# WELCOME TO THE ONLINE CLASS

**SESSION NO.: 5**
**CLASS: 5**
**SUBJECT: SCIENCE**
**CHAPTER NUMBER: 9**
**CHAPTER NAME: OUR SKELETAL SYSTEM**
**SUB TOPIC: MUSCLES AND MOVEMENTS**



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# LEARNING OBJECTIVE

**To enable the learner to:**

- **know the importance of muscles.**
- **understand how the bones and muscles together help in movement.**

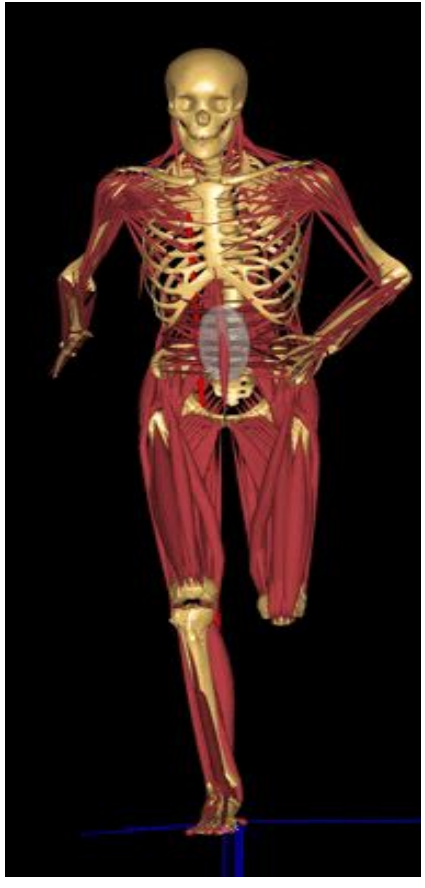
# LET'S RECAP

**Give answer in one word.**

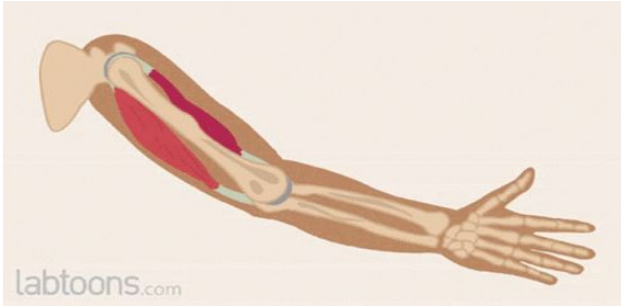
- **The meeting point of two bones held together by strong tissues called ligaments.**
- **Strong tissues that bind the bones at a joint.**
- **The joints that do not allow any kind of movement of the bones.**
- **The joint found in our wrist.**
- **The joint found in between our skull and first vertebra.**

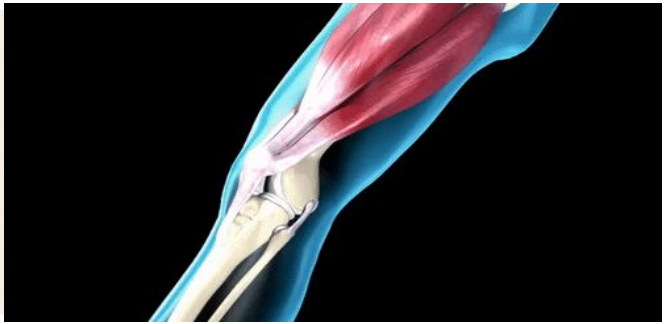
# MUSCLES AND MOVEMENT

- The muscles in the body tighten and relax to produce movement.
- There are about 650 muscles in the body and each one causes a particular movement.

