

Unit 5 Application of Fitness Testing

Learning Aim A and B

Learning Aim C

Key terms

Validity

The accuracy of the results. This means whether the results obtained are a true reflection of what you are actually trying to measure.

Reliability

The consistency and repeatability of the results obtained. That is, the ability to carry out the same test method and expect the same results.

Protocol

A set method for carrying out a particular test. If you do not follow a standard protocol when conducting fitness tests, your test will not be reliable.

Ethics

Rules of conduct that should be respected at all times and which ensure that all people are treated fairly.

Methods of ensuring reliability

Pre-test

1. Calibration of equipment
2. Warm up
3. Fitness test technique practice

During the test

1. Skill level of the administrator
2. Adherence to test protocol
3. Constant conditions
4. Appropriate rest periods between tests

B1 Fitness tests to assess components of physical fitness

- Flexibility – sit and reach, shoulder flex test, calf muscle flexibility test, trunk rotation test.
- Strength – 1RM tests, grip dynamometer, seven stage abdominal strength test.
- Aerobic endurance – multi-stage fitness test, maximal oxygen consumption test (VO₂ max), 12-minute Cooper test, Harvard step test, Rockport walk test.
- Speed – sprint tests over 20 metres, 30 metres, 40 metres, 50 metres, 60 metres.
- Muscular endurance – one-minute press-up, one-minute sit-up, wall sit test.
- Body composition – skinfold calipers, bioelectrical impedance analysis, body mass index (BMI), girth measurements.

B2 Fitness tests to assess components of skill-related fitness

- Agility – Illinois agility run test, T-test, side-step test.
- Balance – stork stand test, beam walk.
- Co-ordination – wall-toss test.
- Power – vertical jump test, standing long jump test, Margaria-Kalamen power test, seated medicine ball throw, cricket ball throw test, Wingate test.
- Reaction time – ruler drop test.

Factors affecting the practicality of fitness tests

- Cost
- Time
- Equipment
- Facilities
- Available

Planning tests

- Subject requirements
- Selection of appropriate fitness tests
 - health checks
 - body measurements
 - flexibility test
 - skill-related tests
 - speed and power tests
 - muscular endurance tests
 - aerobic endurance test
- Test procedure
- Health and Safety
 - subject screening
 - reasons for terminating a test
 - informed consent
 - pre-test warm-up

A fitness profile for a selected sports performer

- Interpret results against normative data
- Suitability of fitness test selection

TABLE 8.2 Illinois Test Norms in Seconds for Males and Females

Category	Males	Females
Excellent	<15.2	<17.0
Good	15.2-16.1	17.0-17.9
Average	16.2-18.1	18.0-21.7
Fair	18.2-18.3	21.8-23.0
Poor	>18.3	>23.0

Feedback to a selected sports performer

- Method of feedback
- Test results
- Levels of fitness
- Strengths and areas for improvement

Administering tests

- Role of tester
- Responsibilities of tester
- Pre-test checks

