movement skills and to improve the action of the foot on the ground.

Set-up: On a tennis court

- Arrange three cones placed along the baseline as in the previous drill. The fourth cone is placed 120 cm in front of the service line.
- Weave through the cones starting from either the left or right side. After finishing the weave, sprint forward and perform a split step at the forward cone. Then back-pedal to the opposite side of the cones in the starting area and repeat the drill going both left and right when starting the weave portion of the drill. Repeat 2 to 3 times each side.

Equipment: 4 cones.

Sets/reps/rest: 1 to 2 sets of 4 to 6 reps rest: 60 sec. between reps and 180 sec. between sets.

Exercise 10: The sidewinder.

😊 Female 14-17 Male 15-18

Sources:

USTA

Purpose: To develop specific movement skills and to improve the action of the foot on the ground.

Set-up: On a tennis court

- Arrange all three cones on the baseline with the middle cone on the center of the baseline and the other cones 90-120cm on either side of the first cone.
- Start at one end of the cones and begin shuffling laterally, weaving through the cones to the right or left then moving in the opposite direction. Once having weaved all the way through the cones, take a cross-over step and sprint to the sideline. Touching the sideline, return by shuffling along the baseline and begin weaving in the opposite direction.

Equipment: 3 cones.

Sets/ reps/rest: 1 to 2 sets of 3 to 5 reps rest: 60 sec. between reps and 180 sec. between sets.

Exercise 11: Tennis specific on court exercises.

😊 Female 14-17 Male 15-18

Sources:

FFT

Purpose: To develop the ability to reach strategic zones and to maintain a high level of technical performance.

Set-up: On a tennis court

- All exercises that necessitate high-speed executions (upper body and lower body motions and/or movements)
- Ensure a high level of success in reaching strategic zones (targets) and the maintenance of technical quality.

Equipment: Tennis racquet and tennis balls and targets.

Sets/ reps/rest: 2 to 5 sets of 4 to 10 reps rest: 60-120 sec between sets.

Strength

Exercise 1: Step-ups.

😊 Female 14-17 Male 15-18
LTA

Sources: FFT, USTA,

Purpose: To develop the strength of the lower body and balance

Set-up:

- Stand with your hands on your hips or with a barbell behind your neck and stabilized with your hands or holding dumbbells at your sides.
- Using a stool or gym step of approximately 0.3m high. Step onto the object with one foot and bring your other leg up until your knee is at waist level. Hold your leg there for a count of three and return to the starting position. Alternate legs; for 6 to 10 reps.

Equipment: A stool or gym step 0.3m high, barbells, dumbbells or medicine balls.

Sets/reps/rest: 2 to 5 sets of 6 to 10 reps. rest: 60-180 sec. between sets depending the kind of strength you want to develop.

Exercise 2: Lunges.

😊 Female 14-17 Male 15-18
LTA

Sources: USTA,

Purpose: To develop the strength of the lower body, trunk and to develop dynamic balance.


Set-up:

- Stand with your feet 20cm apart, your hands on your hips or with a barbell behind your neck and stabilized with your hands or holding dumbbells at your sides.
- Take a large step forward and position your body over your front leg. Bend your front knee so it is in line with or slightly in front of the ankle joint and does not project beyond a line drawn up from the front of your shoe. Return to the starting position by pushing your weight backward and straightening your front leg. Keep your trunk erect during the exercise by looking straight ahead and keeping your chest out. You can do 6 to 10 reps with the same legs then switch, or alternate legs.

Equipment: Barbells, dumbbells, medicine balls.

Sets/reps/rest: 2 to 5 sets of 6 to 10 reps. rest: 60-180 sec. between sets depending on the kind of strength you want to develop.

Exercise 3: Crossover lunges.

 **Female 14-17 Male 15-18**

Sources:

USTA

Purpose: To develop the strength of the lower body, trunk and to develop dynamic balance.


Set-up:

- Instead of stepping forward, move your front leg in a 45-degree diagonal (moving the left leg in a crossing direction in front of your right leg and foot). You can do 6 to 10 reps with the same legs then switch, or alternate legs.

Equipment: Barbell, dumbbells, medicine balls.

Sets/reps/rest: 2 to 5 sets of 6 to 10 reps. rest: 60-180 sec. between sets depending on the kind of strength you want to develop.

Exercise 4: Lateral lunges.

 **Female 14-17 Male 15-18**

Sources:

USTA

Purpose: To develop the strength of the lower body, trunk and to develop dynamic balance.


Set-up:

- Step laterally to the right, keeping both feet pointed straight ahead, feet flat, left leg straight, sit the right hip back, squatting as low as possible, then exploding off the right leg into complete extension, transferring the maximal amount of force to the ground, back to the starting position. Repeat 6 to 10 times with the same leg then switch or alternate.

Equipment: Barbells, dumbbells.

Sets/reps/rest: 2 to 5 sets of 6 to 10 reps. rest: 60-180 sec. between sets depending on the kind of strength you want to develop.

Exercise 5: Overhead squat on your toes.

 **Female 14-17 Male 15-18**

Sources: FFT

Purpose: To develop the strength of the lower body, trunk and to develop dynamic balance.


Set-up:

- Stand on your toes with your feet shoulder-width apart, holding a barbell overhead with your arms completely extended. Bend your knees and hips to lower your body until the tops of your thighs are at 90 degrees, but keep your ankles extended. Stay in that position for one to two seconds before recovering to the starting position. Repeat 6 to 10 times.

Equipment: Barbells

Sets/reps/rest: 2 to 5 sets of 6 to 10 reps. rest: 60-180 sec. between sets depending on the kind of strength you want to develop.

Exercise 6: Wide grip bench press.

 **Female 14-17 Male 15-18**

Sources:

FFT

Purpose: To develop the strength of the upper body.

Set-up:

- Lying supine (face-up) on the bench with barbell in hands (wide grip) and arms fully extended above chest, palms facing your feet. Keep the stomach tight, with the feet on the ground.

- Slowly lower the barbell to your chest and press back with explosiveness to starting position.

Equipment: Barbells

Sets/reps/rest: 2 to 5 sets of 6 to 10 reps. rest: 60-180 sec. between sets depending on the kind of strength you want to develop.

Exercise 7: Dumbbells fly.

 **Female 14-17 Male 15-18**
LTA

Sources: FFT, USTA, DTB,

Purpose: To develop the strength of the upper body.


Set-up:

- Lying supine (face-up) on the bench with a dumbbell in each hand and arms extended above the chest. Keep the stomach tight, with the feet on the ground.
- Slowly lower the dumbbells until the arms are just a little lower than parallel to floor, and return with explosiveness to starting position.

Equipment: dumbbells

Sets/reps/rest: 2 to 5 sets of 6 to 10 reps. rest: 60-180 sec. between sets depending on the kind of strength you want to develop.

Exercise 8: Dumbbell one arm one leg row.

 **Female 14-17 Male 15-18**
USTA

Sources:

Purpose: To develop the strength of the upper body and core stability.

Set-up:

- Hold weight in right hand, bend from hip until body is parallel to the floor, right knee slightly bent, left arm stabilizing on a stable surface in front of the body. Extend left leg behind, squeezing the glutes, and keep the hips parallel with the floor. Maintain a level back (ie: a neutral spine: maintaining the natural lumbar curvature of the lower back) and good posture at all times by keeping the core tight. Weight should be hanging straight down from right shoulder.
- Squeeze shoulder blade back and bring dumbbell up to the waist. Keep elbow at 90 degrees and close to the body. Maintain good posture and level back throughout the exercise. Lower to starting position and repeat.

Equipment: Dumbbells

Sets/reps/rest: 2 to 5 sets of 6 to 10 reps. rest: 60- 180 sec. between sets depending on the kind of strength you want to develop.

Exercise 9: Pullovers.

😊 Female 14-17 Male 15-18

Sources: FFT, USTA,

DTB

Purpose: To develop the strength of the upper body.

