Principles of Exercise and Sports Science Exam Revision

Musculoskeletal Anatomy

Infancy & Childhood
Puberty & Early Childhood
Middle Ages to Elderly
Planes of Reference
Bone Classification
Joint Classification
Osteogenic exercises
Osteoblasts and Osteoclasts
Synovial Joint Characteristics
Properties of Muscle Tissue
Joint Movements

Exercise Physiology

VO2max
PWC170
Energy Systems
Carbohydrate consumption
Micronutrients
Muscle Fibres
Stroke Volume
Anaerobic Energy Production
Oxygen Debt and Oxygen Deficit
Enzymes in the energy system

Biomechanics

Vertical and Transverse displacement during walking
Muscle Hypertrophy
Velocity
Scalar vs. Vector
Newton's Law
Law of Inertia

Law of Acceleration

Law of Action-Reaction

Children and Adult Gait Cycles

Torque

Free Body Diagram

Finding the resultant force

Impulse

Gravity

Motor Control

Muscle Spindles

Extrafusal vs Intrafusal Fibres

Extrafusal

Intrafusal Fibres

Motor Units

Structure of a Neuron

Vibration on the body

Golgi tendon organs

Motor Equivalence

Afferent vs. Efferent

Motor Cortex

Cerebral Cortex

Synapse

Action Potentials

Choice Reaction Time

Information Processing Model

Movement Organisation and Planning

Proximodistal and Cephalocaudal

Ageing and the motor Neurons

Psychology

Arousal

Goal Setting and Adherence

Autogenic training

Drive Theory

Exercise Psychology

Techniques to increase and decrease arousal

Exercise, mood and mental health

Personality Framework

Success and Competitiveness

Success

Competitiveness

Sport and Personality

Nutrition

Water vs. Sports Drinks

Carbohydrates