

Body Mass Index (BMI)

Used to measure fat and determine if a person is overweight.

$$BMI = \frac{\text{weight (kg)}}{\text{height}^2 \text{ (m}^2\text{)}}$$

Muscular Endurance Tests-

Sit Up or Press Up Test

Complete as many sit ups or press ups (depending on selected muscle group) as possible in one minute.

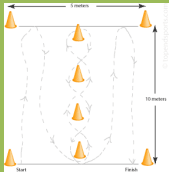
Advantages: Quick and easy- no equipment needed. Disadvantages: Correct technique important.

Agility Test- Illinois Agility Test

Start lying on floor face down. On 'go' get up and print around course in direction indicated.

Advantages: Cheap to do. Minimal equipment needed.

Disadvantages: Good surface needed to minimise slipping risk.



Strength Test- Grip Dynamometer Test

Hold dynamometer parallel to the side of body (arms by side) with display facing away from body. Squeeze as hard as possible for 5 seconds without moving arm.

Advantages: Minimal equipment needed.

Disadvantages: Only measures strength of arm muscles.



Bioelectrical Impedance Analysis (BIA)

Used to predict the percentage of body fat in a person.

Participants must not exercise for 12 hours prior to the test, or eat or drink within 4 hours of the test.

Participant data should be entered into machine before BIA

electrodes are connected to each wrist and foot, sending electrical impulses through the body.



Skinfold Testing

Skinfold calipers are used to measure fat at various locations on the body.

Males: Chest, Abdominal, Thigh.

Females: Stomach, Tricep, Thigh.



Pre-Test procedures

Informed consent must be given by all participants. A PAR-Q form may be used to provide medical information.

Reliability- Using the same methods for each test- are results consistent?

Validity- Accuracy of results- do they measure what you need?

Practicality- How easy it is to carry out tests- are expenses and equipment required?

Unit 1

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Learning Aim C: Fitness Testing

Why are fitness tests important?

- Provide information on current fitness levels
- Can be used to plan training programme
- Can be used to measure progress

Flexibility Test- Sit & Reach Test

Reach slowly forwards on sit and reach box, keeping legs flat on the floor.

Advantages: Easy and quick.

Disadvantages: Does not measure entire body flexibility.



Speed Test- 35 Metre Sprint Test

Sprint as fast as possible over 35m whilst a peer times using a stopwatch.

Advantages: Easy and quick.

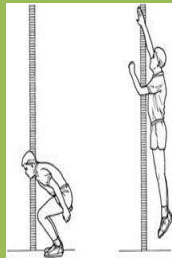
Disadvantages: Assistant and non-slip surface needed.

Anaerobic Power Test- Vertical Jump Test

Stand with dominant side against board and reach up to record standing reach height. One dip is allowed then the participant must jump and touch the board as high as they can.

Advantages: Quick to do. Minimal equipment needed.

Disadvantages: Only measures power in legs.



Aerobic Endurance Tests-

1. Step Up Test

Step up and down bench in time with metronome. Do this for 5 minutes before taking pulse reading.

Advantages: Easy and quick. Disadvantages: Requires correct reading of pulse in order to be reliable.

2. Multi-Stage Fitness Test

20m shuttle runs in time with bleeps that gradually increase pace.

Advantages: Large numbers can be tested at once. Cheap to do.

Disadvantages: Not suitable for all (eg- elderly and asthma sufferers). Requires high levels of motivation.