Set-up:

- Lying on a bench with your knees bent at 90 degrees, using both arms, slowly lift a dumbbell from your chest over your head as far as you can and then slowly return it to starting position.
- It's important to keep your elbows facing forward as much as possible through the motion.

Equipment: Dumbbells

Sets/reps/rest: 2 to 5 sets of 6 to 10 reps. rest: 60- 180 sec. between sets depending on the kind of strength you want to develop.

Exercise 10: Bracing with posterior tilt.

😊 Female 14-17 Male 15-18

Sources: FFT,

DTB

Purpose: To develop core strength.

Set-up:

- Lying on the stomach on an exercise mat with the legs completely extended on your toes with the forearms propped with the elbows located under the shoulder joint. Hold the position.
- In addition, one leg can be raised.

Equipment: Mat

Sets/reps/rest: 2 to 3 sets of 60 to 120 sec. rest: 60-120 sec. between sets

Exercise 11: Bracing with lateral tilt.

😊 Female 14-17 Male 15-18

Sources: FFT,

DTB

Purpose: To develop core strength.

Set-up:

- Lying on the side, one leg is lying on top of the other. One arm is propped up, with the elbow located under the shoulder joint. From this position, slowly press into the mat on the forearm and at the same time, keep the body stiff. Hold the position then switch side.
- In addition, one leg can be raised.

Equipment: Mat

Sets/reps/rest: 2 to 3 sets of 45 to 90 sec. rest: 60-120 sec. between sets.

Exercise 12: Bracing with anterior tilt (superman).

😊 Female 14-17 Male 15-18

Sources: FFT,

DTB

Purpose: To develop core strength.

Set-up:

- Lying on your stomach on an exercise mat with arms fully extended overhead. Lift both arms and both legs simultaneously. Hold this position.

Equipment: Mat

Sets/reps/rest: 2 to 3 sets of 10 reps of 1 to 5 sec. rest: 60-120 sec. between sets.

Exercise 13: Physiotherapy core exercise 1.

😊 Female 14-17 Male 15-18

Sources: Canada,

LTA

Purpose: To isolate abdominal muscles

Set-up:

- Lying on your back on an exercise mat with arms fully extended at each side of your body. The knees are slightly bent.

- Contract the pelvic floor muscles, contract the TA (lower abdominal), remember to breath.
- Ensure that the initial contraction is isolated (no other muscles substituting), the contraction should begin slowly with control, low effort is all that is required, breathe normally.

Equipment: Mat

Sets/reps/rest: 2 to 3 sets of 30-90 sec. rest: 60-90 sec. between sets.

Exercise 14: Physiotherapy core exercise 2.

😊 Female 14-17 Male 15-18

Sources: Canada,

LTA

Purpose: To isolate abdominal muscles

Set-up:

- Lying on your back on an exercise mat with arms fully extended at each side of your body. The knees are slightly bent.
- Contract the pelvic floor muscles, contract the TA (lower abdominal), remember to breath.
- Ensure that the initial contraction is isolated (no other muscles substituting), the contraction should begin slowly with control, low effort is all that is required, breathe normally.
- Once you have mastered isolating the TA with a normal breathing pattern, progress to sliding out one leg at a time. Keep the TA on during the entire exercise and slowly straighten one leg while sliding it along the surface of the floor and then returning to the start position to a count of 10. Repeat with the other leg but be sure to keep TA on the entire time and continue to breathe. Repeat 5-10 times on each leg. The exercise can be made more challenging by lifting the foot off the floor as you slide it out and back.

Equipment: Mat

Sets/reps/rest: 1 to 2 sets of 5-10 x 10sec. each leg rest: 60-90 sec. between sets.

Exercise 15: Injury prevention 1 (external shoulder rotation).

😊 Female 14-17 Male 15-18

Sources:

USTA

Purpose: To develops external rotation strength

Set-up:

- Secure the rubber tubing, about waist high, to a doorknob. Stand sideways to the door with the racquet arm away from the door. Place a small, rolled towel under the racquet arm.
- Hold the rubber tubing in the racquet hand and start with the hand close to the abdomen. Rotate the hand and forearm away from the abdomen until the hand and forearm are straight out in front, pulling on the tubing for resistance. Return to the starting position and repeat. Keep your elbow at a 90-degree angle throughout the exercise. You can place your opposite hand under your elbow to support the arm if needed.

Equipment: Rubber tubing

Sets/reps/rest: 2 to 3 sets of 10 reps rest: 60-90 sec. between sets.

Exercise 16: Injury prevention 2 (external shoulder rotation with abduction).

😊 Female 14-17 Male 15-18

Sources: USTA

Purpose: To work the rotator cuff muscles in a specific position to the tennis serve.

Set-up:

- Secure the rubber tubing, about waist high, to a doorknob. Stand facing the door with the upper arm parallel to the ground and the forearm perpendicular to the upper arm at 90 degrees.
- While maintaining a right angle at the elbow, externally rotate the forearm until it points to the ceiling (90 degree abduction). Slowly lower it and return to the starting position.

Equipment: Rubber tubing or Thera-band

Sets/reps/rest: 2 to 3 sets of 10 reps rest: 60-90 sec. between sets.

Other possibilities: working other exercises with the Swiss Ball.

Explosive-strength

Exercise 1: Resistance running.

😊 Female 14-17 Male 15-18

Sources: FFT, USTA,

LTA

Purpose: To develop the power of the lower body, to improve stride frequency, to improve bracing ability.


Set-up: On the length of a tennis court or a playing area

- The runner has a belt around his waist, which is connected to a pulley system by a rope. His partner, located behind him, controls his running speed. He should attempt to sprint over a distance of 20 meters as quickly as possible in spite of the tension provided by the rope.

Equipment: Cones, belts, a climbing rope approximately 40 meters long, a pulley or specific elastic.

Sets/reps/rest: 2 to 3 sets of 4 to 5 reps. rest: 1 min. for reps and 3 min. for sets.

Exercise 2: Side-to-side box shuffle.

 Female 14-17 Male 15-18

Sources: FFT,

USTA

Purpose: To develop the ability to push-off the ground in a lateral direction, and to develop dynamic balance.


Set-up:

- The player stands next to a sturdy box approximately 0.5m wide and 0.3m high. He places the right foot on the box while the left foot remains on the ground. He pushes up and across the top of the box; landing with the left foot in the middle of the top of the box and the right foot on the ground. Continue to shuffle back and forth across the box for 6 to 10 repetitions.
- The player should use his arms to facilitate his lifting from the ground. Land softly and control the landing. Try to move back and forth in a smooth manner.

Equipment: a sturdy box 0.3m high and 0.5m wide

Sets/reps/rest: 2 to 5 sets of 6 to 10 reps. rest: 1 min. between sets.

Exercise 3: Split squat jump or lunges jump.

 Female 14-17 Male 15-18

Sources: USTA,

LTA

Purpose: To improve hip flexibility and hip flexor power.


Set-up: On a tennis court or playing area.

- The player assumes a split squat position with one foot forward and the other projected to the rear. Hands can be placed on the hips. In this position the front knee will be bent at 90 degrees and the rear knee will be almost touching the ground. The player will jump as high as he can and switch the position of the legs before landing. Focus on the landing and maintain the torso in an upright posture.

Equipment: none

Sets/reps/rest: 2 to 3 sets of 5-6 reps each leg, rest: 90-120 sec. between sets.

Exercise 4: Single-leg bounds.

 **Female 14-17 Male 15-18**

Sources: USTA,

LTA

Purpose: To improve hip extension and flexion strength.


Set-up: On a tennis court or playing area.

- Get a slow running start and start hopping on a single leg. Try to bring the thigh up into a parallel position.

Equipment: none

Sets/reps/rest: 2 to 3 sets of 5-6 reps each leg, rest: 90-120 sec. between sets.

Exercise 5: Sit on a bench.

