

**PEARSON
BTEC
LEVEL 3
NATIONAL
SPORT -
UNITS 1
AND 2
REVISION**

COMPREHENSIVE
REVIEW FOR KEY
SPORTS UNITS



INTRODUCTION AND COURSE OVERVIEW

Units 1 and 2 Revision Overview

Unit 1 Focus

Unit 1 covers anatomy and physiology, emphasizing body systems and their responses to exercise.

Unit 2 Focus

Unit 2 develops skills in fitness assessment, training methods, and programming for health and sport.

Revision Strategy

The presentation supports exam preparation through key content review, technical terms, and practice questions.

Exam Technique Emphasis

Understanding command words like describe, explain, and evaluate improves exam responses and confidence.



UNIT 1: ANATOMY AND PHYSIOLOGY

Overview of Body Systems in Sport

Skeletal System Function

The skeletal system provides body structure, protects organs, and enables movement through joints.

Muscular System Role

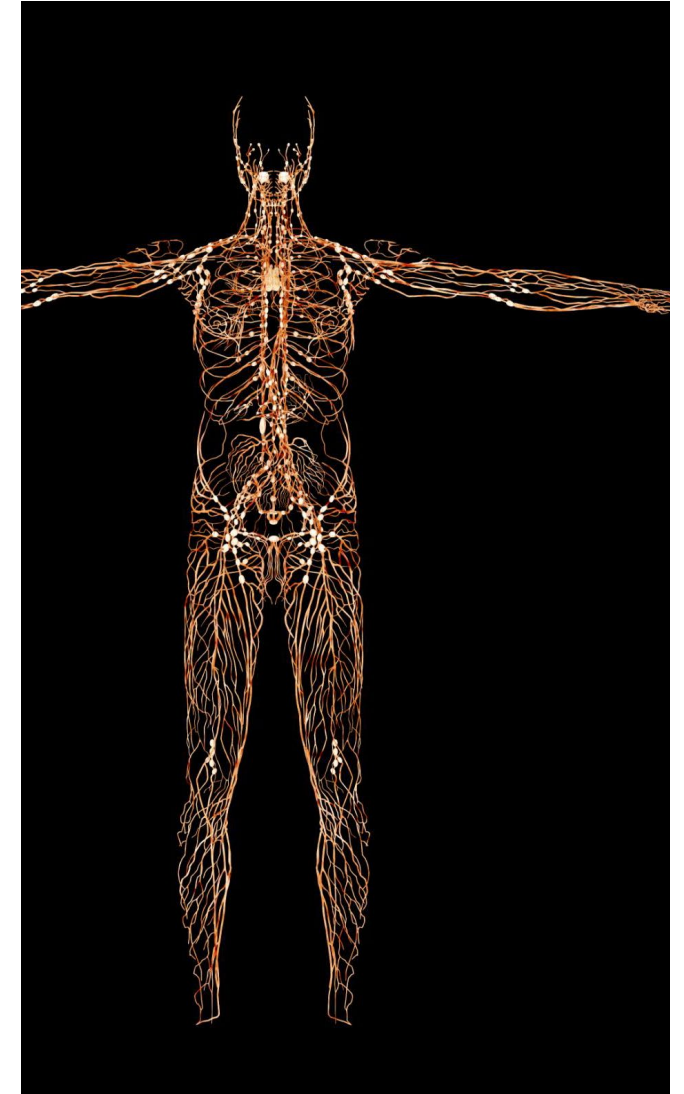
Muscles produce movement by contracting and work in antagonistic pairs for controlled motion.

