

Laboratory Practical 11

Assessing Strength

Take values from the Kaiser leg press machine for mean power produced over 10 reps. Perform this on left, right and both legs.

To calculate the mean – total up values and divide by reps

	Mean Values for KAISER
LEFT	
RIGHT	
BILATERAL	

Assessing Speed

Using the SmartspeedTM light gates, place a pair of timing gates at 0m, 10m and 40m interval on an appropriate sprinting surface.

Ensure the timing gates are paired and calibrated.

Ensure the athlete lines up 10cm behind the first timing gate. In their own time, the athlete is to sprint through the timing gate as fast as possible.

Recording of the data will be displayed on the Smartspeed handheld computer. Assessing Power A number of direct and indirect power

tests exist in the literature. The Margaria-Kalamen Power Test (Margaria et al, 1966) is a stair climbing test used to measure peak power production. The test involves ascending nine steps, 3 at a time.

Assessing Power

Power is defined as the rate at which energy is used or created from other forms. Power can be calculated by the following formula

Power = force (strength) x velocity (speed)

As you can see from above, power is a function of the force that can be produced and the speed of that force application.

Take a value for countermovement jump on the force platform

Repeat for 3 repetitions and derive a mean value

Place your results in the table below:

	Mean Values for Force Plate
LEFT	
RIGHT	
BILATERAL	