 **Female 14-17 Male 15-18**

Sources: FFT

Purpose: To develop leg power


Set-up: Sit on a bench

- From this position you must jump as high as possible, landing with both feet on the bench and legs completely extended. Then you must regain the starting positions and start over for 5 to 8 repetitions.

Equipment: Bench

Sets/reps/rest: 2 to 5 sets of 5-6 reps rest: 60-90 sec. between sets.

Exercise 6: Medicine ball toss with shuffle steps.

 **Female 14-17 Male 15-18**

Sources: FST, USTA,

LTA

Purpose: To develop power of the upper body, agility and strengthen core.

Set-up: On a tennis court


- Stand across the net from a partner, with both of you at the singles sideline, about halfway back to the service line. Moving quickly across

the court with shuffle steps, pass a medicine ball of comfortable weight back and forth, keeping the ball at chest level. Go from sideline to sideline one to three times.

Equipment: Medicine balls from 1-4 kg.

Sets/ reps/rest: 2 to 5 sets of 1-3 reps rest: 20 sec. between reps 90 sec. between sets.

Exercise 7: Rotation into first step speed.

 **Female 14-17 Male 15-18**

Sources: LTA

Purpose: To develop power of the upper body, and the ability to move quickly.


Set-up: On a tennis court or playing area.

- Two hands throw from an open stance combined to shuffle steps.
- Two hands throw from an open stance combined to crossover steps.
- Wide positions.
- Wide positions with one hand medicine ball throw
- Low positions, high positions.
- Rotate and one crossover step. (One hand medicine ball)
- Overhead throws with big first step.

Equipment: Medicine balls from 1 to 4 kg. Handle medicine balls from 1 to 2kg.

Sets/ reps/rest: 2 to 5 sets of 4 to 10 reps. rest: 90-120 sec. between sets.

Exercise 8: Pick-up throws.

 **Female 14-17 Male 15-18**

Sources: Tennis

Canada

Purpose: To develop power of the upper body and dynamic balance.

Set-up:


- Stand 1.5 to 3 meters from the coach. Hold the medicine ball with both hands at your forehand or backhand sides depending on the strokes used.

- From a static lunge position, throw the ball to your coach using a forehand or a backhand technique. When you receive the ball from your coach, try to catch and release it back as quickly as possible.

Equipment: Medicine balls from 1 to 4 kg.

Sets/ reps/ rest: 2 to 5 sets of 6 to 10 reps. rest: 60-90 sec. between sets.

Exercise 9: Medicine balls dynamic core exercises.

 **Female 14-17 Male 15-18**

Sources: USTA, DTB,

LTA

Purpose: To develop power of the upper body and core strength


Set-up: On a mat, on a Swiss ball

- On a mat chest pass, sit-up toss, pullover toss, side tosses, double pump.
- On a Swiss ball overhead toss, side tosses and one hand throws.
- On a Swiss ball, one foot on the ground, same throws.
- On a mat combined throws.

Equipment: Medicine balls from 1 to 4 kg, mat, Swiss ball.

Sets/ reps/ rest: 2 to 5 sets of 6 to 10 reps. rest: 30- 90 sec. between sets.

Exercise 10: Adapted dynamic power lifting movements.

 **Female 14-17 Male 15-18**

Sources:

FFT

Purpose: To develop power, core strength, balance, coordination and shoulder stabilization.

Set-up: In a gym


- Perform adapted dynamic power lifting movements.

Equipment: Barbells

Sets/ reps/ rest: 2 to 5 sets of 6-8 reps rest: 90-120 sec. between sets.

Flexibility

Stretching method 1: ballistic and dynamic.

 **Female 14-17 Male 15-18**

Sources: LTA, USTA

See Warm-up

Stretching method 2: static.

😊 Female 14-17 Male 15-18

Sources: LTA, USTA

See Cool Down

Stretching method 3: passive. (Not on video)

😊 Female 14-17 Male 15-18

Sources: LTA,

USTA

Characteristics:

- Should be performed with the help of an assistant, who moves the muscle group in order to increase the ROM.
- Can be performed statically or using the contraction-relaxation technique.

Benefits:

- With the help of the assistant, more muscles or muscle groups can be stretched as compared to static stretching exercises.
- Good method to combine with contraction-relaxation techniques.

Practical application:

- Best performed on a treatment table.
- The routine normally starts with the lower extremities and continues with the spine, upper extremities and finishes with the neck.
- Ideally performed at the end of the day after all tennis and physical training work has been completed.

Equipment: Mats.

Aerobic endurance

Exercise 1: Basic endurance training. (Explained on video)

😊 Female 14-17 Male 15-18

Sources: DTB,


USTA

Purpose: To develop basic aerobic endurance.

Set-up: Running, cycling, inline-skating or swimming.

- Continuous work for 30 minutes, 1 to 2 times a week.
- Intensity is moderate to a little difficult.

Exercise 2: Intermittent training (1).

 **Female 14-17 Male 15-18**

Sources:


FFT, DTB

Purpose: To develop aerobic-anaerobic endurance in a more general way.

Set-up: Running, cycling or rowing.

- Intermittent efforts (10-20, 15-15, 20-20, 30-30) for 8 to 10 minutes,
1 to 5 sets with 3-5 minutes rest, 1 to 2 times a week.
- Intensity is difficult to very difficult.

Exercise 3: Intermittent training (2).

 **Female 14-17 Male 15-18**


Sources: FFT

Purpose: To develop aerobic-anaerobic endurance in a more oriented way, to develop strength-endurance, speed endurance, agility endurance, coordination endurance and mental endurance.

Set-up: On and off-court using a variety of exercises.

- Intermittent efforts (10-20, 15-15, 20-20, 30-30) for 8 to 10 minutes,
1 to 5 sets with 3-5 minutes rest, 1 to 2 times a week.
- Intensity is difficult to very difficult.

Exercise 4: Intermittent training (3).

 **Female 14-17 Male 15-18**

Sources: FFT,


USTA, DTB

Purpose: To develop in a specific way aerobic-anaerobic endurance, strength-endurance, speed endurance, agility endurance, coordination endurance and mental endurance.

Set-up: On a court with the coach feeding balls.

- Intermittent efforts (10-20, 15-15, 20-20, 30-30) for 8 to 10 minutes,
1 to 3 sets with 3-5 minutes rest, 1 to 2 times a week.
- Intensity is difficult to very difficult.

Exercise 5: Long match. (Explained on video)

 **Female 14-17 Male 15-18**

Sources: FFT

Purpose: To develop a game's specific endurance.


Set-up: On a tennis court

- Play a 4 to 5 sets match.

Cool down: light biking, light jogging or light swimming must be developed six times a week for 25 minutes including 10 minutes of static or passive stretching.

Coordination

Exercise 1: Combined passes.

 **Female 14-17 Male 15-18**

Sources: FFT

Purpose: To develop differentiation between upper and lower body, to develop rhythm and peripheral vision.


Set-up: On a tennis court or a playing area.

- 2 players facing each other 3 to 4 meters apart.
- One player holds a ball in his hand (handball type) the other puts a soccer ball on the ground just in front of him.
- At the coach's signal the players exchange balls for 30 sec., the handball in the air and the soccer ball on the ground; balls can't be stopped for the exercise duration.

Equipment: Handball, soccer ball, tennis ball, basketball.

Sets/reps/rest: 3-5 sets of 30 sec. rest: 30-60 sec. between sets.

Exercise 2: Toss and Kick.

 Female 14-17 Male 15-18

Sources: Tennis

Canada

Purpose: To develop lateral movement, agility, foot-eye coordination, dynamic balance, spatial and temporal orientation.

Set-up: On a tennis court or playing area.

- The coach is 2 meters in front of the player.
- The coach tosses a soccer ball to either side of you. Shuffle laterally with small steps, retrieve the ball, and kick it back to your coach. Then change direction to retrieve the ball coming to the opposite side and kick it back to your coach. Drill continues for 6 to 10 repetitions. With or without bounces. Then you can mix with cross over steps.
- Same exercise with a volleyball. (Change kicks for volleyball techniques).

