

Introduction to Exercise Physiology SHSS4072



Learning Objectives

- To gain more knowledge on the subject of questionnaires for the subject of health and fitness
- To understand why you might need to utilise questionnaires in the assessment of health
- To describe how to conduct an assessment on each other using an appropriate measure and procedures involved



Exercise and Training

“Those who think they have no time for bodily exercise will sooner or later have to find time for illness.”

Edward Stanley

Benefits of Exercise

- Reduce the risk of premature death
- Reduce the risk of developing and/or dying from heart disease
- Reduce high blood pressure or the risk of developing high blood pressure
- Reduce high cholesterol or the risk of developing high cholesterol
- Reduce the risk of developing colon cancer and breast cancer
- Reduce the risk of developing diabetes
- Reduce or maintain body weight or body fat
- Build and maintain healthy muscles, bones, and joints
- Reduce depression and anxiety
- Improve psychological well-being
- Enhanced work, recreation, and sport performance
- Etc, etc.

Contra-indications to exercise

Most people will benefit from some level of exercise but some people will need special attention or referral from a medical professional;

Cardiovascular disease

Hypertension

Injuries

Rheumatoid arthritis

Stroke

Osteoporosis

Epilepsy / fainting

Obesity

Diabetes

Mental health

Pregnancy

Cancer

Asthma / respiratory disease

Fitness Assessment

1. Why do we want to assess?
2. How do we assess?
3. What does the information mean?
4. How can the information used?

Why Conduct An Assessment

1. Establish current physical capacities
2. Monitor changes in capacity
3. Determine areas for training
4. Determine issues that may affect training
5. Motivation in training
6. Establish 'norm' or reference values

Role of Fitness Assessment

A Diagnostic Tool

The data is used to prescribe exercise but;

- You are not qualified to diagnose any medical condition.
- You can indicate a predisposition to a condition.
- You should refer a client to a health professional for diagnosis if you suspect any condition that may be aggravated by exercise.

How do we Assess?

- Pre-assessment information
 - Lifestyle?
 - Medical?
- Selection of assessments
 - Needs or activity analysis
- Protocols
 - Validity
 - Reliability
 - Reproducibility
 - Accuracy
 - Sensitivity
 - Techniques
- Other factors
 - Equipment
 - Environment
 - Health and Safety Issues

What does the information mean?

- Comparison to norms
 - Actual data
 - Mathematical manipulations
- Comparison to previous data
 - Actual data
 - Mathematical manipulations

How is the information used?

- Design training programmes
- Monitor and Adjust training programmes
- Limit training and exercise
- Referral to other exercise or medical professionals.
- Job and team selection
- Others?

Subjective V Objective

- Subjective – Data that you get from told from an individual or client
- Objective –Data that you gain from the individual as a result of tests you perform on them.

Questionnaires

- A comprehensive medical/health questionnaire should include:
 - Medical diagnosis
 - Previous physical exam findings
 - History of symptoms
 - Recent illness, hospitalisation, new medical diagnosis or surgical procedures
 - Orthopaedic problems
 - Medication use and drug allergies
 - Lifestyle habits
 - Exercise and work history
 - Family history of disease

Fitness Tests/ Assessments

- Blood Pressure
- FEV₁, FVC, PF
- Height & Weight
- Astrand Sub-maximal VO₂
- Durnin and Wormersley 4-site skinfold test
- Modified Sit and Reach
- Handgrip & Leg/Back Dynamometer
- Maximal Vertical Jump

Recommendations for Testing

- You have been tasked with produce a test to assess someone's level of fitness and/ or health status. What would you do as part of this process?
- Based on the suggested tests on previous slide, work together to draw up some recommendations to ensure the test is reliable, accurate, safe and valid.

Informed Consent

- By law, any subject, patient, or client who is exposed to possible physical, psychological, or social injury must give **informed consent** prior to participation in a program.
- Free choice is key in consent. Are they willing to undertake the program?
- Informed consent should be read and signed by the subject
- Informed Consent should be written so as to be easily understood by all subjects.
- All forms should include the following:
 - A general statement of the background of the program and objectives
 - An explanation of the procedures to be followed
 - A description of any and all risks attendant to the procedures
 - A description of the benefits that can reasonably be expected
 - An instruction that the subject, client, or patient is free to withdraw consent and to discontinue participation in the program at any time without prejudice to the person

HEALTH & SAFETY.....What can go wrong?



Questionnaire Examples

Look at some examples and try the questionnaires out on each other

Make some comments of the usefulness of such questionnaires in measurement of health and fitness in your groups

- Oswestry
- PAR Q
- VISA
- RPE
- Balance/ NLS
- Healthy Lifestyle