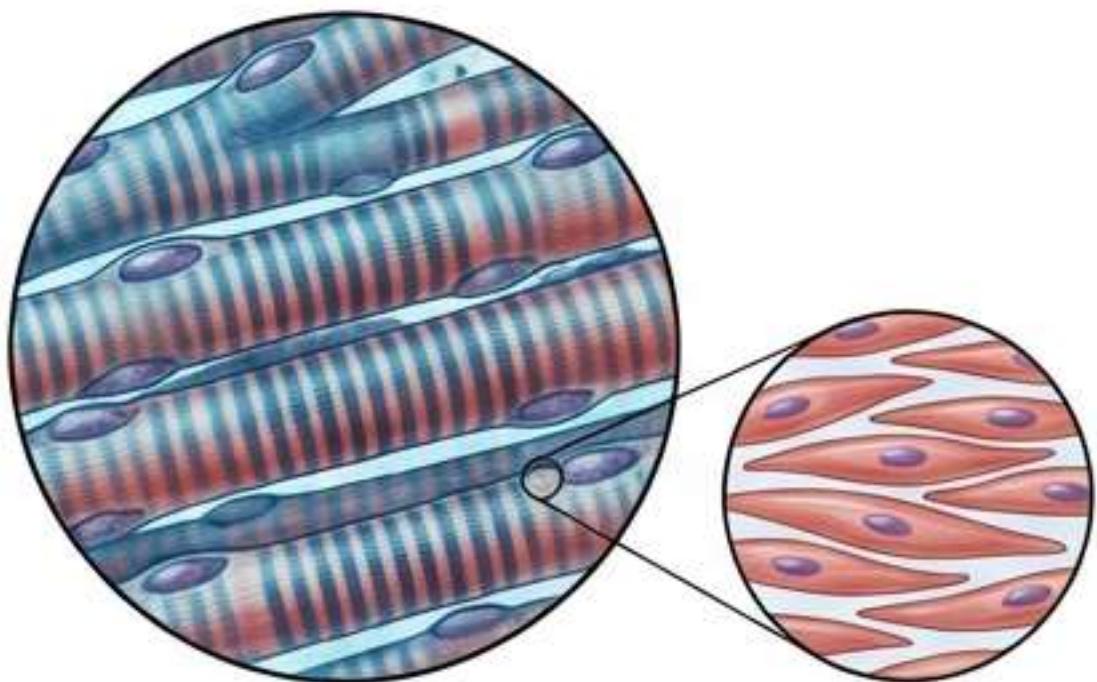


Question 01 | Source: EMD 1-2023

Concerning striated muscle:

- A- It can be attached to the skeleton
- B- It can be attached to the skin
- C- Is of voluntary contraction
- D- It forms the muscular wall of the viscera
- E- It is of slow contraction

Striated muscles are the engines of 'animal life'. They are primarily **skeletal** but can be **cutaneous** (moving skin). Crucially, they are **voluntary** and contract **rapidly**. The muscular wall of viscera is formed by **smooth** muscle.



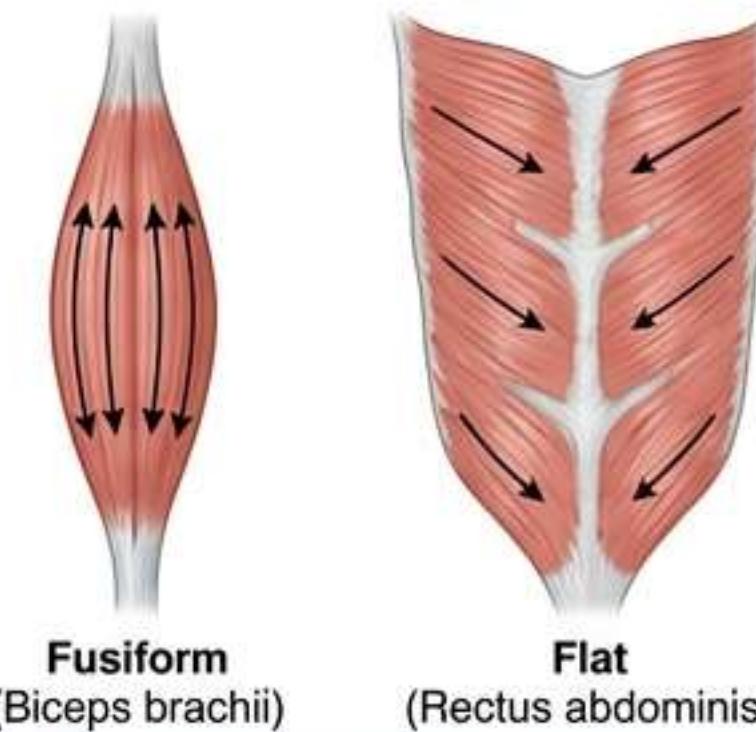
S.T.R.I.A.T.E.D = Speed, To Skeleton/Skin, Rapid, Inter-connected, Activated voluntarily.