Equipment: Soccer ball, volleyball.

Sets/reps/rest: 2 to 5 sets of 6 to 10 reps. rest: 30-60 sec. between sets.

Exercise 3: Volleyball drills.

 Female 14-17 Male 15-18

Sources:

FFT

Purpose: To develop agility, hand-eye coordination, dynamic balance, spatial and temporal orientation.

Set-up: On a tennis court or playing area.

- Two players 2-3 meters apart, playing volleyball.
- Use a variety of exercises.

Equipment: Volleyball.

Sets/reps/rest: 2 to 5 sets of 6 to 10 reps. rest: 30-60 sec. between sets.

Exercise 4: Soccer drills.

😊 Female 14-17 Male 15-18

Sources:

FFT

Purpose: To develop agility, foot-eye coordination, dynamic balance, spatial and temporal orientation.

Set-up: On a tennis court or playing area.

- Three players (One in the middle)
- Sprinting with reaction to the balls.

Equipment: 2 soccer balls

Sets/reps/rest: 2 to 5 sets of 6 to 10 reps rest: 30-60 sec. between sets.

Exercise 5: Handball drills.

😊 Female 14-17 Male 15-18

Sources:

FFT

Purpose: To develop agility, hand-eye coordination, dynamic balance, spatial and temporal orientation.

Set-up: On a tennis court or playing area.

- Three players (One in the middle)
- Sprinting, catching and throwing.

Equipment: 2 Handballs.

Sets/reps/rest: 2 to 5 sets of 6 to 10 reps rest: 30-60 sec. between sets.

Exercise 6: Tennis specific drills.

😊 Female 14-17 Male 15-18

Sources:

FFT

Purpose: To develop specific coordination.

Set-up: On a tennis court

- All exercises that necessitate high level of coordination.

Equipment: Tennis racquet and tennis balls.

Sets/reps/rest: 2 to 5 sets of 6 to 10 reps rest: 30-60 sec. between sets.

Exercise 7: Athletic throws.

😊 Female 14-17 Male 15-18

Sources:

Canada

Purpose: To develop general coordination, dynamic balance, differentiation, spatial and temporal orientation and strength from an off balance position.

Set-up: On a tennis court or playing area.

- The player jumps and throws a medicine ball using different techniques like forehand, backhand, overhead toss.
- The player jumps and throws with one foot on the ground.

- The player jumps and throws with one foot on the ground and the reception is with the same foot or the other.

Equipment: Medicine balls

Sets/ reps/rest: 2 to 5 sets of 6 to 10 reps. rest: 30-60 sec. between sets.

Sports and games

(Not on video)

Exercise 1: Soccer.



Female 14-17 Male 15-18

Sources: FFT, USTA, LTA, DTB

Purpose: To develop explosive-strength, agility, balance, coordination, aerobic and muscular endurance, to develop decision-making ability and to develop team spirit.

Set-up:

- 2 teams of 3 to 5 players
- 2 half times of 15-20 minutes with a break of 5-10 minutes (passive rest, hydrate).
- On a soccer field, a playing area or a tennis court (30-50 m x 20-30 m).
- Use cones for goals.
- Use soccer rules.

Equipment: Soccer balls, cones, t-shirts for team identifications.

Exercise 2: Soccer-Tennis.



Female 14-17 Male 15-18

Sources: FFT,

DTB

Purpose: To develop agility, balance, coordination, to develop decision-making ability, to develop team spirit and to develop aerobic endurance (one on one).

Set-up:

- 2 teams of 3 players
- 2 sets of 10-15 points
- On a tennis court, full court

- Use soccer rules (ball can not be touched by arms)
- You are allowed to let the ball touch the ground twice on your side before you return it to your opponents.

Equipment: soccer ball, volleyball, foam ball or tennis ball.

Other possibilities: Biking, swimming, etc.

Training to win

Chronological Age: Females 17+, Males 18 +

-This is the final stage of athletic preparation. All of the athlete's physical, technical, tactical and mental capacities are now fully established and the focus of training has shifted to the optimization of performance. Athletes are trained for major tournaments.

Recovery protocols and short rest periods or prophylactic breaks should be implemented every 10-15 weeks.

-A constant evaluation will determine the athlete's needs; what should receive priority and which areas will be maintained or consolidated? Maintenance can be achieved by training strength every seven to ten days and training the aerobic system two-three times per week can achieve this. (Balyi)

-The player's strengths and weaknesses, as well as the amount of time available before the next tournament, will determine the content of training. It should be noted that players (and coaches) are often very reluctant to take time out of competition to retrain some factors when maintenance has failed and detraining has taken place. Block loading can be used to retrain these weaknesses: not taking time out to fix problem areas will contribute to a plateau and to poor performance. This leads to a "catch 22" situation where players cannot improve performance because of lack of fitness or technical weakness, but there is no time to improve fitness or technical skills due to competition schedules. (Balyi)

-Training in this stage is characterized by high intensity and relatively high volume. (Mujika, 1998)

-Sports are recreational activities only.

- Training: 25% competition: 75%. (Balyi, Bompa)

- 10-15 sessions of 1-2h 30. Maximum length of session duration is 2h 30.

Year	13	14	15	Proposal
F	17-18years	18-19years	19-20years +	<p>Female 17-18 years 18-19 years 19-20 years + Male 18-19 years 19-20 years 20-21 years +</p> <p>Tennis 18-24 h 18-24 h 18-24 h Co-ordination 3 x 15 m 3 x 15 m 3 x 15 m Speed 2-3 x 45-60 m 2-3 x 45-60 m 2-3 x 45-60</p> <p>Strength 2-3 x 45-60 m 2-3 x 45-60 m 2-3 x 45-60 m</p>
M	18-19years	19-20years	20-21years +	<p>Flexibility 6 x 20-30 m 6 x 20-30 m 6 x 20-30 m + W.U. + W.U. + W.U. Endurance 3 x 30-50 m 3 x 30-50 m 3 x 30-50 m + 6 C. D. + 6 C. D. + 6 C. D.</p> <p>Total: 30-35 hours 30-35 hours 30-35 hours</p> <p>Coach's responsibility.</p>

TRAINING TO WIN FITNESS EXERCISE GUIDELINES

Performance factors	Age	17-18	18-19	19-20 +	20-21 +	Proposal
	Speed (efforts of 8 seconds or less)	F	2-3 x 45-60 m	2-3 x 45-60 m	2-3 x 45-60 m	SAME
M		N.A.	2-3 x 45-60 m	2-3 x 45-60 m	2-3 x 45-60 m	
Strength- endurance	F	3 x 20 m	3 x 20 m	3 x 20 m	SAME	<p>Strength-endurance gains are developed by using light to medium loads, core stability, injury prevention and by longer training and preparation matches.</p> <p>Isometric work can also be done at this stage.</p>
	M	N.A.	3 x 20 m	3 x 20 m	3 x 20 m	

