

Unit 6: Measurement and evaluation of human performance

'Progress depends on effort not ability'

Unit 6.2	Study design
Key learning intention (KLI)	To understand the principles of study design in sports science.
Success criteria	I can design an experiment for a skill/sport of my choice explaining my reasoning for choosing different types of testing i.e. double-blind, sub-maximal. I can demonstrate I have considered other ideas and why they have been rejected.
Resources	P143-146
Key words	Double-blind, placebo, control, sub-maximal, field/laboratory testing,

6.2.1. Outline the importance of the following components in fitness testing

Component	Description of why it's important
Specificity	
Accuracy	
Reliability	
validity	

6.2.2. Discuss the importance of study design in the context of sport and exercise science

component	Why it is important
Control groups	
Randomised groups	
Blind	
Double blind	This is where both the participants and the experimenters are unaware of who is in the experimental or control groups. This is to make sure that neither party influences the results.
Placebo	

PAR-Q and YOU

(A Questionnaire for People Aged 15 to 69)

Regular physical activity is fun and healthy, and increasingly more people are starting to become more active every day. Being more active is very safe for most people. However, some people should check with their doctor before they start becoming much more physically active.

If you are planning to become much more physically active than you are now, start by answering the seven questions in the box below. If you are between the ages of 15 to 69, the Par-Q will tell you if you should check with your doctor before you start. If you are over 69 years of age, and you are not used to being very active, check with your doctor.

Common sense is your best guide when you answer these questions. Please read the questions carefully and answer each one honestly. Check YES or NO.

YES	NO	
<input type="checkbox"/>	<input type="checkbox"/>	1. Has your doctor ever said that you have a heart condition and that you should only do physical activity recommended by a doctor?
<input type="checkbox"/>	<input type="checkbox"/>	2. Do you feel pain in your chest when you do physical activity?
<input type="checkbox"/>	<input type="checkbox"/>	3. In the past month, have you had chest pain when you are not doing physical activity?
<input type="checkbox"/>	<input type="checkbox"/>	4. Do you lose your balance because of dizziness or do you ever lose Consciousness?
<input type="checkbox"/>	<input type="checkbox"/>	5. Do you have a bone or joint problem (for example, back, neck, knee, or hip) that could be made worse by a change in your physical activity?
<input type="checkbox"/>	<input type="checkbox"/>	6. Is your doctor currently prescribing drugs (for example, water pills) for your blood pressure or heart condition?
<input type="checkbox"/>	<input type="checkbox"/>	7. Do you know <u>any other reason</u> why you should not do physical activity?

**if
you
answered**

YES to one or more questions

Talk with your doctor by phone or in person BEFORE you start becoming much more physically active or BEFORE you have a fitness appraisal. Tell your doctor about the PAR-Q and which questions you answered YES.

- You may be able to do any activity you want—as long as you start slowly and build up gradually. Or, you may need to restrict your activities to those which are safe for you. Talk with your doctor about the kinds of activities you wish to participate in and follow his/her advice.
- Find out which community programs are safe and helpful to you.

NO to all questions

If you answered NO honestly to all PAR-Q questions, you can be reasonably sure that you can:

- start becoming much more physically active – begin slowly and build up gradually. This is the safest and easiest way to go.
- take part in a fitness appraisal – this is an excellent way to determine your basic fitness so that you can plan the best way for you to live actively. It is also highly recommended that you have your blood pressure evaluated. If your reading is over 144/94, talk with your doctor before you start becoming much more physically active.

DELAY BECOMING MUCH MORE ACTIVE:

- If you are not feeling well because of a temporary illness such as a cold or a fever – wait until you feel better; **or**
- If you are or may be pregnant – talk to your doctor before you start becoming more active.

PLEASE NOTE: If your health changes so that you then answer YES to any of the above questions, tell your fitness or health professional. Ask whether you should change your physical activity plan.

Informed use of the PAR-Q: The Canadian Society for Exercise Physiology, Health Canada, and their agents assume no liability for persons who undertake physical activity, and if in doubt after completion of this questionnaire, consult your doctor prior to physical activity.

NOTE: If the PAR-Q is being given to a person before he or she participates in a physical activity program or a fitness appraisal, this section may be used for legal or administrative purposes.

"I have read, understood and completed this questionnaire. Any questions I had were answered to my full satisfaction."

NAME: _____

SIGNATURE: _____

DATE: _____

SIGNATURE OF PARENT: _____
or GUARDIAN (for participants under the age of majority)

WITNESS: _____

NOTE: This physical activity clearance is valid for a maximum of 12 months from the date it is completed and becomes invalid if your condition changes so that you would answer YES to any of the seven questions.

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6.2.3. Outline the importance of the PAR-Q (Physical activity readiness questionnaire)

The PAR-Q is important because.....

6.2.4. Evaluate types of testing

Click on the links of each type of test for an example from pponline.

Type of testing	Advantages	disadvantages
Field		
Laboratory		
Maximal		
Sub-maximal		

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You have finished unit 6.2. You should now be able to achieve the success criteria above.

How about some quick revision before you complete the end of unit assessment.

Click [here](#)