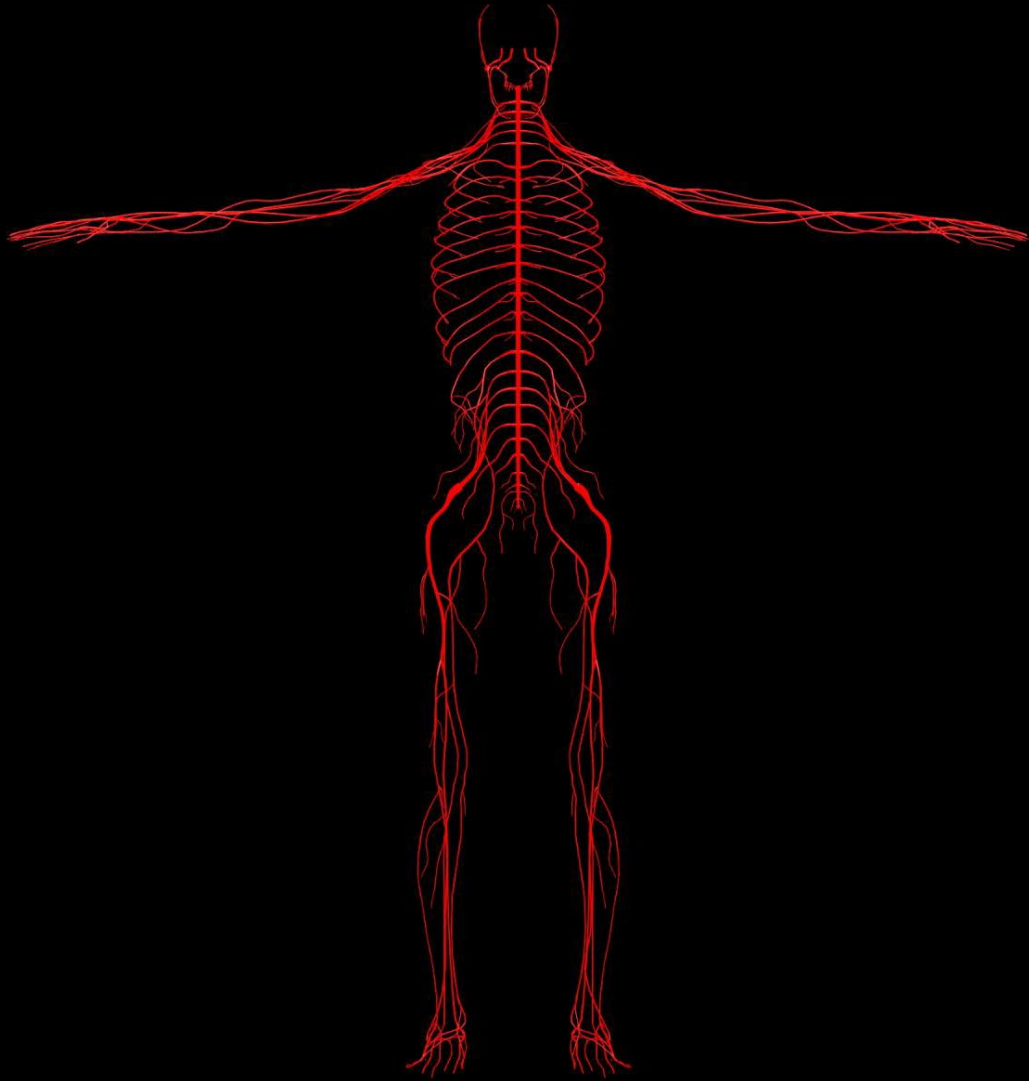
Cardiovascular and Respiratory Systems

These systems collaborate to deliver oxygen to muscles and remove carbon dioxide waste during exercise.

Energy Systems in Sport

Energy systems provide the fuel for muscle contractions, varying by activity intensity and duration.





Skeletal System

Functions of the Skeletal System

The skeletal system provides support, protection, movement, blood cell production, and mineral storage for the body.

Types of Synovial Joints

Synovial joints like hinge, ball-and-socket, pivot, condyloid, saddle, and gliding allow specific movements vital for sports actions.

Blood Cell Production and Mineral Storage

Red bone marrow produces blood cells, while bones store minerals such as calcium and phosphorus to maintain strength.



