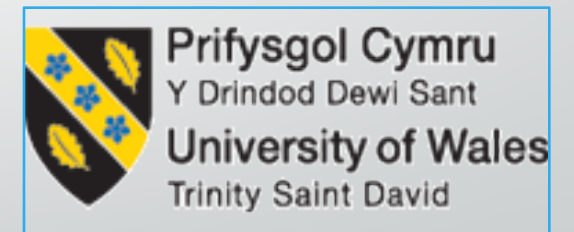


Introduction to Exercise Physiology SHSS4072



Learning Objectives

- To perform a strength test using the dynamometers provided
- To undertake video assessment of the test and describe the procedures that are involved in the test.
- To be able to record data on excel documents accurately and reliably

Practical Two

STRENGTH

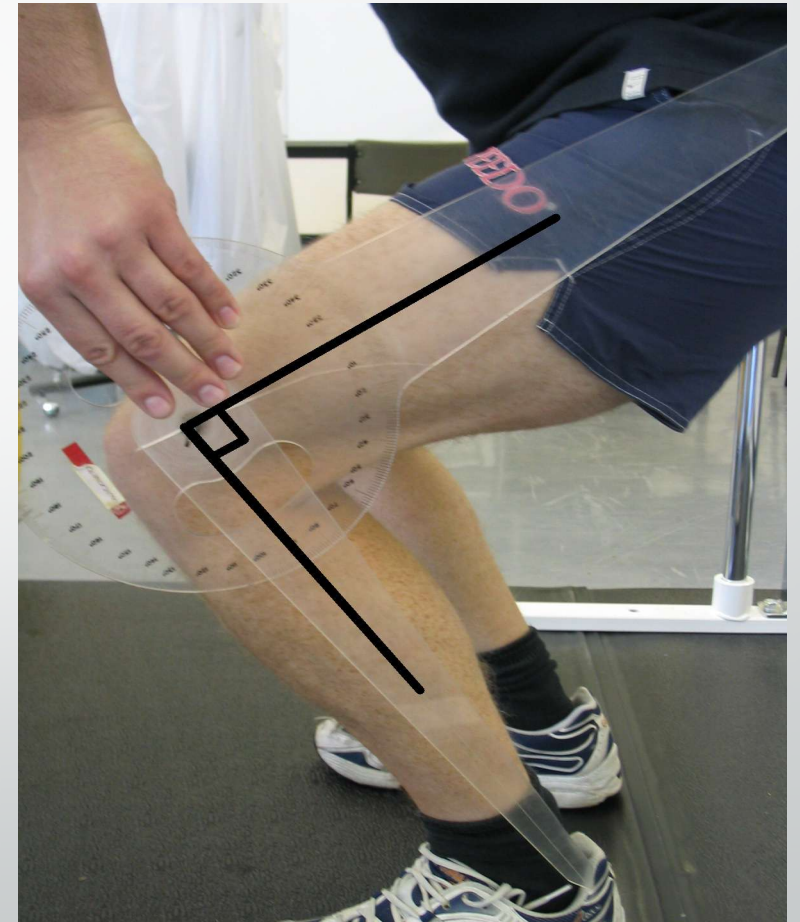


Assessing Power and Strength

- Muscular Strength
 - the amount of force that a muscle, or muscle group, can produce in a single maximal effort.
- Muscular Endurance
 - the ability of a muscle group to perform repeated contractions against a light load for an extended period of time.
 - Partial curl ups, push ups, calf raises, repetitions of a % of body weight

Goniometer

- Use the goniometer
 - Take the point of the Greater Trochanter (Bony protuberance on the side of the hip) and follow the line of the femur and line of the spine to produce an angle.
 - Place the goniometer at the mid point of the knee and measure the angle between the femur and tibia.
- Once measured compare with the video software.



Assessing Total Body Strength

- Strength Protocol
- The client is measured into a position of 90° Flexion of the Knee with the goniometer
- The instructor puts the chain at the appropriate level whereby the back is straight
- The client then takes hold of the Bar on the strength dynamometer
- The client takes a breath in, and as they exhale they squeeze through there heels maintaining a strong hold on the bar
- Record the maximum reading (kg)
- The client repeats the test 3 times with a 1 min rest period between repetitions and a maximum reading is recorded.
- Repeat with Dead Lift Position OR following Gym Based Exercise Program

Tasks and Documentation

- Add all values to an excel document
- Look at the values between strength and muscle circumference
- Compare the two and produce a graph on excel to display your data
- Is there any difference in the relationship when you look at age differences? Are these reliable?

Assessing Upper Body Strength

- Grip Strength Protocol
- The client takes hold of the grip strength dynamometer in their dominant hand and moves their shoulder in to full flexion with the elbow and wrist in extension.
- The client takes a breath in, and as they exhale they squeeze the dynamometer with maximum force whilst lower the arm from flexion to neutral (arm by the side).
- Record the maximum reading (kg)
- The client repeats the test 3 times with a 1 min rest period between repetitions and a maximum reading is recorded.
- Compare the maximum strength in the dominant and non-dominant hand.



Task to post on the Forum.....

Can grip strength be used as a representative of
total body strength?