

**Lesson 3: HUMAN ANATOMY**

**LEARNING ACTIVITY 1: COMPONENTS OF THE CARDIOVASCULAR SYSTEM**

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**LEARNING ACTIVITY 2: THE BREATHING PROCESS**

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**LEARNING ACTIVITY 3: REGIONS OF THE DIGESTIVE SYSTEM**

- Pharynx \_\_\_\_\_
- Mouth \_\_\_\_\_
- Large intestine \_\_\_\_\_
- Esophagus \_\_\_\_\_
- Stomach \_\_\_\_\_
- Small intestine \_\_\_\_\_

**LEARNING ACTIVITY 4: THE DIGESTIVE SYSTEM AT WORK**

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### LEARNING ACTIVITY 5: JOINTS AND THEIR CORRESPONDING ACTIONS

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| 1. _____ | 2. _____ |
| 1. _____ | 2. _____ |
| 1. _____ | 2. _____ |
| 1. _____ | 2. _____ |

### LEARNING ACTIVITY 6: MOVEMENT TERMINOLOGY

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### LEARNING ACTIVITY 7: COMPONENTS AND FUNCTIONS OF THE NERVOUS SYSTEM

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### LEARNING ACTIVITY 8: ANATOMICAL STRUCTURE OF NEURONS

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### LEARNING ACTIVITY 9: RECEPTORS OF THE NERVOUS SYSTEM

#### Gogli Tendon Organs

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#### Muscle Spindles

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## LEARNING ACTIVITY 10: MUSCLE-FIBER TYPES

1. **Type I:** Slow-twitch; small amount of mitochondria; fatigue-resistant; used during anaerobic metabolism; used during sports such as cross-country running
2. **Type IIx:** Fast-twitch; also known as fast-glycolytic; small amount of mitochondria; less resistant to fatigue than type I fibers; largest and fastest fibers; limited capacity for aerobic metabolism
3. **Type IIa:** Fast-twitch; can be trained to be more oxidative or glycolytic; can only sustain activity for less than 30 seconds

## LEARNING ACTIVITY 11: THE ROLE OF CONNECTIVE TISSUE

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## LEARNING ACTIVITY 12: THE SHOULDER GIRDLE IN ACTION

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## LEARNING ACTIVITY 13: THE SHOULDER COMPLEX

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## LEARNING ACTIVITY 14: FOREARM AND ELBOW MUSCLES

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## LEARNING ACTIVITY 15: TRUNK MUSCLES AT WORK

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## LEARNING ACTIVITY 16: HIP MUSCLES AND THEIR ACTIONS

1. Gluteus maximus: Extension, external rotation, adduction
2. Gracilis: External rotation, adduction, flexion
3. Rectus femoris: Abduction, flexion, internal rotation
4. Tensor fasciae latae: Flexion, abduction, internal rotation
5. Pectineus: Flexion, adduction, external rotation
6. Biceps femoris: Extension, abduction, adduction, external rotation
7. Semitendinosus: Extension, adduction, slight internal rotation
8. Piriformis: Adduction, flexion, external rotation

## LEARNING ACTIVITY 17: THE KNEE JOINT

1. \_\_\_\_\_
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## LEARNING ACTIVITY 18: THE ANKLE AND FOOT

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## LEARNING ACTIVITY 19: HORMONES AND THEIR FUNCTIONS

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**Lesson 4: EXERCISE PHYSIOLOGY**

**LEARNING ACTIVITY 1: CONCEPTS OF PHYSICAL FITNESS**

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**LEARNING ACTIVITY 2: PHYSIOLOGY OF THE CARDIORESPIRATORY SYSTEM**

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**LEARNING ACTIVITY 3: ENERGY SYSTEMS**

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#### LEARNING ACTIVITY 4: RESPIRATORY EXCHANGE RATIO

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#### LEARNING ACTIVITY 5: ACUTE AND CHRONIC RESPONSES TO AEROBIC EXERCISE

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#### LEARNING ACTIVITY 6: HORMONAL RESPONSES TO EXERCISE

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#### LEARNING ACTIVITY 7: ENVIRONMENTAL CONSIDERATIONS WHEN EXERCISING

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**Lesson 5: FUNDAMENTALS OF  
APPLIED KINESIOLOGY**

**LEARNING ACTIVITY 1: PHYSICS AND HUMAN MOVEMENT**

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**LEARNING ACTIVITY 2: THE BALANCED AND MOVING BODY**

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LEARNING ACTIVITY 3: EVALUATING MOVEMENTS OF THE HIP

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LEARNING ACTIVITY 4: EVALUATING MOVEMENTS OF THE KNEE

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2. \_\_\_\_\_

LEARNING ACTIVITY 5: EVALUATING MOVEMENTS OF THE ANKLE

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2. \_\_\_\_\_

LEARNING ACTIVITY 6: REVIEW OF THE LOWER EXTREMITY

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LEARNING ACTIVITY 7: RESTORE THE CORE

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LEARNING ACTIVITY 8: THE SHOULDER COMPLEX IN ACTION

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## LEARNING ACTIVITY 9: SPECIAL POPULATIONS

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**Lesson 6: NUTRITION**

**LEARNING ACTIVITY 1: NUTRIENTS**

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**LEARNING ACTIVITY 2: FEDERAL GUIDELINES**

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**LEARNING ACTIVITY 3: FOOD LABELS**

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**LEARNING ACTIVITY 4: DETERMINING RMR**

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**Answer:** \_\_\_\_\_

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### LEARNING ACTIVITY 5: WEIGHT-LOSS STRATEGIES

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### LEARNING ACTIVITY 6: NUTRIENTS AND EXERCISE

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### LEARNING ACTIVITY 7: NUTRITION AND SPECIAL POPULATIONS

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3. \_\_\_\_\_
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### LEARNING ACTIVITY 8: SCOPE OF PRACTICE

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2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

**Lesson 7: PHYSIOLOGY  
OF TRAINING**

LEARNING ACTIVITY 1: ACUTE RESPONSES TO EXERCISE

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LEARNING ACTIVITY 2: FUEL SOURCES

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LEARNING ACTIVITY 3: THERMOREGULATION

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LEARNING ACTIVITY 4: CHANGES IN THE CARDIORESPIRATORY SYSTEM

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### LEARNING ACTIVITY 5: TRAINING PRINCIPLES

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### LEARNING ACTIVITY 6: MUSCULAR ADAPTATIONS

1. Increase in the number of actin and myosin filaments
2. Decrease in the levels of the sarcoplasm
3. Increase in the amount of lactate that is produced
4. Increase in the body's ability to buffer lactic acid
5. Increase in the levels of testosterone and growth hormone
6. Decrease in the production of new muscle fibers
7. Increase in the utilization of type I fibers
8. Increase in neuromuscular adaptations

### LEARNING ACTIVITY 7: STRETCHING TECHNIQUES

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