

**MUSCULAR STRENGTH - Health**

**TEST:** Hand Grip Dynamometer Test

**PROTOCOL:** Grip the dynamometer in one hand. Start with your hand up and bring down to side while pulling in handle. No swinging your hand.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Simple and easy to complete</li> </ul>	<ul style="list-style-type: none"> <li>• Only one size of dynamometer which may affect reading</li> <li>• Focuses solely on forearm strength.</li> </ul>

**CARDIOVASCULAR ENDURANCE - Health**

**TEST:** 12 min Cooper Run

**PROTOCOL:** Continuously run/swim for 12 minutes. Distance recorded.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Minimal equipment needed</li> <li>• Test can be self-administered</li> </ul>	<ul style="list-style-type: none"> <li>• Inaccuracy of heart rate measurements</li> <li>• Motivation dependent</li> </ul>

**TEST:** Multi stage Fitness Test

**PROTOCOL:** It requires the athlete to perform continuous 20m shuttle runs, whereby the individual must reach the opposite end of the 20m grid before the next beep sounds. The time between recorded beep decreases each minute.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• The beep test allows for mass participation</li> <li>• The beep test records maximal aerobic capacity</li> <li>• Inexpensive equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Inaccuracy of heart rate measurements</li> <li>• Motivation dependent</li> </ul>

**MUSCULAR ENDURANCE - Health**

**TEST:** 1 minute sit up test

**TEST:** 1 minute press up test

**PROTOCOL:** Complete as many full sit ups/press ups as possible in 1 minute

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Simple and easy to complete</li> <li>• Minimal equipment needed</li> </ul>	<ul style="list-style-type: none"> <li>• Difficult to assess whether each repetition is performed correctly. Difficult to accurately measure large groups</li> </ul>

**FLEXIBILITY - Health**

**TEST:** Sit and Reach Test

**PROTOCOL:** Sit with legs straight out in front and soles of feet against box/table. Reach forward without bending knees. No jerking movements. Measure from fingertips.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Quick and easy to perform</li> <li>• Data table readily available for comparison</li> </ul>	<ul style="list-style-type: none"> <li>• Can cause injury if not fully warmed up appropriately</li> <li>• Only measures flexibility of lower back and hamstrings</li> </ul>

**RELIABILITY/VALIDITY**

**Validity** relates to whether the test actually measures what it sets out to measure.

**Reliability** is a question of whether the test is accurate. It is important to ensure that the testing procedure is correctly maintained for ALL individuals.

**RESULTS CAN BE IMPROVED:**

- By using experienced testers & calibrating equipment
- Ensuring performers have the same level of motivation to complete each test
- Repeatedly test to avoid human error (x3)

**Health Related Components of Fitness**

**AGILITY - Skill**

**TEST:** Illinois Agility Test

**PROTOCOL:** Start lying down at the start line. Complete course as quick as possible (10m x 5m – 4 central cones)

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Quick and easy to perform</li> </ul>	<ul style="list-style-type: none"> <li>• Motivation dependent</li> <li>• Human error of timing</li> <li>• Need a non-slip surface and correct footwear</li> </ul>

**BALANCE - Skill**

**TEST:** Stork Stand Test

**PROTOCOL:** Stand on strongest toes of strongest leg, with the bottom of the weaker foot placed against the strongest legs knee.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Minimal equipment required</li> <li>• Simple and easy to perform</li> <li>• Can be performed anywhere</li> </ul>	<ul style="list-style-type: none"> <li>• Need an assistant to perform the test</li> </ul>

**CO-ORDINATION - Skill**

**TEST:** Alternate Hand Wall Toss Test.

**PROTOCOL:** Participant stands 2m away from a wall. They throw a ball underarm at the wall and catch it with the opposite hand. Repeat this for a set time period (30 seconds).

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Minimal equipment required</li> <li>• Simple and easy to perform</li> </ul>	<ul style="list-style-type: none"> <li>• Technique will affect scores</li> <li>• Only tests hand eye co-ordination</li> </ul>

**REACTION TIME - Skill**

**TEST:** Ruler drop test

**PROTOCOL:** The ruler is held between the participant's index finger and thumb at the zero mark. The assistant drops the ruler and the participant has to catch it as quickly as possible.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Minimal equipment required</li> <li>• Simple and easy to perform</li> <li>• Can be performed anywhere</li> </ul>	<ul style="list-style-type: none"> <li>• Need an assistant to complete test</li> <li>• Human error effecting reliability of results</li> </ul>

**POWER - Skill**

**TEST:** Sargent Jump Test

**PROTOCOL:** Stand next to wall with your arms stretched upwards and make a mark. Jump as high as possible and make a mark on the wall. Measure the distance from first mark to the second mark.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Quick and easy to perform</li> <li>• Easy to complete with large groups</li> </ul>	<ul style="list-style-type: none"> <li>• Technique plays a large role in successful completion</li> </ul>

**Test:** Standing Broad Jump

**PROTOCOL:** Stand on the start line, use your arms and legs to jump as far forward as possible. Measure from furthest point backwards.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Quick and easy to perform</li> <li>• Easy to complete with large groups</li> </ul>	<ul style="list-style-type: none"> <li>• Technique plays a large role in successful completion</li> </ul>

**SPEED - Skill**

**TEST:** 30M Sprint

**PROTOCOL:** Start from a stationary position. Complete 30m in quickest time possible.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Minimal equipment and space needed</li> </ul>	<ul style="list-style-type: none"> <li>• Weather and running surface can affect results</li> <li>• Human error with stopwatch</li> </ul>

# Skill Related Components of Fitness