

Learning Support
Graphs
for
Exercise Physiology

54 pages

18 graphs of the fundamentals of exercise physiology with full interpretations.

An Appendix contains full colour versions of the graphs.



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Introduction

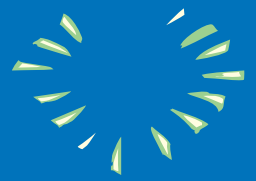
Graphs, such as those presented here, are the simplest way of summarising the complex interactions between body systems during varying levels of activity. They allow a clear visualisation of rates of change in the activity of these systems with differing demands.

They can thus serve as excellent focus points for lectures. A consideration of the trends shown in the graphs leads naturally to a discussion of the actual physiological events underlying these trends.

The metabolic demands of the tissues, predominately the skeletal muscles in exercise physiology, stimulate corresponding changes in activity of the body systems that supply those tissues. It is important to realise and adopt this 'demand led' approach to the subject, which is also the basis of the performance based approach. By asking questions about the demands of performance, there is a natural progression to explaining the functioning of the various systems.

Exercise physiology is definitely a study of demand and supply.

Estimated Blood flow in cm^3 per minute to different organ/systems in a trained male at rest and during maximum effort.



Organ System	At Rest	%	Max Effort*	%
Skeletal muscle	1000	20	26000	88.00
Coronary vessels	250	5	1200	4.00
Skin	500	10	750	2.50
Kidneys	1000	20	300	1.00
Liver & gut	1250	25	375	1.25
Brain	750	15	750	2.50
Whole body	5000	100	30000	100.00

*Cycle Ergonometer