						(FFT, LTA)
Maximum strength	F	3 x 25-40 m or Explosive- Strength	3 x 25-40 m or Explosive- Strength	3 x 25-40 m or Explosive- Strength	SAME	Maximum strength is developed and maintained through repeated efforts not maximum efforts and by isometric, stato-dynamic and Complex--methods. (FFT)
	M	N.A.	3 x 25-40 m or Explosive- Strength	3 x 25-40 m or Explosive- Strength	3 x 25-40 m or Explosive- Strength	
Explosive-strength (starting-power, power) Explosive-strength End.	F	3 x 25-40 m or Maximum- Strength	3 x 25-40 m or Maximum- Strength	3 x 25-40 m or Maximum- Strength	SAME	The explosive-strength is developed and maintained through resistance sprints and plyometrics. The upper body work is done through exercises with Medicine Balls of 1-2-3-4 Kg. and light weights.
	M	N.A.	3 x 25-40 m or Maximum- Strength	3 x 25-40 m or Maximum- Strength	3 x 25-40 m or Maximum- Strength	The explosive- strength endurance is done through intermittent work. (FFT)
Flexibility	F	6 x 20-30 m + Warm-Up	6 x 20-30 m + Warm-Up	6 x 20-30 m + Warm-Up	SAME	The flexibility is consolidated and maintained in warm-up with dynamic exercises. Flexibility/stretching should be a part of the athlete's regular routine. (USTA, LTA, IIF, FFT, DTB)
	M	N.A.	6 x 20-30 m + Warm-Up	6 x 20-30 m + Warm-Up	6 x 20-30 m + Warm-Up	
Aerobic endurance (continuous training sub-maximal efforts)	F	2-3 x 30-50 m + 6 C. Down	2-3 x 30-50 m + 6 C. Down	2-3 x 30-50 m + 6 C. Down	SAME	Aerobic training on and off court should be emphasized. The athlete must be capable of maintaining sub-maximal effort for 30-40 minutes. Aerobic endurance is used for active rests. (ITF, LTA)
	M	N.A.	2-3 x 30-50 m	2-3 x 30-50 m	2-3 x 30-50 m	

Aerobic-Anaerobic end. (intermittent or interval efforts, maximal efforts)			+	+	+	Very important in preparation for the clay season. (FFT)
	F		6 C. Down	6 C. Down	6 C. Down	
		1-2 x 30-50 m +	1-2 x 30-50 m +	1-2 x 30-50 m +	SAME	Intermittent training allows you to integrate fitness including both strength and speed (with maximal aerobic power) to tennis. (FFT)
	M	N.A.	6 C. Down	6 C. Down	6 C. Down	
ABC: agility, balance, coordination	F	3 x 15 m	3 x 15 m	3 x 15 m	SAME	During this stage the priority is to maintain the basic skills, (running, jumping, throwing, catching) and refine the complex specific tennis skills with specific exercises 4-6 times per week. The coordination could be introduced in the warm-up. (LTA, FFT)
	M	N.A.	3 x 15 m	3 x 15 m	3 x 15 m	
Recovery	F	Everyday	<i>Everyday</i>	Everyday	SAME	Refine and maintain all the Techniques taught.
	M	N.A.	Everyday	<i>Everyday</i>	Everyday	

Warm-up

 **Female 17+ years Male 18+ years**
USTA

Sources: FFT,

Purpose: To increase body temperature, to prime the cardiovascular system and get the heart and lungs ready to engage in vigorous activity, to improve joint range, to help to engrain proper movement patterns and to wake up the nervous system.

Set-up: On a tennis court or playing area for 20-25minutes

- Using FFT techniques
- Using USTA techniques

Equipment: Tennis balls, soccer balls, medicine balls, rubber tubing

Speed and agility

Exercise 1: Ball drops.

 **Female 17+ years Male 18+ years**

Sources: FFT, USTA

Purpose: To develop reaction speed, starting ability and agility.

Set-up: On the tennis court or playing area

- The coach stands in front of the player with one ball in each hand and arms extended to the side.
- The coach drops either one of the balls and you try to catch it before it bounces a second time.
- The coach should vary his positioning with reference to the player.
- Change the starting positions. Feed more than one ball.

Equipment: Use different balls to get different types of bounces.

Sets/reps/rest: 2 to 3 sets of 6 to 10 reps. rest: 90 sec. between sets.

Exercise 2: Colour balls.



Female 17+ years Male 18+ years

Sources: FFT

Purpose: To develop the player's reaction and adaptation ability to a visual signal and to improve body movement, speed, and movement technique.

Set-up:

- On the tennis court or on playing area.
- Four speed activities, each with a distinctive colour, are arranged in the shape of a cross. Here, it is the responsibility of coaches to devise activities according to the physical and technical strengths and limitations of their players.
- Players react to the colour of the ball that the coach feeds and perform the corresponding circuit.

Equipment: Cones, slats, sticks, hurdles, ladder, use balls of different colours.

Sets/ reps/rest: 2 to 3 sets of 4 to 5 reps. rest: 30 sec. for reps and 90 sec. for sets.

Exercise 3: Ball throws.



Female 17+ years Male 18+ years

Sources:

FFT

Purpose: To develop arm speed, to respect the basic principles of throwing technique.

Set-up: On a tennis court or playing area.

- Two players play points by throwing a ball, over-arm to each other.
- Players put the ball in play diagonally and are allowed to go the net.
- Players should throw the ball back without moving.

Equipment: 2-4 mini handball type balls (size 0), or smaller balls.

Sets/ reps/rest: 2 to 3 sets of 3 to 5 points rest: 90-120 sec. between sets.

Exercise 4: Agility courses.

Female 17+ years Male 18+ years

Sources:

FFT

Purpose: To improve running technique, ability to change direction and speed.

Set-up: On a tennis court or on an open and flat space

- Over a 15 to 20 meters distance, place small cones, hoops or low hurdles to make different course designs.
- Organize different situations working shuffle steps, running around cones, changing rhythm, etc.

Equipment: 6-8 small cones and 6-8 low hurdles.

Sets/reps/rest: 2 to 3 sets of 4 to 5 reps. rest: 30 sec. for reps and 90 sec. for sets.

Exercise 5: Roll and Toss.

Female 17+ years Male 18+ years

Sources: FTS,

USTA, FFT

Purpose: To develop lateral movement, stride frequency, and agility.

Set-up: On a tennis court or playing area.

- Coach kneels 1 meter in front of the player. The player is on the baseline.
- The coach rolls a ball to either side of player. Player shuffles laterally with small steps, retrieves the ball, and tosses it back to the coach. Player then changes direction to retrieve the ball coming to the opposite side and tosses it back to the coach. Drill continues for 4 to 10 repetitions.

Equipment: Tennis balls.

Sets/reps/rest: 2 to 5 sets of 4 to 10 reps. rest: 30-90sec. between sets.

Exercise 6: Oriented on court exercises.

Female 17+ years Male 18+ years

Sources:

FFT

Purpose: To develop speed, agility, balance and coordination

Set-up: On a tennis court

- All exercises that necessitate high-speed execution (upper body and lower body motions and/or movements)
- Ensure a high level of technique execution.
- Shuffle steps, crossovers, figure eight, split steps, full court, volley and smash etc.

Equipment: Tennis racquet, medicine balls, specific elastic.

Sets/reps/rest: 2 to 5 sets of 4 to 10 reps rest: 60-120 sec between sets.

Exercise 7: Specific on court exercises.

 **Female 17+ years Male 18+ years**

Sources:

FFT

Purpose: To develop the ability to reach strategic zones and to maintain a high level of technical performance.

Set-up: On a tennis court

- All exercises that necessitate high-speed execution (upper body and lower body motions and/or movements)
- Ensure a high level of success in reaching strategic zones (targets) and the maintenance of technical quality.

Equipment: Tennis racquet and tennis balls and targets.

Sets/reps/rest: 2 to 5 sets of 4 to 10 reps rest: 60-120 sec between sets.

Exercise 8: Integrated on court exercises.

 **Female 17+ years Male 18+ years**

Sources:

FFT

Purpose: To develop speed, agility, balance, coordination, to develop the ability to reach strategic zones and to maintain a high level of technical performance.

Set-up: On a tennis court, combination of oriented and specific exercises.


- All exercises that necessitate high-speed execution (upper body and lower body motions and/or movements)
- Ensure a high level of technique execution.

Equipment: Tennis racquet, tennis balls, targets, medicine balls, specific elastic.


Sets/reps/rest: 2 to 5 sets of 4 to 10 reps rest: 60-120 sec between sets.

Strength

Exercises 1-17: See training to compete.

 **Female 17+ years Male 18+ years** Sources: FFT, USTA, LTA, Canada

Exercises 18: Squat.

 **Female 17+ years Male 18+ years** Sources: USTA

Purpose: To develop mobility, stability, and strength in the hips and torso.


