



## **SOTC 2022 Fitness Testing Protocols**

All SO Team Canada athletes will be required to complete a series of fitness tests over the course of their journey with the team so we can measure their progress from start to finish. Training coaches have all of the equipment needed to support the athletes with the tests and results will need to be recorded in Training Central once they are completed.

This instruction manual as well as demonstration videos have been uploaded to the Training Central resource site to assist with the testing. Testing can be done at home, at a gym or outside depending on what facilities you have access to in your area.

Timing: Athletes, with support from their training coaches, will have one (1) month to complete the tests and results must be entered into Training Central by the end of the month as reports will be pulled right after.

First Test Period – June 1-30, 2021

Second Test Period – November 15-December 15, 2021

*Note: Summary results will be included as an appendix to the final report and provided to Sport Canada*

### **Test Instructions – Measurements**

#### **Height**

- 1) Stick the measuring tape to the wall using adhesive tape
- 2) Have the athlete stand next to the tape without shoes on
- 3) Record the value in centimeters.

#### **Weight**

- 1) Have the athlete stand on a scale without shoes on
- 2) Record the value in kilograms.

## Test Instructions – Fitness Tests

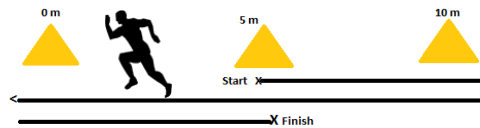
### Pro Agility

**Objective:** To complete the agility pattern as quickly as possible.

**Equipment needed:** Stopwatch, tape measure and cones

**Setup:** Use the measuring tape to measure 10m and place a cone at each end of the 10m. Place another cone in the middle of the two ends at the 5m mark.

**Test** (video available with instruction)



- 1) Have the athlete stand at the middle cone, say “Go” and press start on the stop watch.
- 2) The athlete runs to one end cone then to the other end cone and then back to the middle as fast as possible.
- 3) Stop the stop watch the second time the athlete passes the middle cone.
- 4) Record the best time of three trials.

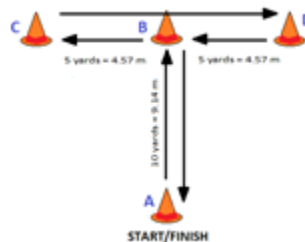
### T-Test

**Objective:** To complete the agility “T” pattern as quickly as possible

**Equipment needed:** Stopwatch, tape measure and cones

**Setup:** Set out four cones in a shape of a T using the distances of 10 yards for each direction (5 yards = 4.57m, 10 yards = 9.14 m)

**Test** (video available with instruction)



- 1) Starting at cone A, the athlete must sprint to cone B (touch the base of the cone with their right hand), then turn left and shuffle sideways to cone C, (touches its base with left hand), then shuffle sideways to the right to cone D (touch the base with right hand), then shuffle back to cone B (touch base with left hand), and run backwards to cone A.
- 2) The stopwatch is stopped as they pass cone A.
- 3) Record the best time of three successful trials.

### Stork Stand

**Objective:** The athlete is to hold this position for as long as possible

**Equipment needed:** Stopwatch

**Test** (video available with instruction)

- 1) Have the athlete stand comfortably on both feet with their hands on their hips.

- 2) The athlete lifts the right leg and places the sole of the right foot against the side of the left kneecap.
- 3) Start the stopwatch when the athlete raises the heel of the left foot to stand on their toes.
- 4) Stop the stopwatch when the athlete's left heel touches the ground or the right foot moves away from the left knee.
- 5) Record the time then let the athlete rest for 3 minutes.
- 6) Repeat for other leg.

### Alternate Hand Ball Toss

**Objective:** To measure hand eye coordination as the number of number of successful catches in 30 seconds

**Equipment needed:** Stopwatch, tennis ball, marker tape and measuring tape

**Setup:** Mark a line 2 metres from the wall

**Test** (video available with instruction)

- 1) The athlete stands behind the line facing the wall. The ball is thrown from one hand in an underarm action against the wall, and attempted to be caught with the opposite hand. The ball is then thrown back against the wall and caught with the initial hand.
- 2) The test continues for 30 seconds.
- 3) Record the number of successful catches.

### 2 Legged Bound

**Objective:** To measure the coordination of lower body by measuring the maximum distance of two consecutive double-leg hops.

**Equipment needed:** Marking tape and measuring tape

**Setup:** Mark a starting line on the ground

**Test** (video available with instruction)

- 1) The athlete starts with toes behind the starting line, feet shoulder width apart and in a crouched position.
- 2) When ready, the athlete leaps forward off both feet, performing two consecutive jumps with no pause.
- 3) Upon landing the second jump, the athlete should remain standing with feet stationary to ensure accurate measurement.
- 4) Record the distance the tip of the toes travelled in cm. Best of two trials is recorded.