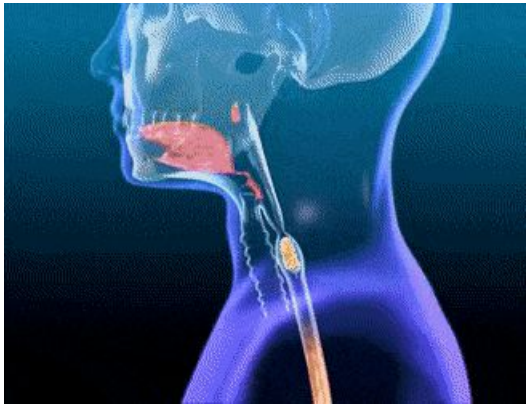
# MUSCLES AND MOVEMENT




**Muscles help us to bend our arms and knees.**

**Muscles help us to chew our food.**

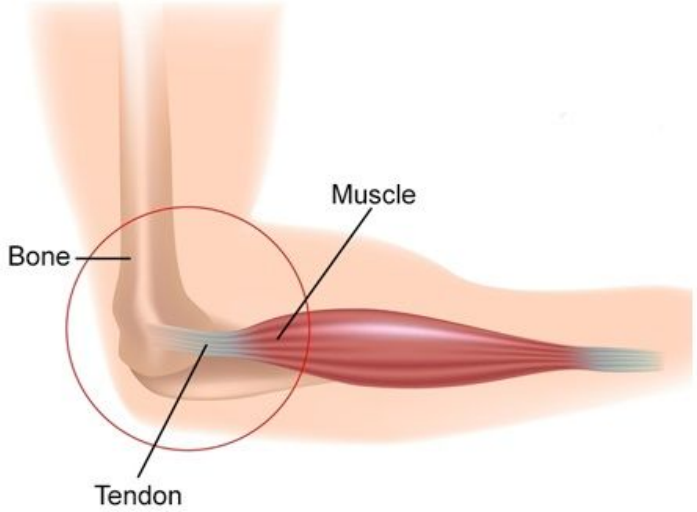


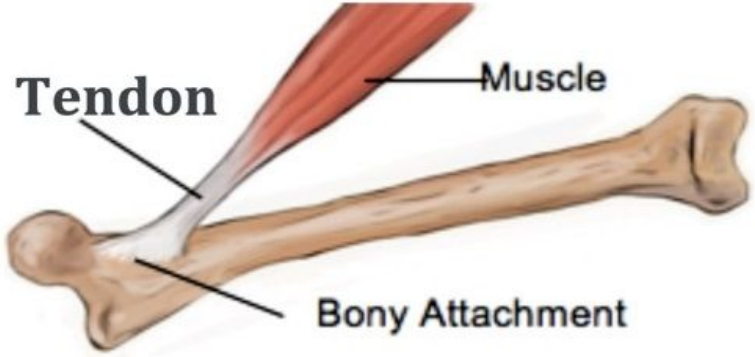
**Muscles push food into the digestive canal.**

**Muscles allow us to inhale air into our lungs.**

# TENDONS

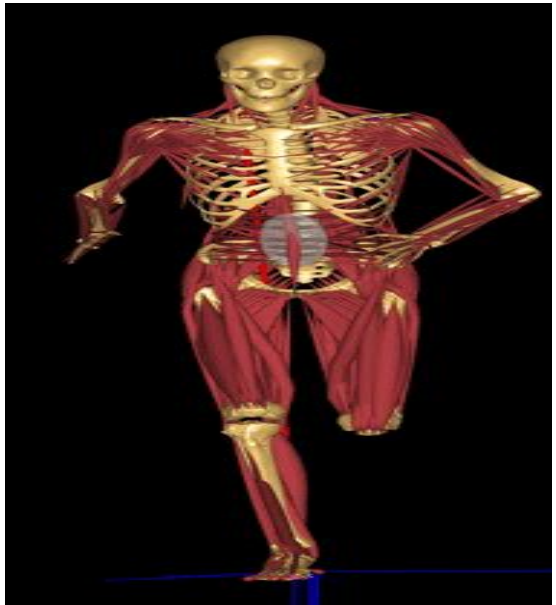
- Muscles are attached to the bones by strong fibres called tendons.
- These tendons or fibres become stronger with regular exercise.