Set-up:

- Perfect posture, barbell placed across the trapezius and shoulders, hands grasping the bar just outside shoulder width, chest up, abdominals tight, feet just outside the hips, weight on the midfoot to heel. Eyes focused on a point at eye level.
- Head and torso in a straight line, chest up, inhale, pull abdominals in tight, initiate the movement with the hips back and down, keeping the knees behind the toes, weight on the midfoot to heel, lowering the hips down to top of the thigh at 90 degrees, then pressing back up by forcefully driving through your feet, legs, hips and chest.

Equipment: Barbells

Sets/reps/rest: 2 to 5 sets of 6 to 10 reps. rest: 60-180 sec. between sets depending on the kind of strength you want to develop.

Exercises 19: Leg curl.

 **Female 17+ years Male 18+ years** Sources: USTA

Purpose: To develop hamstring strength

Set-up:

- Lying on your stomach, your kneecaps should extend horizontally just over the edge of the bench, and the back of your ankles should rest against the padded bar.
- Begin the exercise by bending your knees as far as possible, trying to touch the pad to your buttocks, pause, then slowly return to the starting position.

Equipment: Leg curl machine

Sets/reps/rest: 2 to 3 sets of 6 to 10 reps. rest: 60-180 sec. between sets depending on the kind of strength you want to develop.

Exercises 20: Hyperextensions.

 **Female 17+ years Male 18+ years**

Sources:

USTA

Purpose: To develop the erector spinae strength.

Set-up:

- Lying on your stomach, on a table or specific machine, with the trunk and upper body hanging off the end. On a table have a partner hold down your lower body.
- From a lowered starting position, raise the upper body until it is in line with the rest of the body or until the back is tight. Lower the upper body to a 30-degree angle or just before the lower back curves.

Equipment: Table or specific machine

Sets/reps/rest: 2 to 3 sets of 20 reps rest: 60-120 sec. between sets.

Exercises 21: Reverse hyperextensions.

 **Female 17+ years Male 18+ years**

Sources:

USTA

Purpose: To develop the erector spinae strength.

Set-up:

- Lying on your stomach, on a table or specific machine, with the legs hanging off the end.
- While keeping the feet together, raise and lower the legs. Perform this slowly and repeat.

Equipment: Table or specific machine

Sets/reps/rest: 2 to 3 sets of 20 reps rest: 60-120 sec. between sets.

Exercise 22: Manual wrist supination/pronation.

 **Female 17+ years Male 18+ years**

Sources:

USTA

Purpose: To develop the strength in forearms and wrists.

Set-up:

- Hold pipe, palms facing each other, one above the other.

- Pronate/supinate wrists to unravel rope from pipe. Once rope is fully unraveled, rewind rope onto pipe until fully wrapped.

Equipment: pipe, barbell, dumbbells

Sets/reps/rest: 2 to 3 sets rest: 120 sec. between sets.

Exercise 23: Physiotherapy core exercise 3.

 **Female 17+ years Male 18+ years**

Sources: Canada,

LTA

Purpose: To isolate abdominal muscles

Set-up:

- Lying on your back on an exercise mat with arms fully extended at each side of your body. The knees are slightly bent.
- Contract the pelvic floor muscles, contract the TA (lower abdominal), remember to breathe.
- Ensure that the initial contraction is isolated (no other muscles substituting), the contraction should begin slowly with control, low effort is all that is required, breathe normally.
- Once you have mastered isolating the TA with a normal breathing pattern, now let one leg fall out to the side and back up to a count of 10. Repeat with the other leg but be sure to keep TA on the entire time and continue to breathe. Repeat 5-10 times on each leg.
- Don't let the opposite hip come up.

Equipment: Mat

Sets/reps/rest: 1 to 2 sets of 5-10 x 10sec. each leg rest: 60-90 sec. between sets.

Exercise 24: Physiotherapy core exercise 4.

 **Female 17+ years Male 18+ years**

Sources: Canada,

LTA

Purpose: To isolate abdominal muscles

Set-up:

- Lying on your back on an exercise mat with arms fully extended at each side of your body. The knees are slightly bent.
- Contract the pelvic floor muscles, contract the TA (lower abdominal), remember to breathe.
- Ensure that the initial contraction is isolated (no other muscles substituting), the contraction should begin slowly with control, low effort is all that is required, breathe normally.

- Once you have mastered isolating the TA with a normal breathing pattern, now march your feet up and down several inches for a count of 10 seconds Repeat 5-10 times on each leg.

Equipment: Mat

Sets/ reps/ rest: 1 to 2 sets of 5-10 x 10sec. each leg rest: 60-90 sec. between sets.

Exercise 25: Injury prevention 3-4-5-6.

 **Female 17+ years Male 18+ years**

Sources:

USTA

Purpose: To develop strength and prevent shoulder injuries.

Set-up:

- Pro-retraction
- Sawing
- Extension
- Pull-over

Equipment: Rubber tubing

Sets/ reps/ rest: 2 to 3 sets of 10 reps rest: 60-90 sec. between sets.

Exercise 26: Swiss ball hip extension knee flexion.

 **Female 17+ years Male 18+ years**

Sources: LTA

Purpose: To develop strength of the hamstrings as both a knee flexor and hip extensor.

Set-up:

- Lying on your back on the ground, place a ball under your heels. Place your arms in a T position to assist with balance.
- Movement is initiated by squeezing your glutes and raising your hips off the ground, once your ankles, knees, and hips are aligned, bring your heels toward you by flexing at the knee.
- Once your heels are at the end of their range, reverse the movement. After extending your knees, lower your hips.
- Try using a single-leg movement instead of double-leg movement.

Equipment: Swiss ball

Sets/ reps/ rest: 2 to 3 sets of 10 reps rest: 60-90 sec. between sets.

Other possibilities: working other exercises with the Swiss Ball.

Explosive-strength

Exercise 1: Resistance running.

 **Female 17+ years Male 18+ years**
LTA

Sources: FFT, USTA,

Purpose: To develop the power of the lower body, to improve stride frequency, to improve bracing ability.

Set-up: On the length of a tennis court or a playing area

- The runner has a belt around his waist, which is connected to a pulley system by a rope. His partner, located behind him, controls his running speed. He should attempt to sprint over a distance of 20 meters as quickly as possible in spite of the tension provided by the rope.

Equipment: Cones, belts, a climbing rope approximately 40 meters long, a pulley or specific elastic.

Sets/reps/rest: 2 to 3 sets of 4 to 5 reps. rest: 1min. for reps and 3min. for sets.

Exercise 2: Sand running.

 **Female 17+ years Male 18+ years**
USTA

Sources: FFT,

Purpose: To develop overall power, to improve dynamic balance, to promote maximum physical efforts and fighting spirit, to hone proprioceptive skills.

Set-up:

- Use a long jump pit or a natural sand site (i.e beach, beach volleyball court).
- The player sprints at maximal speed in the sand.
- The player can start with a roll forward or with a jump over a hurdle, landing with his feet together.

Equipment: Sand area, hurdles, cones and rubber tubing.

Sets/reps/rest: 2 to 3 sets of 4 to 5 reps. rest: 45sec for reps and 3min for sets.

Other possibilities:

Uphill speed runs (1-to-3 degree incline), partner tubing-resisted speed runs, stadium stairs, parachute running, contrast parachute running, falling starts, downhill speed runs (3-to-7 degree decline), uphill-to-flat contrast speed runs (5-degree incline).

Exercise 3: Side-to-side box shuffle.

 **Female 17+ years Male 18+ years**

Sources: FFT,

USTA

Purpose: To develop the ability to push-off the ground in a lateral direction, and to develop dynamic balance.

Set-up:

- The player stands next to a sturdy box approximately 0.5m wide and 0.3m high. He places the right foot on the box while the left foot remains on the ground. He pushes up and across the top of the box; landing with the left foot in the middle of the top of the box and the right foot on the ground. Continue to shuffle back and forth across the box for 6 to 10 repetitions.
- The player should use his arms to facilitate his lifting from the ground. Land softly and control the landing. Try to move back and forth in a smooth manner.