Question 02 | Source: EMD 1-2023

Concerning muscles:

- A- The texture depends on fiber arrangement relative to tendons
- B- In fusiform muscle, fibers are parallel
- C- In flat muscle, fibers converge toward the tendon
- D- A fibrous sheath envelops the tendon
- E- A synovial sheath envelops the muscle

Muscle power is dictated by geometry. **Fusiform** muscles (spindle shape) have fibers that *converge* to a tendon. **Flat** muscles usually have *parallel* fibers. **Fibrous sheaths** create osteofibrous canals for tendons; fascia covers the belly.



Fusiform = Funnels (Converges).
Parallel = Plate (Flat).

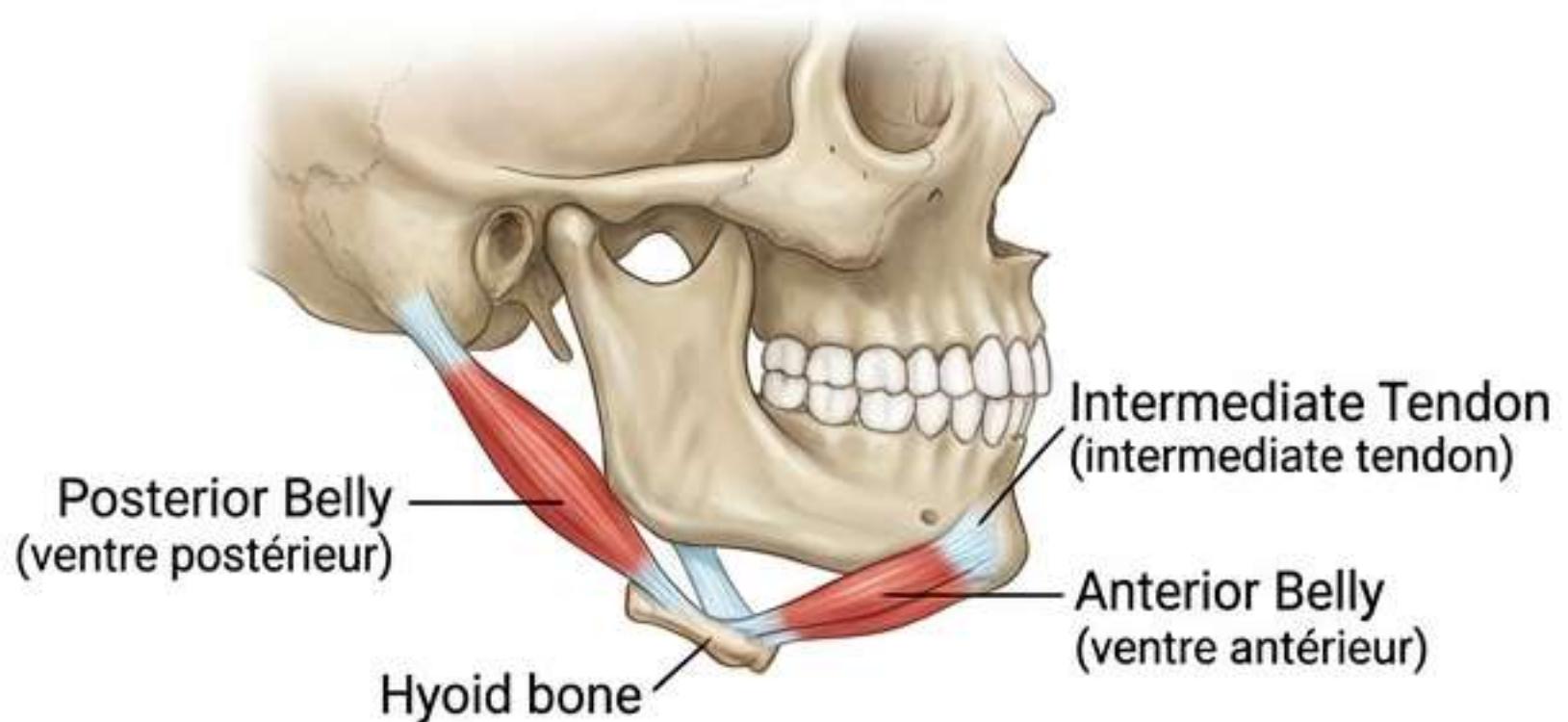
