

# Sports Science Basics

Sports Science · Practice Test · 20 Questions

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**1. What is the main gas absorbed by the lungs to produce energy during aerobic exercise?**

- A) Oxygen
- B) Carbon dioxide
- C) Nitrogen
- D) Hydrogen

**2. Which muscle is the largest in the human body?**

- A) Biceps brachii
- B) Gluteus maximus
- C) Gastrocnemius
- D) Latissimus dorsi

**3. What term describes the maximum amount of oxygen an individual can utilize during intense exercise?**

- A) BMI
- B) VO2 max
- C) Lactate threshold
- D) Heart rate reserve

**4. Which tissue connects muscle to bone in the human body?**

- A) Ligament
- B) Cartilage
- C) Tendon
- D) Fascia

**5. What type of muscle contraction occurs when a muscle lengthens while producing force?**

- A) Concentric
- B) Isometric
- C) Eccentric
- D) Isokinetic

**6. What is the scientific study of human movement and physical activity called?**

- A) Kinesiology
- B) Cardiology
- C) Neurology
- D) Psychology

**7. Which macronutrient is the body's primary source of rapid energy during high-intensity exercise?**

- A) Fat
- B) Protein
- C) Carbohydrates
- D) Vitamin C

**8. What is the thickest and strongest tendon in the human body?**

- A) Patellar tendon
- B) Achilles tendon
- C) Biceps tendon
- D) Hamstring tendon

**9. Which major mineral is lost in the highest concentration through sweat?**

- A) Potassium
- B) Sodium
- C) Calcium
- D) Magnesium

**10. What is the medical term for the increase in muscle size resulting from resistance training?**

- A) Atrophy
- B) Hypertrophy
- C) Hyperplasia
- D) Dystrophy

**11. Which type of joint allows movement in almost all directions, such as in the shoulder and hip?**

- A) Hinge joint
- B) Pivot joint
- C) Ball-and-socket joint
- D) Saddle joint

**12. Which protein in red blood cells is responsible for transporting oxygen to working muscles?**

- A) Myosin
- B) Hemoglobin
- C) Actin
- D) Collagen

**13. What instrument is commonly used by sports scientists to measure skinfold thickness?**

- A) Goniometer
- B) Skinfold caliper
- C) Dynamometer
- D) Stadiometer

**14. Which byproduct accumulates in muscles during high-intensity anaerobic exercise?**

- A) Lactic acid
- B) Uric acid
- C) Citric acid
- D) Amino acid

**15. What is the typical normal resting heart rate range for a healthy adult?**

- A) 20-40 beats per minute
- B) 60-100 beats per minute
- C) 120-150 beats per minute
- D) 160-180 beats per minute

**16. Which strong tissue connects bone to bone at a joint to provide stability?**

- A) Tendon
- B) Ligament
- C) Epidermis
- D) Myofibril

**17. What does the acronym BMI stand for in health and fitness assessment?**

- A) Body Mass Index
- B) Basic Metabolic Indicator
- C) Bone Muscle Intensity
- D) Body Measurement Rate

**18. Which unit of measurement is used to quantify energy obtained from food and used in activity?**

- A) Watt
- B) Calorie
- C) Volt
- D) Lumen

**19. Which device is commonly used in sports science to measure hand grip strength?**

- A) Dynamometer
- B) Pedalometer
- C) Spirometer
- D) Accelerometer

**20. Which hormone is released by the pancreas to help regulate blood glucose levels after eating?**

- A) Adrenaline
- B) Cortisol
- C) Insulin
- D) Melatonin