Equipment: A sturdy box 0.3m high and 0.5m wide

Sets/reps/rest: 2 to 5 sets of 6 to 10 reps. rest: 1 min. between sets.

Exercise 4: Sit on a bench.

 **Female 17+ years Male 18+ years**

Sources:

FFT

Purpose: To develop leg power

Set-up: Sit on a bench

- From this position you must jump as high as possible. The reception is done with feet on the bench and legs completely extended. Then you must regain the starting position and start over for 5 to 8 repetitions.

Equipment: Bench

Sets/reps/rest: 2 to 5 sets of 5-8 reps rest: 60-90 sec. between sets.

Exercise 5: Medicine ball toss with shuffle steps.

 **Female 17+ years Male 18+ years**

Sources: FST, USTA,

LTA

Purpose: To develop power of the upper body, agility and strengthen core.

Set-up: On a tennis court

- Stand across the net from a partner, with both of you at the singles sideline, about halfway back to the service line. Moving quickly across the

court with shuffle steps, pass a medicine ball of comfortable weight back and forth, keeping the ball at chest level. Go from sideline to sideline one to three times.

Equipment: Medicine balls from 1 to 4 kg.

Sets/ reps/ rest: 2 to 5 sets of 1 to 3 reps rest: 20 sec. between reps 90 sec. between sets.

Exercise 6: Rotation into first step speed.

 **Female 17+ years Male 18+ years**

Sources:

LTA

Purpose: To develop power of the upper body, and the ability to move quickly.

Set-up: On a tennis court or playing area.

- Two hands throw from an open stance combined to shuffle steps.
- Two hands throw from an open stance combined to crossover steps.
- Wide positions.
- Wide positions with one hand medicine ball throw
- Low positions, high positions.
- Rotate and one crossover step. (One hand medicine ball)
- Overhead throws with big first step.

Equipment: Medicine balls from 1 to 4 kg. Handle medicine balls from 1 to 2kg.

Sets/ reps/ rest: 2 to 5 sets of 4 to 10 reps. rest: 90-120 sec. between sets.

Exercise 7: Medicine balls dynamic core exercises.

 **Female 17+ years Male 18+ years**

Sources: USTA, DTB,

LTA

Purpose: To develop power of the upper body and core strength

Set-up: On a mat, on a Swiss ball

- On a mat chest pass, sit-up toss, pullover toss, side tosses, double pump.
- On a Swiss ball overhead toss, side tosses and one hand throws.
- On a Swiss ball, one foot on the ground, same throws.
- On a mat combined throws.

Equipment: Medicine balls from 1 to 4 kg, mat, Swiss ball.

Sets/ reps/ rest: 2 to 5 sets of 6 to 10 reps. rest: 30-90 sec. between sets.

Exercise 8: Adapted dynamic power lifting movements.

 **Female 17+ years Male 18+ years**

Sources:

FFT

Purpose: To develop power, core strength, balance, coordination and shoulder stabilization.

Set-up: In a gym

- Perform adapted dynamic power lifting movements.

Equipment: Barbells

Sets/ reps/rest: 2 to 5 sets of 6 reps rest: 90-120 sec. between sets.

Exercise 9: Specific on court drills.

 **Female 17+ years Male 18+ years**

Sources:

FFT

Purpose: To develop specific explosive-strength.

Set-up: On a court

- All exercises that necessitate high level of explosive-strength.

Equipment: Tennis racquet and tennis balls

Sets/ reps/rest: 2 to 5 sets of 6 reps rest: 90-120 sec. between sets.

Exercise 10: Integrated on court drills.

 **Female 17+ years Male 18+ years**

Sources:

FFT

Purpose: To develop general or oriented with specific explosive-strength.

Set-up: On a court

- All exercises that necessitate high level of explosive-strength.

Equipment: Variety of balls, cones etc., tennis racquet and tennis balls.

Sets/ reps/rest: 2 to 5 sets of 6 reps rest: 90-120 sec. between sets.

Flexibility

Stretching method 1: ballistic.

 **Female 17+ years Male 18+ years**

Sources: LTA, USTA

Stretching method 2: static.

😊 **Female 17+ years Male 18+ years**

Sources: LTA, USTA

Stretching method 3: passive.

😊 **Female 17+ years Male 18+ years**

Sources: LTA,

USTA

Stretching method 4: PNF.

😊 **Female 17+ years Male 18+ years**

Sources: LTA,

USTA

Characteristics:

- Contraction-relaxation is the technique most commonly used in tennis. It involves passive movement to the onset of muscle stretch, and a maximal voluntary contraction performed against resistance (5-10 seconds) before relaxation (10-15 seconds) and then passive movement further into range.
- Some exercises can be performed individually, however assistance and resistance are typically provided by a trainer.

Benefits:

- Proven to improve flexibility more than other stretching techniques.

Practical application:

- Almost all the passive stretching exercises can be performed with the PNF technique.
- Players can practice PNF daily or every time they stretch passively. PNF stretches are normally best conducted at the end of the day.

Equipment: Mats.

Stretching method 5: Postural.

😊 **Female 17+ years Male 18+ years**

Sources: LTA, FFT

Characteristics:

- Different postures are held for an extended period of time (five minutes) in order to stretch muscles groups and chains.

Benefits:

- Gains in flexibility are related to the time of the stretch.

Practical application:

- A complete session of postural stretching takes 15 to 20 minutes.
- This type of stretching should be performed one to two times per week.

Equipment: Mats.

Aerobic endurance

Exercise 1: Basic endurance training.

 **Female 17+ years Male 18+ years**
USTA

Sources: DTB,

Purpose: To develop basic aerobic endurance.

Set-up: Running, cycling, inline-skating or swimming.

- Continuous work for 30-40 minutes, 1 to 3 times a week. (Periodization)
- Intensity is moderate to a little difficult.

Exercise 2: Intermittent training (1).

 **Female 17+ years Male 18+ years**
DTB

Sources: FFT,

Purpose: To develop aerobic-anaerobic endurance in a more general way.

Set-up: Running, cycling or rowing.

- Intermittent efforts (10-20, 15-15, 20-20, 30-30) for 8 to 10 minutes, 1 to 5 sets with 3-5 minutes rest, 1 to 2 times a week. (Periodization)
- Intensity is difficult to very difficult.

Exercise 3: Intermittent training (2).

 **Female 17+ years Male 18+ years**
Sources: FFT

Purpose: To develop aerobic-anaerobic endurance in a more oriented way, to develop strength-endurance, speed endurance, agility endurance, coordination endurance and mental endurance.

Set-up: On and off-court using a variety of exercises.

- Intermittent efforts (10-20, 15-15, 20-20, 30-30) for 8 to 10 minutes, 1 to 5 sets with 3-5 minutes rest, 1 to 2 times a week. (Periodization)
Intensity is difficult to very difficult.

Exercise 4: Intermittent training (3).

 **Female 17+ years Male 18+ years**
DTB

Sources: FFT, USTA,

Purpose: To develop in a specific way aerobic-anaerobic endurance, strength-endurance, speed endurance, agility endurance, coordination endurance and mental endurance.

Set-up: On a court with the coach feeding balls.

- Intermittent efforts (10-20, 15-15, 20-20, 30-30) for 8 to 10 minutes, 1 to 3 sets with 3-5 minutes rest, 1 to 2 times a week. (Periodization)
- Intensity is difficult to very difficult.

Exercise 5: Intermittent training (4).

 **Female 17+ years Male 18+ years**
DTB

Sources: FFT, USTA,

Purpose: To develop in an integrated way aerobic-anaerobic endurance, strength-endurance, speed endurance, agility endurance, coordination endurance and mental endurance.

Set-up: On a court, variety of exercises combined with the coach feeding balls.

- Intermittent efforts (10-20, 15-15, 20-20, 30-30) for 8 to 10 minutes, 1 to 4 sets with 3-5 minutes rest, 1 to 2 times a week. (Periodization)
- Intensity is difficult to very difficult.

