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Primary Type: Lesson Plan

# The Muscular System for Dancers

In this lesson, students will learn the function of muscles and how muscles and bones work together. Students will learn how can to prevent injuries, what to do if they are injured and what foods to each to stay healthy as dancers.

**Subject(s):** Dance

**Grade Level(s):** 9, 10, 11, 12

**Intended Audience:** Educators

**Instructional Time:** 1 Hour(s)

**Keywords:** muscles, muscular system, dance, movement, RICE

**Resource Collection:** Arts for a Complete Education (ACE)

## LESSON CONTENT

**Lesson Plan Template:** General Lesson Plan

**Learning Objectives: What should students know and be able to do as a result of this lesson?**

Students will be able to identify the function of muscles,

Students will know the major muscles used by most dance majors.

Students will understand how muscles and bones work together and the steps needed to prevent injury.

Students will know the term RICE and how it is used if injury happens.

Students will examine the foods in their diet to make their muscles grow and stay strong.

**Prior Knowledge: What prior knowledge should students have for this lesson?**

Students should have base knowledge of the following dance concepts:

Ballet Positions

Turnout

Ballet Barre Combinations

Ballet terminology (plie', tendu, releve', eleve', cambre', rond de jambe, demi, grande, degage', battement, lunge (wide 4th), gateway (arms), petite jumps

**Guiding Questions: What are the guiding questions for this lesson?**

What are the function of muscles? Which major muscles should I know? Based on what I know about

how muscles and bones work together, how can I prevent injuries? What is RICE? What foods should I have

in my daily diet to help my muscles grow and stay strong?

**Teaching Phase: How will the teacher present the concept or skill to students?**

Hand out Anticipation Guides to link prior knowledge and build confidence in the topic. Move

around to make sure students are completing correctly.

What do Muscles need?

The muscles are made of protein and water. So good nutrition helps build, repair, and develop strong healthy

muscle. Hydrate, Hydrate, Hydrate to make sure your muscles stay healthy. A dancer's diet should include

lean meats, fish, and low fat dairy products. Regular exercise and good posture also help our muscular system.

The muscles also need REST and oxygen.

Based on what I know about how muscles and bones work together, how can I prevent injuries?

Good nutrition, hydration, and proper warm up are key. Take advantage of any pre-warm up periods before class to mentally scan your body for sore or aching parts. Provide relaxed breathing and light stretching to begin to send oxygen to the muscles. Always warm up fully to insure oxygen and blood flow move into both large and small muscle groups.

Hold stretches for 30 counts.

What is RICE?

A simple way to remember the first aid treatment is to keep in mind the following acronym: RICE.

? R= Rest

? I= Ice

? C= Compression

? E= Elevation

RICE is the recipe for first aid.

Time Required: First 48 hours after the injury occurs

Here's How:

1. Rest: Without rest, continual strain is placed on the injured area, leading to increased inflammation, pain, and further injury. Additionally, some soft tissue injuries will take longer to heal without rest. Stop using the injured area as soon as you experience pain.

Jessica Harvie, M.ED Arts and Academic Interdisciplinary

2. Ice: Ice is a great way to reduce inflammation and pain associated with heat generated by increased blood flow or blood loss. Apply ice for 20 minutes, one time each hour. As an alternative, apply ice for **15–20 minutes, then remove for 20 minutes, for a 24–48 hour period. To prevent damage to the skin, place the ice inside a towel or other insulating material before wrapping around the area.**

3. Compression:

Compression aims to reduce swelling associated with the inflammatory process. Although some swelling is unavoidable, too much swelling can result in increased healing times or excessive pain.

Use a loose, elastic bandage instead of tape. Usage of a tight, non-elastic bandage will result in decreased blood flow. Make sure the bandage is snug but not too snug to not be able to move freely. The muscles will need room to contract and fill with blood. Compression stockings or sleeves are a viable option to manage swelling. .

1. Elevation: Elevation aims to reduce swelling by increasing venous return of blood to the systemic circulation. This will result in less swelling which will reduce pain as well. Be sure to raise the injured area to a height near or above the upper body.

Tips:

1. If you suffer a dance injury, stop dancing immediately. Continuing to dance may greatly worsen an injury.

2. The following injuries require immediate professional attention: patellar tendinitis, shin splints, sprains, and stress fractures.

3. Use common sense while dancing...pushing your body beyond its limits will almost always cause an injury.

What You Need:

? Ice

? Bandage

? Time

? Possibly a doctor

What foods should I have in my daily diet to help my muscles grow and stay strong?

Lean meats, fish, and low fat dairy products.

### **Guided Practice: What activities or exercises will the students complete with teacher guidance?**

As we watch the video together fill in the bones under vocabulary and answers to the questions in the square provided.

View Boda Guru on Muscles. To connect nutrition, bones, and muscles, teacher may choose to open lesson with the Human Body Overview to serve as a review and help students make connections. Teacher should preview and use digression.

<https://www.youtube.com/watch?v=VrS7SCdd7-U> Overview

<http://www.youtube.com/watch?v=Su6QIs7wKWg> pt3 on Muscles

Students should in graphic organizer and the bottom of the anticipation guide.

Check for understanding and discuss muscles. Assist students in learning the muscles. Provide crayons for students to color muscles as they label to aid in memorization.

### **Independent Practice: What activities or exercises will students complete to reinforce the concepts and skills developed in the lesson?**

Collaborative Groups 4 to 6 students will:

Identify the major muscles we use in dance class. Cut out the muscle shape with paper and use one classmate as dance model. Tape or clip the muscle to the body of the model. Have another group check their dancer.

### **Closure: How will the teacher assist students in organizing the knowledge gained in the lesson?**

Complete a quick write answering the guiding questions:

What are the function of muscles?

Which major muscles should I know?

Based on what I know about how muscles and bones work together, how can I prevent injuries?

What is RICE?

What foods should I have in my daily diet to help my muscles grow and stay strong?

### **Summative Assessment**

Teacher will assign a grade when students have placed all of the muscles correctly on their model demonstrating understanding.

### **Formative Assessment**

Ticket out the door: Students are issued a blank index card and must respond the following prompt:

What are the primary functions of muscles?

1. Muscles provide movement of the body through muscular contraction.
2. Muscles provide movement of substances through the body (such as cardiac muscle moving blood).
3. Muscles generate body heat.
4. Muscles provide maintenance of posture and body movements

<http://www.livestrong.com/article/114706-five-functions-muscular-system/>

### **Feedback to Students**

Feedback to students will be continual throughout the lesson, at integral points in the lesson, teacher should stop, discuss and give feedback.

### **Additional Information/Instructions**

#### **By Author/Submitter**

A good resource for diagrams that can be used with this lesson is Yellow Ballet Book, Workbook IV. A copy of the book can be purchased at The Ballet Book Workbook Series <http://www.theballetbook.com/>

## **SOURCE AND ACCESS INFORMATION**

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## Related Standards

Name	Description
<a href="#">DA.912.F.3.10:</a>	Use accurate anatomical terminology to identify planes, regions, bones, muscles, and tissues.
<a href="#">DA.912.H.3.3:</a>	Explain the importance of proper nutrition, injury prevention, and safe practices to optimal performance and the life-long health of a dancer.
<a href="#">DA.912.S.1.3:</a>	Identify muscular and skeletal structures that facilitate or inhibit rotation, flexion, and/or extension.
<a href="#">DA.912.S.3.2:</a>	Develop and maintain flexibility, strength, and stamina for wellness and performance.