Muscular System

Muscle Roles and Actions

Muscles produce movement, maintain posture, and generate heat working in pairs as agonists and antagonists during activities.

Muscle Coordination

Fixators stabilize joints while synergists assist agonists to enable smooth and effective movement.

Major Muscles and Sporting Movements

Key muscles like deltoids, quadriceps, and hamstrings are linked to specific movements in sports such as kicking or pressing.

Cardiovascular and Respiratory Systems

Heart Structure and Function

The heart's atria, ventricles, valves, and major vessels coordinate to pump blood through the cardiac cycle efficiently.

Cardiac Output and Exercise

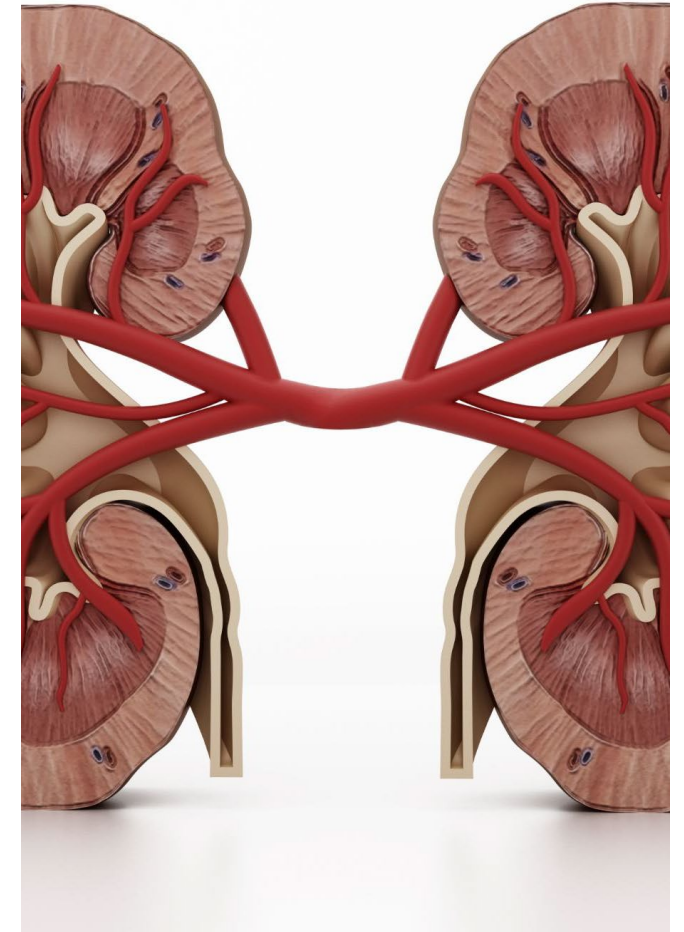
During exercise, heart rate, stroke volume, and cardiac output increase to meet muscle oxygen demands.