Exercise 6: Long match.

 **Female 17+ years Male 18+ years**
Sources: FFT

Purpose: To develop a game-specific endurance.

Set-up: On a tennis court

- Play a 4 to 6 sets match.

Cool down: light biking, light jogging or light swimming must be developed four to five times a week for 25 minutes including 10 minutes of static, passive or PNF stretching.

Coordination

Exercise 1: Combined passes.



Female 17+ years Male 18+ years

Sources: FFT

Purpose: To develop differentiation between upper and lower body, to develop rhythm and peripheral vision.

Set-up: On a tennis court or a playing area.

- 2 players facing each other 3 to 4 meters apart.
- One player holds a ball in his hand (handball type) the other puts a soccer ball on the ground just in front of him.
- At the coach's signal the players exchange balls for 30 sec., the handball in the air and the soccer ball on the ground; balls can't be stopped for the exercise duration.

Equipment: Handball, soccer ball, tennis ball, basketball.

Sets/reps/rest: 3-5 sets of 30 sec. rest: 30-60 sec. between sets.

Exercise 2: Toss and Kick.



Female 17+ years Male 18+ years

Sources: Tennis

Canada

Purpose: To develop lateral movement, agility, foot-eye coordination, dynamic balance, spatial and temporal orientation.

Set-up: On a tennis court or playing area.

- The coach is 2 meters in front of the player.
- The coach tosses a soccer ball to either side of you. Shuffle laterally with small steps, retrieve the ball, and kick it back to your coach. Then change direction to retrieve the ball coming to the opposite side and kick it back to


your coach. Drill continues for 6 to 10 repetitions. With or without bounces. Then you can mix with cross over steps.

- Same exercise with a volleyball. (Change kicks for volleyball techniques).

Equipment: Soccer ball, volleyball.

Sets/reps/rest: 2 to 5 sets of 6 to 10 reps. rest: 30-60 sec. between sets.

Exercise 3: Volleyball drills.

 **Female 15-17 Male 16-18**

Sources: FFT

Purpose: To develop agility, hand-eye coordination, dynamic balance, spatial and temporal orientation.


Set-up: On a tennis court or playing area.

- Use a variety of exercises.

Equipment: Volleyball.

Sets/reps/rest: 2 to 5 sets of 6 to 10 reps. rest: 30-60 sec. between sets.

Exercise 4: Soccer drills.

 **Female 15-17 Male 16-18**

Sources: FFT

Purpose: To develop agility, foot-eye coordination, dynamic balance, spatial and temporal orientation.


Set-up: On a tennis court or playing area.

- Use a variety of exercises.

Equipment: Soccer ball.

Sets/reps/rest: 2 to 5 sets of 6 to 10 reps rest: 30-60 sec. between sets.

Exercise 5: Handball drills.

 **Female 15-17 Male 16-18**

Sources: FFT

Purpose: To develop agility, hand-eye coordination, dynamic balance, spatial and temporal orientation.


Set-up: On a tennis court or playing area.

- Use a variety of exercises.

Equipment: Handball

Sets/reps/rest: 2 to 5 sets of 6 to 10 reps rest: 30-60 sec. between sets.

Exercise 6: Rugby drills.

 **Female 15-17 Male 16-18**

Sources: FFT

Purpose: To develop agility, hand-eye coordination, dynamic balance, spatial and temporal orientation.

Set-up: On a tennis court or playing area.

- Use a variety of exercises.

Equipment: Rugby ball

Sets/ reps/ rest: 2 to 5 sets of 6 to 10 reps rest: 30-60 sec. between sets.

Exercise 7: Specific on court drills.

 **Female 17+ years Male 18+ years**

Sources:

FFT

Purpose: To develop specific coordination.

Set-up: On a tennis court

- All exercises that necessitate high level of coordination.

Equipment: Tennis racquet and tennis balls.

Sets/ reps/ rest: 2 to 5 sets of 6 to 10 reps rest: 30-60 sec. between sets.

Exercise 8: Integrated on court drills.

 **Female 17+ years Male 18+ years**

Sources:

FFT

Purpose: To develop general or oriented with specific coordination.

Set-up: On a tennis court

- All exercises that necessitate high level of coordination.

Equipment: Variety of balls, cones etc., tennis racquet and tennis balls.

Sets/ reps/ rest: 2 to 5 sets of 6 to 10 reps rest: 30-60 sec. between sets.

Exercise 9: Athletic throws.

 **Female 17+ years Male 18+ years**

Sources:

FFT

Purpose: To develop general coordination, dynamic balance, differentiation, spatial and temporal orientation and strength from an off balance position.

Set-up: On a tennis court or playing area.

- The player jumps and throws a medicine ball using different techniques like forehand, backhand, overhead toss.
- The player jumps and throws with one foot on the ground.

- The player jumps and throws with one foot on the ground and the reception is with the same foot or the other.

Equipment: Medicine balls

Sets/reps/rest: 2 to 5 sets of 6 to 10 reps. rest: 30-60 sec. between sets.

Exercise 10: Specific clay drills.

 **Female 17+ years Male 18+ years**

Sources:

LTA

Purpose: To develop specific clay agility, balance and coordination.

Set-up: On a clay court

- Running and sliding drills keeping the ball on the strings.
- Running and sliding drills catching the ball with the racquet.

Equipment: Tennis balls, racquets.

Sets/reps/rest: 2 to 3 sets of 6 to 10 reps. rest: 20 sec. between reps and 90 sec. between sets.

Exercise 11: Specific grass drills.

 **Female 17+ years Male 18+ years**

Sources:

LTA

Purpose: To develop specific grass agility, balance and coordination.

Set-up: On a court or playing area

- From a split step position going to your right side, pushing the ball off the can or cone, recovering, doing the same to your left side, going for 6 to 10 reps.
- Throwing and catching a 1kg medicine ball to the wall in a very low position. Switching hand side and body position on every throw.

Equipment: Tennis balls, 2 cones or 2 tennis cans, 1kg medicine ball.

Sets/reps/rest: 2 to 3 sets of 6 to 10 reps. rest: 90 sec. between sets.

Exercise 12: Decision making drills.

 **Female 17+ years Male 18+ years**

Sources:

LTA

Purpose: To develop decision making ability

Set-up: On a court

- Stands behind the baseline with your racquet in your hand. Your coach throws in the air 3 tennis balls of different colours at the same time. Just before he throws the balls, he calls the sequence that you have to touch the 3 balls. You are not allowed to let the balls touch the ground more than one bounce.

Equipment: Different colours of tennis balls.

Sets/ reps/ rest: 3 to 5 sets of 6 to 10 reps. rest: 60 sec. between sets.

Sports and games

Exercise 1: Soccer.

 **Female 17+ years Male 18+ years**

Sources: FFT, USTA, LTA, DTB

Purpose: To develop explosive-strength, agility, balance, coordination, aerobic and muscular endurance, to develop decision-making ability and to develop team spirit.

Set-up:

- 2 teams of 3 to 5 players
- 2 half times of 15-20 minutes with a break of 5-10 minutes (passive rest, hydrate).
- On a soccer field, a playing area or a tennis court (30-50 m x 20-30 m).
- Use cones for goals.
- Use soccer rules.

Equipment: Soccer balls, cones, t-shirts for team identifications.

Exercise 2: Soccer-Tennis.

 **Female 17+ years Male 18+ years**

Sources: FFT,

DTB

Purpose: To develop agility, balance, coordination, to develop decision-making ability, to develop team spirit and to develop aerobic endurance (one on one).

Set-up:

- 2 teams of 3 players
- 2 sets of 10-15 points

- On a tennis court, full court
- Use soccer rules (ball can not be touched by arms)
- You are allowed to let the ball touch the ground twice on your side before you return it to your opponents.

Equipment: soccer ball, volleyball, foam ball or tennis ball.

Other possibilities: Biking, swimming, etc.