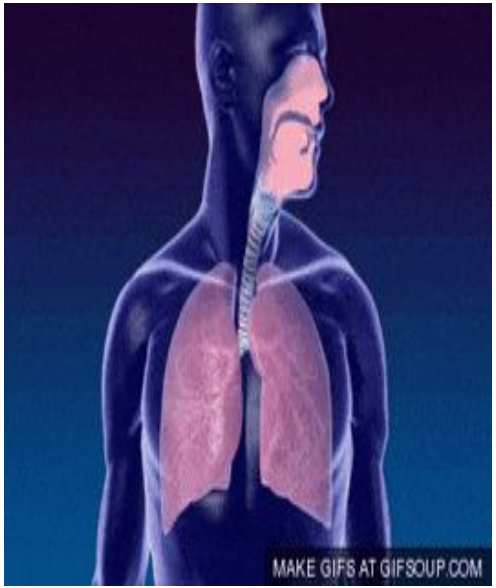



# TYPES OF MUSCLES

**Voluntary muscles**

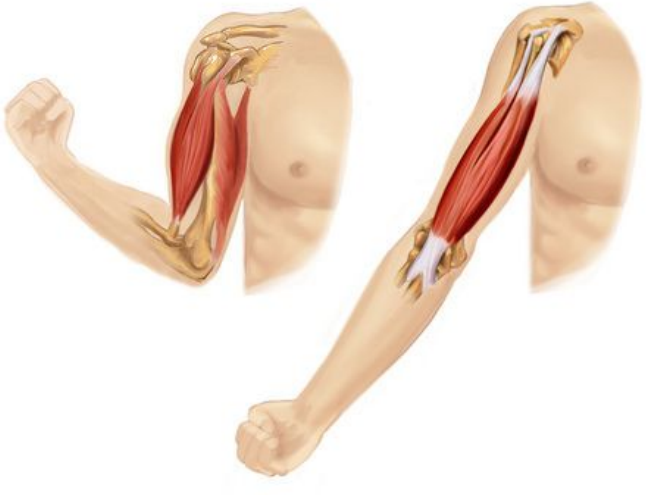


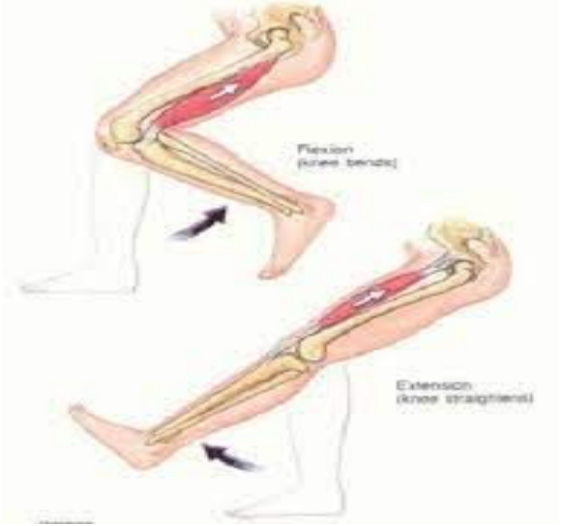
**Involuntary muscles**



# VOLUNTARY MUSCLES

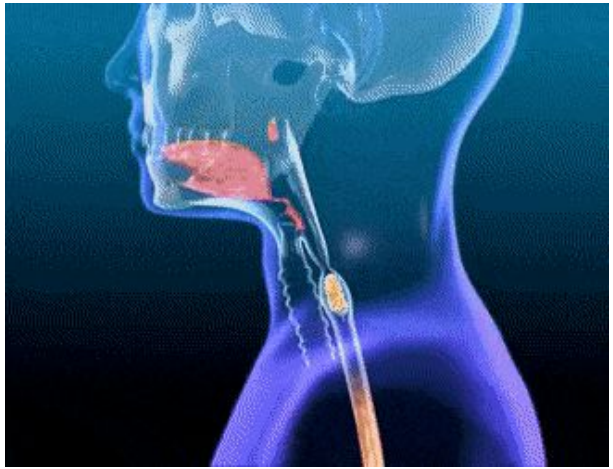
- The muscles which are under our control are called voluntary muscles.
- E.g.: the muscles attached to our skeleton.

