

Recommended Fitness for International Competition (Youth)

1. Purpose of Document

To assist fencers to be optimally prepared for International Competitions

In this document we have formulated a series of sport-specific fitness and skill-based tests with minimum standards.

These scores have been generated from an analysis of results in the Talent Assessment Days attained thus far, taking into account a variety of factors such as age.

The tests identified are those that can be conducted without the use of sophisticated equipment and are therefore available for application at club level; the set-up for these tests is provided (see end of document). To give all fencers the best chance of achieving and ultimately surpassing these scores, some exercises have been suggested for each test (Table 2).

It is worth noting that these tests are simplified versions of some of the tests that talent athletes went through at the Talent Assessment Days. Tests at Talent Assessment days are more rigorous and detailed so emphasis to “get better” at these tests is not advised, but adding the exercise suggestions into your daily training will assist your fencing fitness level.

2. Fitness-test scores

Table 1. fitness-test scores are separated for males and females but are inclusive of all weapons.

Test	Male scores	Female minimum scores
Standing Broad Jump	Jump at least 1.9m	Jump at least 1.5m
7-5-7 Agility Test	Complete this within 9 sec	Complete this within 10.5 sec
Side plank	Should be able to hold correct posture for 90 seconds each side	

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3. Improvement Exercises

Table 2. Exercises to incorporate within your training that will improve your jump distance, change of direction speed and core stability.

Test	Exercises to make you better
Change of direction speed	<p>Other than practicing the test itself and devising others, which incorporate a variety of change of directions (i.e., using different shuttle lengths and sequences such as 2-4-2), try some of the following.</p> <p>On one leg, perform lateral jumps over a bench. Practice minimising the contact times at landing and then progress to increasing the height of the bench.</p> <p>Also, practice stepping off a bench and then upon landing, immediately jumping as high as you can while minimising ground contact time.</p> <p>Progress these to placing some benches in a row and jumping over them, ensuring to minimise ground contact time as you land between each.</p> <p>Progress again to increasing the distances between benches or the height of each bench</p>
Jump height and distance	<p>Other than practicing jumping as far forward as you can, you should practice:</p> <p>Jumping up to a box ensuring to continually increase the height. As a rough guide, you should be able to jump at least hip height with two legs and knee height on one leg. Start off with a low box and gradually increase the height.</p> <p>Practice performing single leg squats (also called pistol squats), ensuring you descend with the weight going through your heel and ascend with the weight distributed across the whole foot</p> <p>Incorporate splits squats, descending and ascending with the weight going through the front heel. Progress this to raising the back leg up on to a bench</p>
Side plank	<p>Performing a side plank is a good exercise to test not only where you are at but also to strengthen your core muscles.</p> <p>Normal plank position on your forearms and feet, keeping a good alignment throughout the whole back can also be added.</p> <p>More dynamic core exercises like the dead bug core exercise where fencer lies on his/her back with knees and elbows tucked in. Action: extend one arm and the opposite leg, pause and bring them back in to the start position. Alternate sides with each repetition. Weight could be added- make sure lower back remains in contact with the floor at all times.</p> <p>Supine windmills (more advanced) where fencer lies on the floor, legs together up in the air and arms open on the floor to increase the support base. Let your legs drop towards one side keeping your mid-back in contact with the floor. Pause and bring them up to the starting position before you let them drop towards the other side. Legs are controlled with core muscles. It is paramount that your mid-back remains in contact with the floor at all times.</p>

4. Set-up instructions for the standing broad jump, the 7-5-7 agility test and the plank

Assessment Goal

- A measure of *lower body power*.

Equipment

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- Tape measure
- Measuring stick (used to measure the heel relative to the tape)

Athlete Instruction

“This is a test of explosive horizontal power. Standing behind the start line, you should jump forward as far as possible. You then need to ‘stick’ the landing. That is, you should not fall forward and your feet should not ‘shuffle’. The coach will then measure the distance travelled, measuring from the back of your heel. You need to keep your hands on your hips throughout this test.”

Errors That Void the Test

- If the athlete falls forward or shuffles their feet at landing
- If the athlete jumps too far away (laterally) from the tape so that distance can not be accurately measured by the practitioner
- If the athlete takes their hands off their hips at any point during the test

7-5-7 Agility Test

Assessment Goal

A measure of *change of direction speed*

Equipment

- Stop watch
- Tape measure
- Electrical tape/cones

Equipment Set Up: Measure 2 and 7 metres from the start line and mark on the floor using the electrical tape and/or cones. Ensure that there is a clear ‘run off area’ behind the start line.

Athlete Instructions:

This is a test of fencing agility, measuring change of direction speed. When asked by the coach, you will set yourself up in an enguard position with your lead toe behind the start line; you may start when ready. You should travel using high-quality footwork up the piste as rapidly as possible until the toe of the lead foot passes the 7-meter line; you are not allowed to lunge to reach this position. From here, rapidly change direction, traveling backwards till your lead toe is behind the 2-meter line. Then rapidly change direction to travel forwards until your lead toe is beyond the 7-meter line again. From here, as quickly as possible, travel backwards through the start line where the test will finish.

Errors that void the test

- If the athlete breaks into running, or uses footwork deemed by the fencing coach to be unrepresentative of proper form
- If the athlete goes across the line at the start or finish line with any part of their body other than their torso
- If the athlete fails to pass either line with their toes or lunges in order to reach the line

Side Plank

Assessment Goal

A measure of *core stability*. There is good evidence to suggest that poor core muscles endurance is directly related to lower back injuries (McGill 2009, 2012; Evans 2007). Lower back pain is quite common in fencing due to the asymmetrical nature of the sport and prevention is key to avoid it.

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Equipment

- Stop watch & a mat.

Athlete Instructions:

- Fencer will be lying on his/her side with trainers on. Elbow bent and in good alignment with the shoulder joint. Feet in touch with top foot going in front of the other as image shows. Bring hips up towards the ceiling adopting a plank position. Good alignment should be observed between legs and spine as the dot line shows.



Errors that void the test

- Most common mistake is that due to the muscle fatigue the initial side plank shape is lost and fencer tries to compensate by:
 - Dropping hips so knees and lower legs can touch floor and therefore there is a bigger platform of support.
 - Leaning forward in order to increase the support upon the forearm
 - Using non-contact arm to help support the body.

If fencer starts compensating with any of the above-mentioned strategies, a warning sign should be given, so it can be corrected. However, the watch should be stopped and time recorded if a second warning sign is needed or fencer drops on the floor.