Blood Vessel Functions

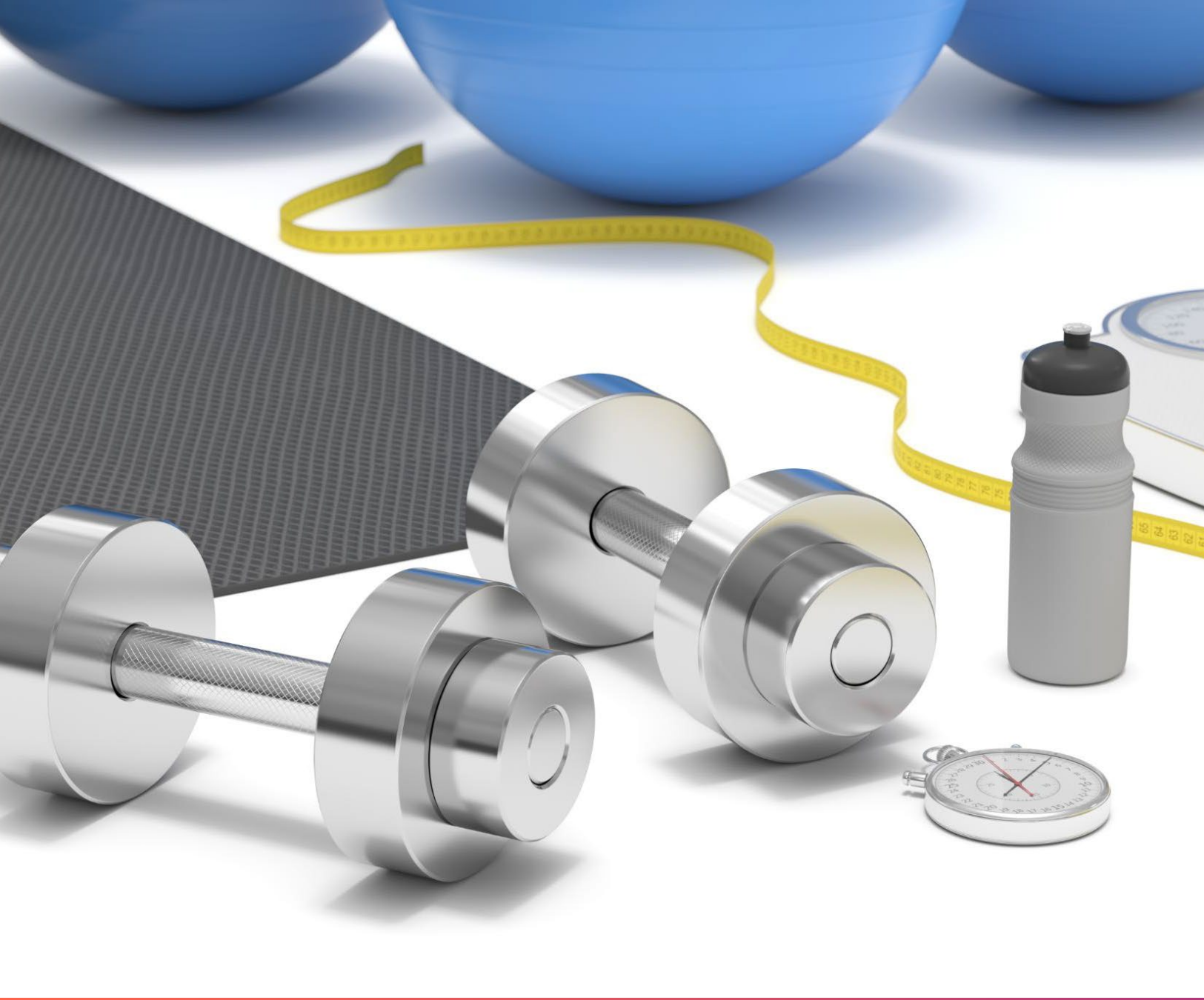
Arteries, veins, and capillaries have distinct structures and roles in blood circulation and oxygen delivery.

Respiratory Gas Exchange

Oxygen enters blood and carbon dioxide is removed in alveoli; breathing rate and tidal volume increase during exercise.



UNIT 2: FITNESS TRAINING AND PROGRAMMING



Components of Fitness

Health-Related Components

Includes cardiovascular fitness, muscular strength, endurance, flexibility, and body composition linked to overall health.

Skill-Related Components

Includes agility, balance, coordination, power, reaction time and speed crucial for sports performance.

Sporting Importance

Different components are vital based on sport, such as cardiovascular fitness for endurance and power for sprinters.

Fitness Testing

Types of Fitness Tests

Key fitness tests include Multistage Fitness Test, Cooper Run, Sit and Reach, Illinois Agility Test, Grip Dynamometer and Vertical Jump Test.

Purpose and Measurement

Each test measures specific fitness components, helping identify strengths and weaknesses in individuals.

Advantages and Limitations

Tests have pros and cons; limitations include motivation, environment, and validity affecting results.

Application in Training

Fitness data guides training program design and supports exam answers linking testing to training.