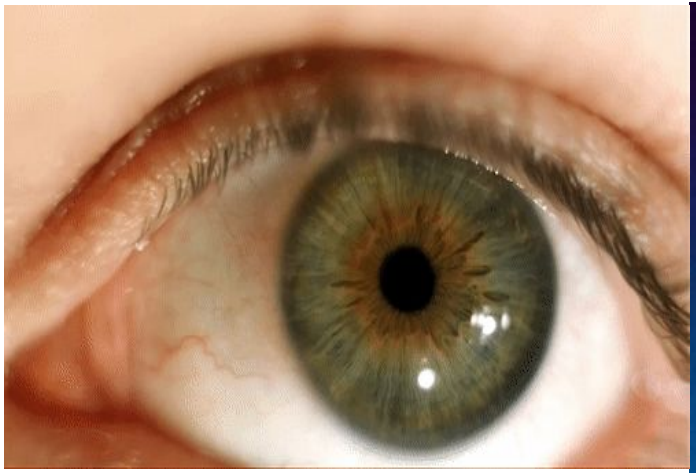





# INVOLUNTARY MUSCLES

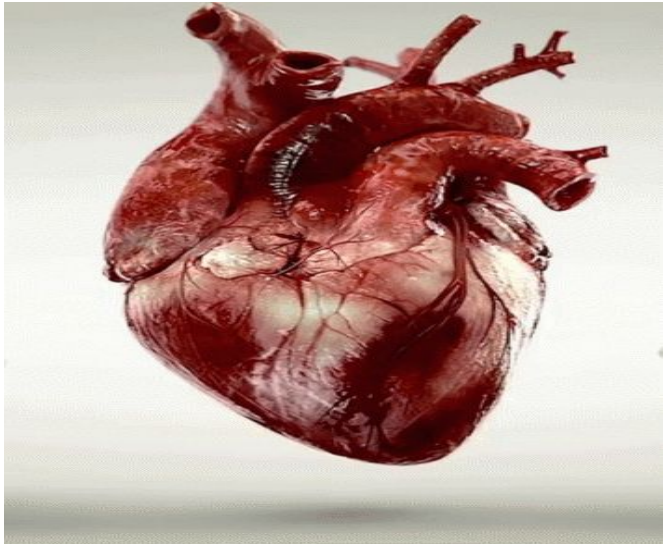
- The muscles which are not under our control are called involuntary muscles.
- They control actions like the movement of food in the alimentary canal, the flow of blood and the movement of the eye muscles.





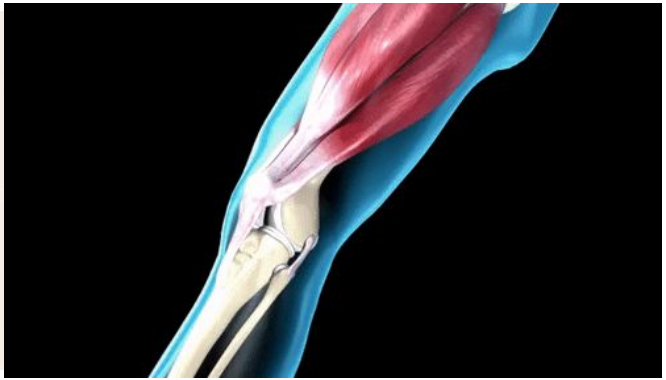
# CARDIAC MUSCLES

- The muscles of the heart are known as cardiac muscles.
- They are also involuntary muscles .



# HOW DO MUSCLES WORK?

- Muscles produce movement in the body by pulling on the bones.
- The contraction and expansion of muscles helps to move over body parts.
- When the knee bends, one muscle contracts and get shorter whereas the other one relaxes. When the leg stretches the reverse happens.

