

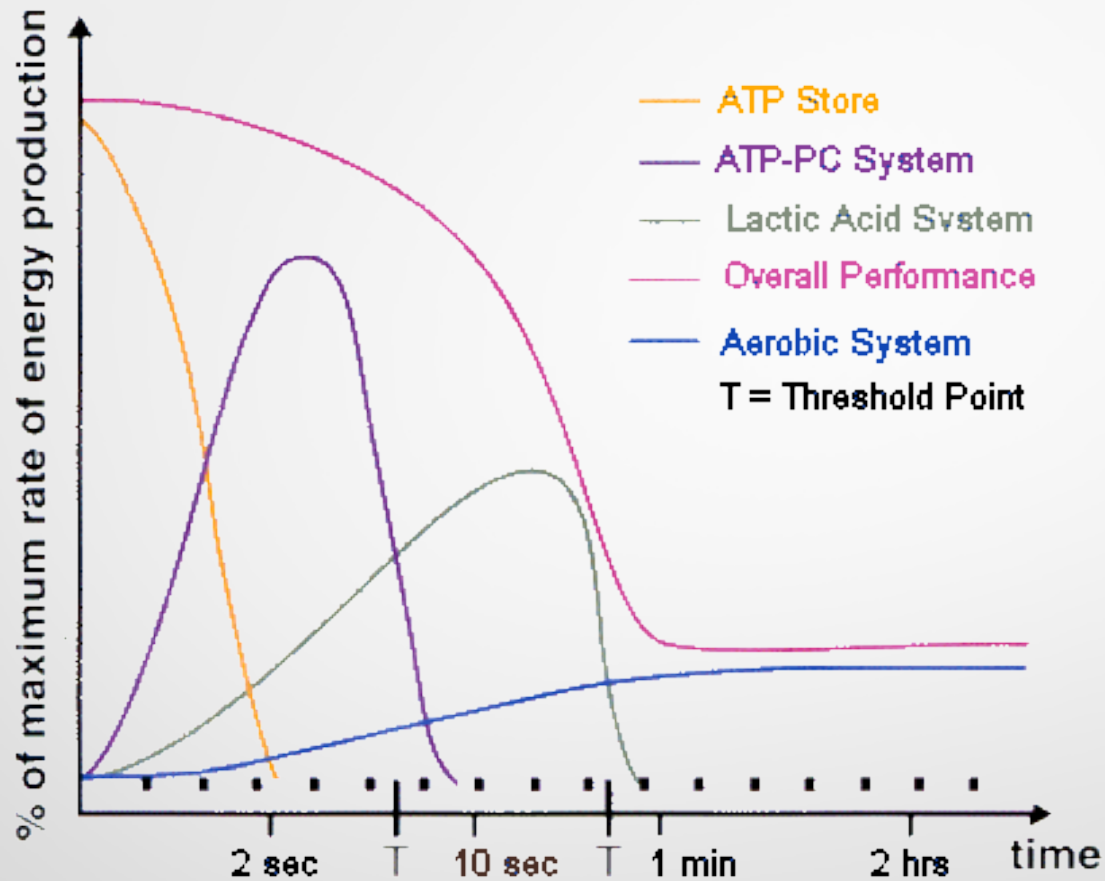
Introduction to Exercise Physiology

Practical 7 – Anaerobic endurance

Learning Objectives

- To understand the measurements involved in anaerobic capacity
- To observe and perform an anaerobic Wingate Monarch test
- To perform another anaerobic test (calf raise test) to understand the effect of lactate on the musculoskeletal system
- To be able to record data on excel documents accurately and understand the effects of the measurements you have taken.

Energy Requirements during exercise



Aerobic V Anaerobic



Wingate Test

- Originated in 
- Been utilised as a measure for anaerobic power for over 40 years
- The values produced include:
 - Peak power - highest power level averaged over a 5 sec period during the test
 - Mean power - average power during the entire 30 sec
 - Power drop off – the amount of power lost through the 30 sec period

Determining anaerobic power output

- Attach weights according to the calculations on screen ($0.075 \times \text{body weight}$)
- Two minute warmup
- Subject at the command "GO", begins pedalling as fast as possible.
- Resistance is automatically applied
- Subject continues to pedal "all out" for 30sec
- Print off results

Determining calf muscular endurance

- Three 45 second intervals
- You will have a 15 second rest in between sets
- You will be asked to go maximally for each set
- Document the number of repetitions per set

Task

Record all your results on the excel document under a separate
TAB

Produce a graph to show results plotting Power (w/kg) versus
Time at 5 sec intervals

Explain why the results showed what they showed?