

iWorx Exercise Physiology Teaching Kits

MAKING PHYSIOLOGY HAPPEN

iWorx offers complete solutions for the teaching of exercise physiology as well as advanced, high performance systems for research. The numerous hands-on experiments provide student involvement that enhances the overall learning experience.



Exercise Physiology Kits

iWorx Exercise Physiology Kits include:

- TA Control Module with iWire-compatible Biopotential (ECG, EMG) Amplifier, Built-in Stimulator
- LabScribe™ Software
- Metabolic Calculations and Reporting
- Reusable 1000L and 300L Flow Head
- Wireless Scosche Ant+ Heart Rate Monitor
- Non-Invasive Blood Pressure Sensor
- Temperature Sensor
- Grip Force Sensor
- Event Marker
- Pulse Probe
- Heart Sounds Sensor
- Striated Muscle Transducer
- Face Mask, Head Gear Assembly and Non-rebreathing Valve
- Mixing Chamber, Electrodes and Tubing
- Courseware

Metabolic Measurements

The kits are suitable for recording and measuring:

- Basal Metabolic Rate (BMR)
- Resting Metabolic Rate (RMR)
- Respiratory Exchange Ratio (RER)
- Sedentary to light activity VO_2 and VCO_2
- VO_2 max
- ECG/EMG
- Blood Pressure
- Spirometry
- Reflexes and more...



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iWorx Physiology Courseware

iWorx courseware includes over 50 experiments and 175 exercises in metabolic, cardiovascular and neuromuscular physiology, as well as all of the components and professionally developed courseware you need to conduct the labs. Use pre-configured teaching kits or iWorx unique LabsByDesign approach to simply choose only the equipment you need for the labs you want to teach.

Exercise Physiology/Kinesiology

- Resting Metabolic Rate (RMR / Respiratory Exchange Ratio)
- Regulation of Body Temperature and the Respiratory Exchange Ratio (RER)
- Metabolic and Thermal Response to Exercise
- Recovery from Exercise
- Exercise, Blood Pressure, and Oxygen Saturation Levels
- Resting, Active, and Exercising Metabolic Rates

Human Circulation

- Blood Pressure, Peripheral Circulation, and Body Position
- Blood Pressure, Peripheral Circulation, and Imposed conditions
- Pulse Wave Velocity

Human Heart

- The Electrocardiogram (ECG) and the Pulse
- Heart Sounds and the Electrocardiogram (ECG)
- The Effects of Exercise on the Electrocardiogram (ECG) and the Pulse
- The Six-Lead Electrocardiogram
- The Diving Reflex
- Heart Rate Variability (HRV)

Human Muscle

- Grip Strength and Electromyogram (EMG) Activity
- Electromyogram Activity in Antagonistic Muscles
- EMG and Arm Wrestling
- Oculomotor Muscle Activity
- Response, Work, Summation and Tetanus in Human Muscle
- Kinesiology Targeted Muscles
- Human Muscle Twitch

Human Spirometry

- Breathing Parameters at Rest and after Exercise
- Breathing and Gravity
- Factors that Affect Breathing Patterns
- Lung Volumes and Heart Rate

Human Nerve

- Auditory and Visual Reflexes
- Stretch Receptors and Reflexes with Reflex Hammer
- Stretch Receptors and Reflexes with Plethysmograph
- Human to Human Interface

Small Animal Physiology

- Small Animal Respiratory Exchange Ratio



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