### Vertical Jump

**Objective:** To measure the explosive power relative to body weight of the athlete

**Equipment needed:** Measuring tape and chalk or a marker to mark the spot on the wall

**Setup:** It is easier for measurement if the distance on the wall can be pre-marked.

**Test** (video available with instruction)

- 1) The athlete stands aside a wall and reaches up with the hand closest to the wall, while keeping the feet flat on the ground.
- 2) Record the highest point of the fingertips as "standing reach height" (SJH).
- 3) Place a coloured mark using chalk or marker on the athletes hands for easier use to measure the height.
- 4) The athlete then moves slightly away from the wall, and leaps vertically as high as possible using both arms and legs to assist in projecting the body upwards.
- 5) At the peak of the jump, the athlete marks the wall with their hand and this is recorded as

“peak jump height” (PJH).

- 6) The vertical jump height (VJH) is calculated by:  $VJH = PJH - SJH$
- 7) The best of three attempts should be recorded.

### Standing Long Jump

**Objective:** To measure the explosive power relative to body weight of the athlete

**Equipment needed:** Measuring tape and marker tape (or street chalk)

**Setup:** Mark out a starting line. It may be easier for measurement if the tape measure can be secured to the ground.

**Test** (video available with instruction)

- 1) The athlete stands with toes behind a line marked on the ground with feet slightly apart.
- 2) The athlete jumps as far as they can using a two foot take-off and landing. Swinging of the arms and bending of the knees is allowed to provide forward drive.
- 3) Measure the tip of the toes at landing.
- 4) The best of three attempts should be recorded.

### Plank Test

**Objective:** To hold an elevated position for as long as possible to test the strength and endurance of the core muscles.

**Equipment needed:** Stopwatch and soft surface

**Test** (video available with instruction)

- 1) The athlete must position themselves with the upper body supported off the ground by both elbows and forearms. The legs are straight and the hips are lifted off the floor so that the elbows and feet support the body creating a straight line from head to toe.
- 2) Begin the stopwatch when the athlete is in the correct position.
- 3) The test is over when the athlete is unable to hold their back straight and/or the hips are lowered.
- 4) Record the time.

### Push-ups

**Objective:** To perform as many push-ups as possible in one minute to measure upper body strength endurance.

**Equipment needed:** Stopwatch

**Test** (video available with instruction)

- 1) Starting position is with the arms straight, elbows locked, body straight, hands placed slightly wider than shoulder-width apart with fingers pointing forward and both feet on the floor.
- 2) From the starting position, on the command ‘go,’ start the timer and the athlete does as many push-ups as they can by bending the elbows and lowering the body until the shoulders drop below the level of the elbows, then returning to the starting position.
- 3) There can be no pausing to rest.
- 4) Record the number of completed push-ups in one minute.

### Sit-ups

**Objective:** To perform as many sit-ups as possible one minute to measure core abdominal strength endurance.

**Equipment needed:** Stopwatch

**Test** (video available with instruction)

- 1) Starting position is lying on the ground knees bent at 90 degrees, hands flat on floor.

- 2) From the starting position, on the command 'go,' start the timer and the athlete does as many sit-ups as they can by rising until their hands touch the tops of their knees.
- 3) There can be no pausing to rest.
- 4) Record the number of completed sit-ups in one minute.

#### Wall Sit

**Objective:** To hold a sitting position while using the wall for support for as long as possible while on one leg.

**Equipment needed:** Stopwatch

**Test** (video available with instruction)

- 1) Athlete stands with feet shoulder width apart, and back against a wall in a sitting position with knees and hips at a 90° angle.
- 2) Start timing when one foot is lifted off the ground.
- 3) Stop timing when the athlete cannot maintain the position and the foot is returned to the ground.
- 4) Record the time.
- 5) After 3 minutes, test the other leg.

#### 40m Sprint

**Objective:** To test speed and acceleration by a single sprint over 40m.

**Equipment needed:** Stopwatch, marking tape, street chalk or cones and tape measure

**Setup:** Mark out a starting line and finish line with marking tape or cones. Have timer at finish line.

**Test**

- 1) To minimize reaction time when calling "go", the athlete will start on the hand signal from the timer. Timer holds arm up high and as their arm sweeps down, the tester should start the stopwatch as the athlete begins to sprint.
- 2) Athlete must begin with foot on starting line and be still for at least 2 seconds.
- 3) Stop timing when the chest of the athlete passes the finish line
- 4) Record the best time of three trials.

#### 20m Dash

**Objective:** To test speed and acceleration by a single sprint over 20m.

**Equipment needed:** Stopwatch, marking tape, street chalk, or cones and tape measure

**Setup:** Mark out a starting line and finish line with marking tape or cones. Have timer at finish line.

**Test**

- 1) To minimize reaction time when calling "go", the athlete will start on the hand signal from the timer. Timer holds arm up high and as their arm sweeps down, the tester should start the stopwatch as the athlete begins to sprint.
- 2) Athlete must begin with foot on starting line and be still for at least 2 seconds.
- 3) Stop timing when the chest of the athlete passes the finish line
- 4) Record the best time of three trials.