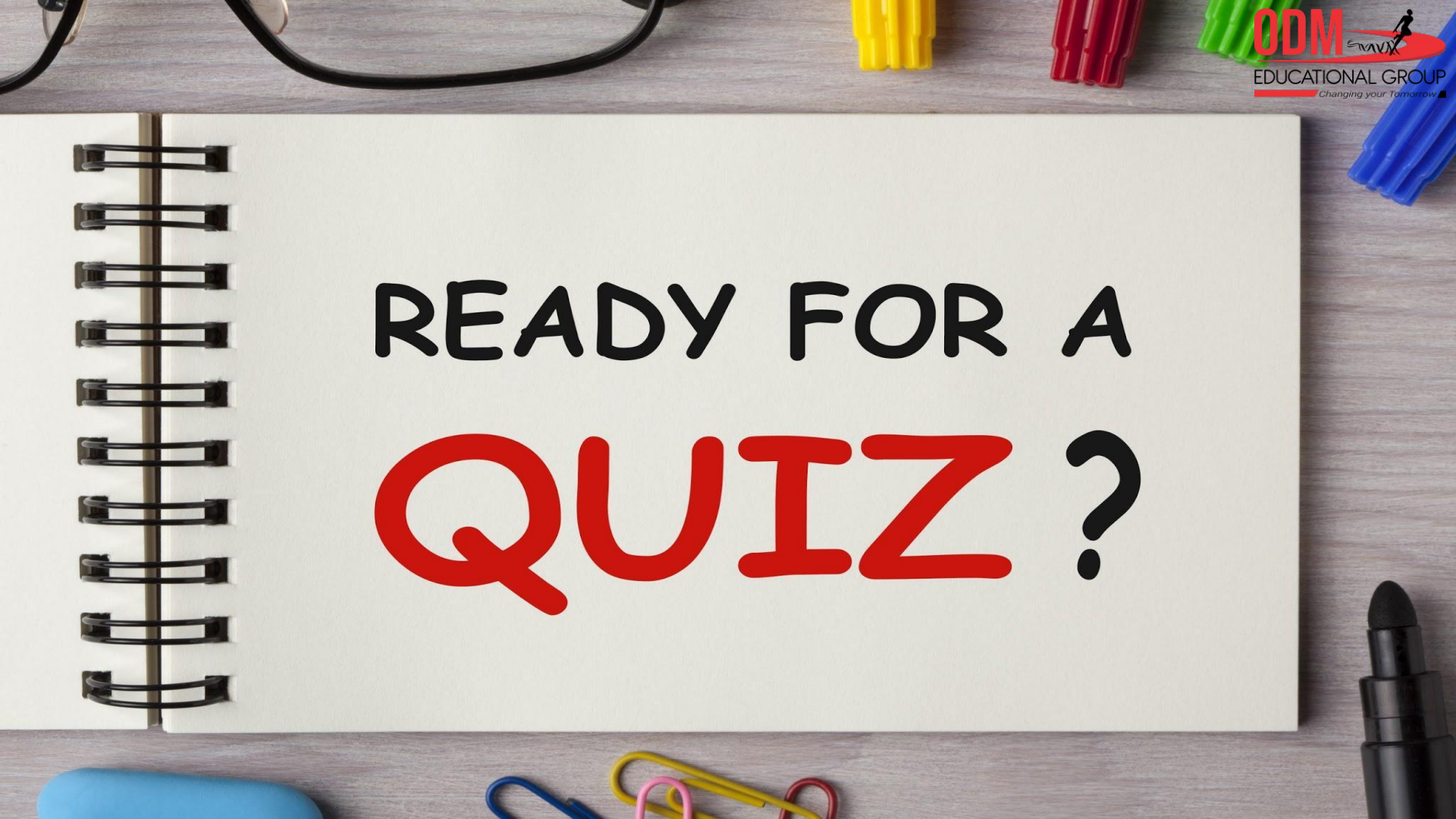



# HOW DO MUSCLES WORK?

- A good posture is needed to be maintain the muscles in good shape.
- We must exercise and rest properly and have a healthy diet in order to keep our body healthy.

# SUMMARY

- The muscles in the body tighten and relax to produce movement.
- There are about 650 muscles in the body and each one causes a particular movement.
- Strong fibres with which muscles are attached to bones is known as tendons.
- There are two types of muscles- voluntary and involuntary.
- The muscles of the heart are known as cardiac muscles.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QUIZ ?

1. **Strong fibres with which muscles are attached to bones.**

**Ans: Tendons**

## 2. Muscles attached to our skeleton are _____ muscles.

**Ans: voluntary**

**3. The movement of food in the alimentary canal happens because of _____ muscles.**

**Ans: Involuntary**

# HOMEWORK

- **What disadvantages would you face if your backbone is made up of just one long bone?**

# D. Write short answers.

**1. What is a joint?**

**Ans: A joint is the meeting point of two bones held together by ligaments.**

**2. Name the different kinds of movable joints in your body.**

**Ans: The different kinds of movable joints in our body are:**

- **the hinge joint**
- **the ball and socket joint**
- **the pivot joint**
- **the gliding joint**

**3. Which part of the facial region is movable? How does it help us?**

**Ans: The lower jaw of the facial region is movable. It helps us to eat and talk.**

# D. Write short answers.

**4. What is bone marrow?**

**Ans: The soft, spongy material found inside the cavities of long bones is known as bone marrow.**

**5. What are tendons?**

**Ans: Tendons are the strong fibres with which muscles are attached to bones.**

# LEARNING OUTCOME

**The learner will be able to:**

- **know the importance of muscles.**
- **understand how the bones and muscles together help in movement.**

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# THANKING YOU

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