Question 03 | Source: EMD 1-2023

Concerning muscles:

- A- The tendon is formed by muscle fibers
- B- The muscular body is the contractile part
- C- A compound striated muscle is formed of several bellies
- D- The muscle fiber is formed of myofibers
- E- The digastric muscle is formed of a single belly

Correct: B, C, D

Anatomy is literal. **Digastric** means 'Two Bellies' (Di = Two, Gaster = Belly), separated by an intermediate tendon. The tendon is **dense connective tissue**, not muscle fibers. The belly contains the contractile machinery.



Digastric = Divided in Two.

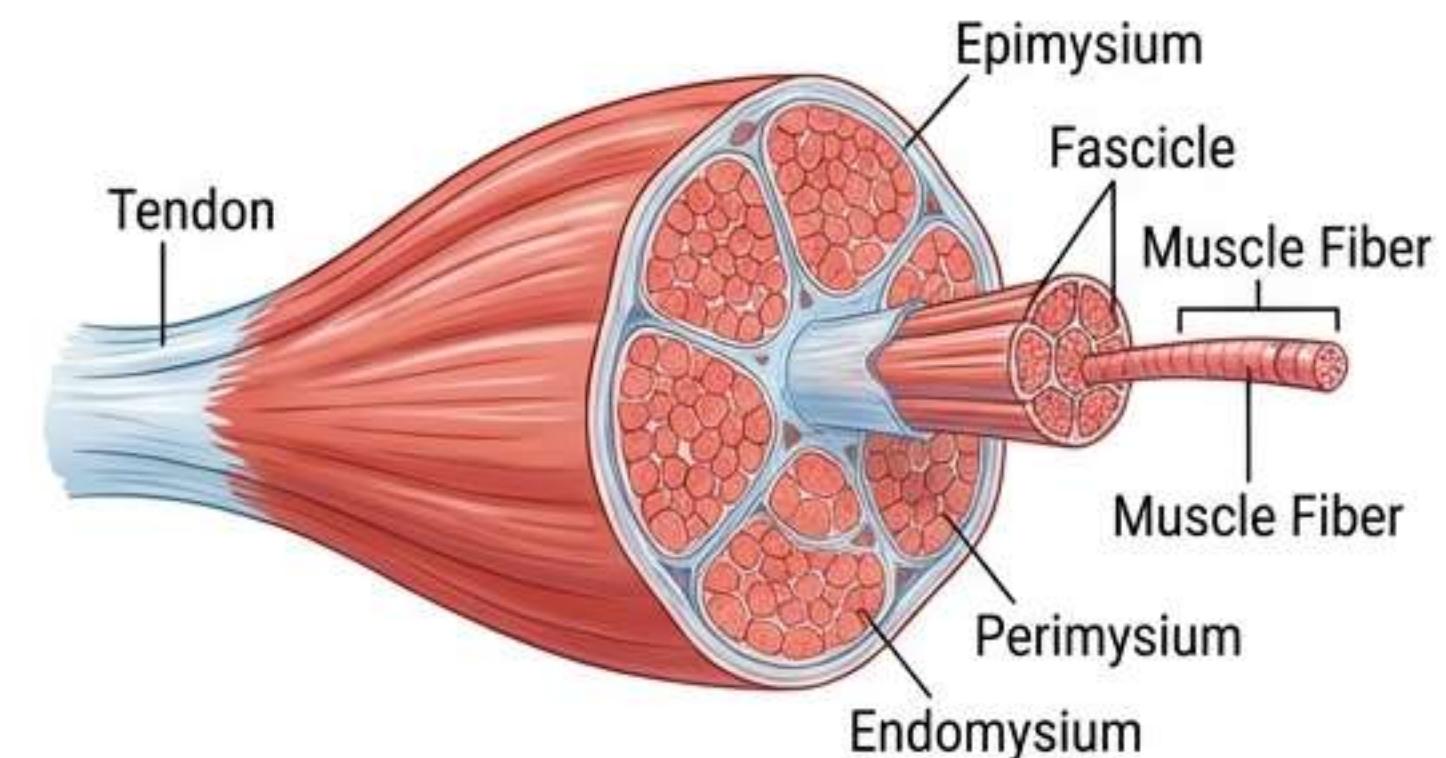
Question 04 | Source: EMD 1 2022

Concerning the muscular system:

- A- The tendon is the contractile part of the muscle
- B- The fiber is the functional unit of the muscle
- C- The parallel arrangement of fibers gives a fusiform muscle
- D- A short muscle is mono-articular
- E- The contraction of striated muscle is rapid

Correct: B, C, D, E

The **muscle fiber** is the functional unit. **Short muscles** are typically deep stabilizers crossing only one joint (**mono-articular**). Note: In this context, 'parallel' fibers are associated with the longitudinal axis of fusiform shapes.



Short muscles make Short trips (One joint).

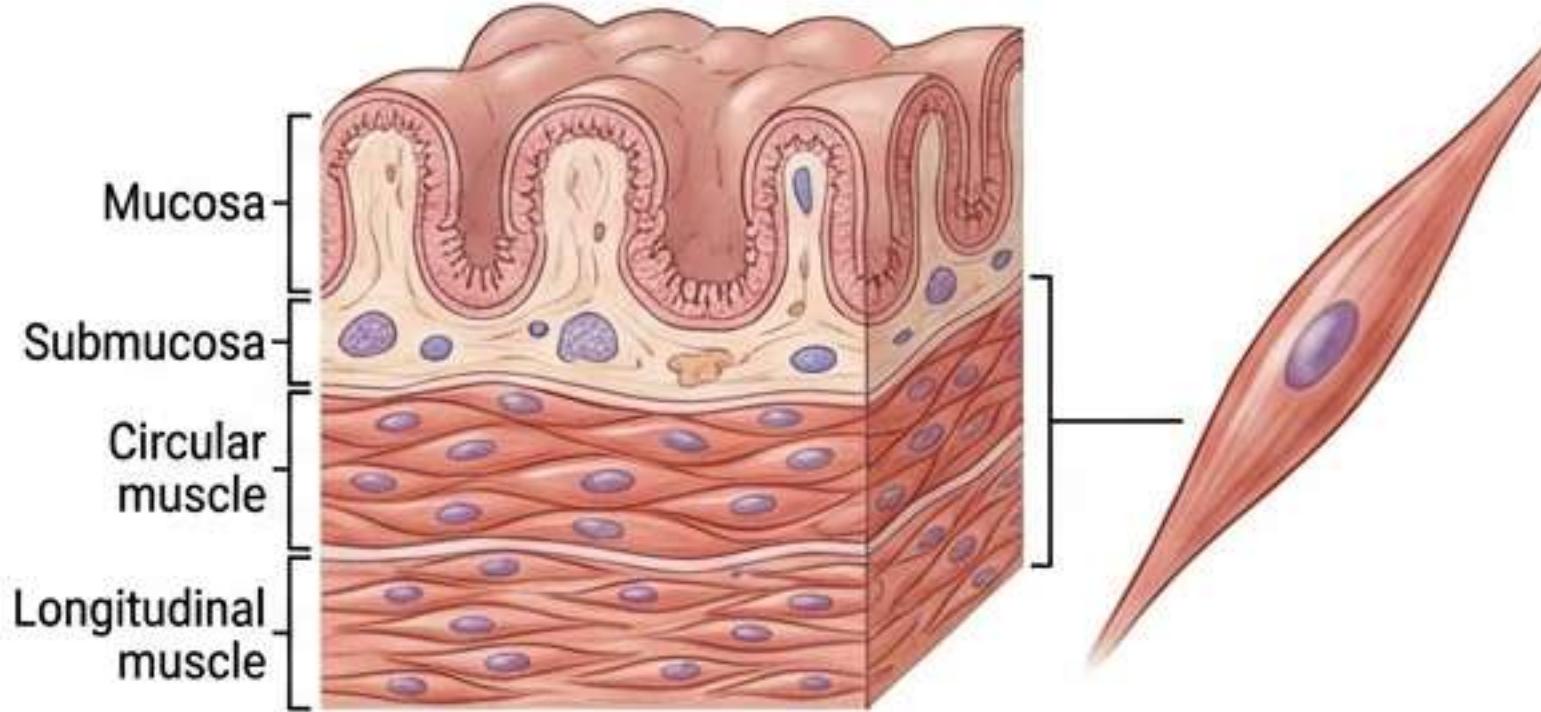
Question 05 | Source: EMD 1 2022

Concerning smooth muscle:

- A- It is a voluntary muscle
- B- Its contraction is slow
- C- Its contraction is rapid and lasts longer
- D- It is a muscle that has no striations
- E- It forms the muscle of the viscera

Correct: B, D, E

Smooth muscle is the muscle of 'vegetative life.' It lacks sarcomere stripes (striations). It is **involuntary** and specializes in **slow, sustained** contractions, essential for organ walls.



SMOOTH = Slow, Maintains tone, Organs, Out of voluntary control.

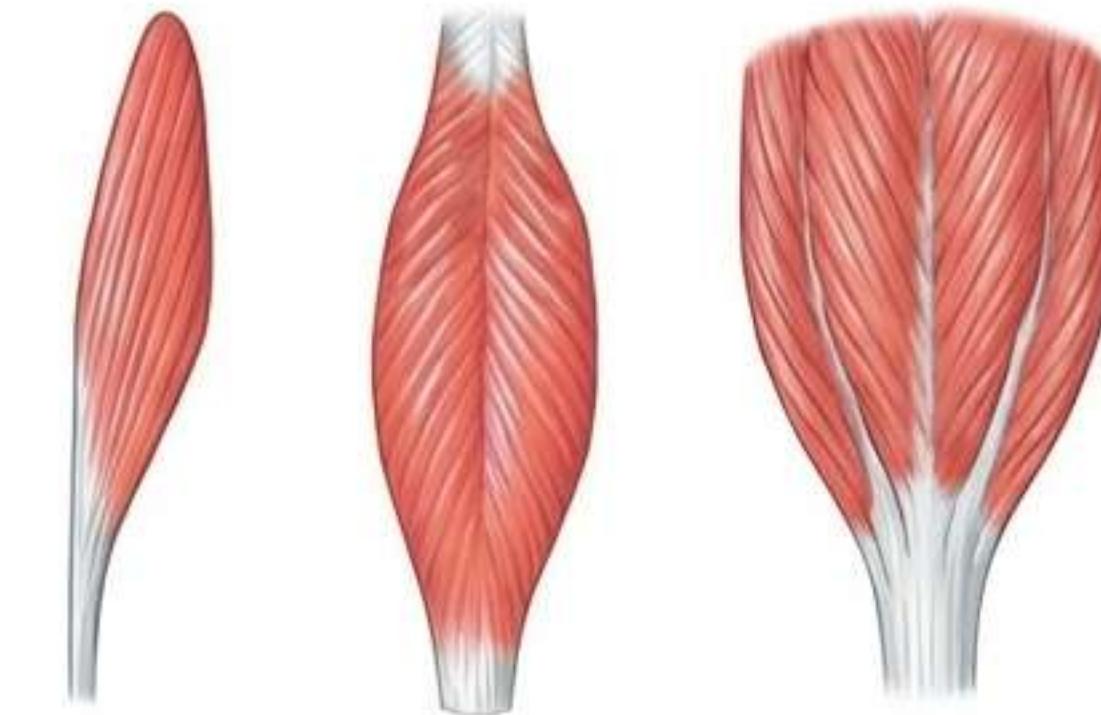
Question 06 | Source: EMD 1 2022

Concerning the muscular system:

- A- The role of the muscular system is mobility
- B- The cutaneous muscle is a striated muscle
- C- The cardiac muscle is a smooth muscle
- D- A long striated muscle is poly-articular
- E- In a penniform muscle, fibers are oblique

Correct: A, B, D, E

Crucial distinction: **Cardiac muscle** is involuntary but **structurally striated**. **Penniform** (feather-shaped) muscles pack fibers obliquely, trading range of motion for force. Long muscles often cross multiple joints.



Pennate = Like a Pen (Quill) = **Oblique** fibers.

Question 07 | Source: EMD 1 2021

Generalities on myology:

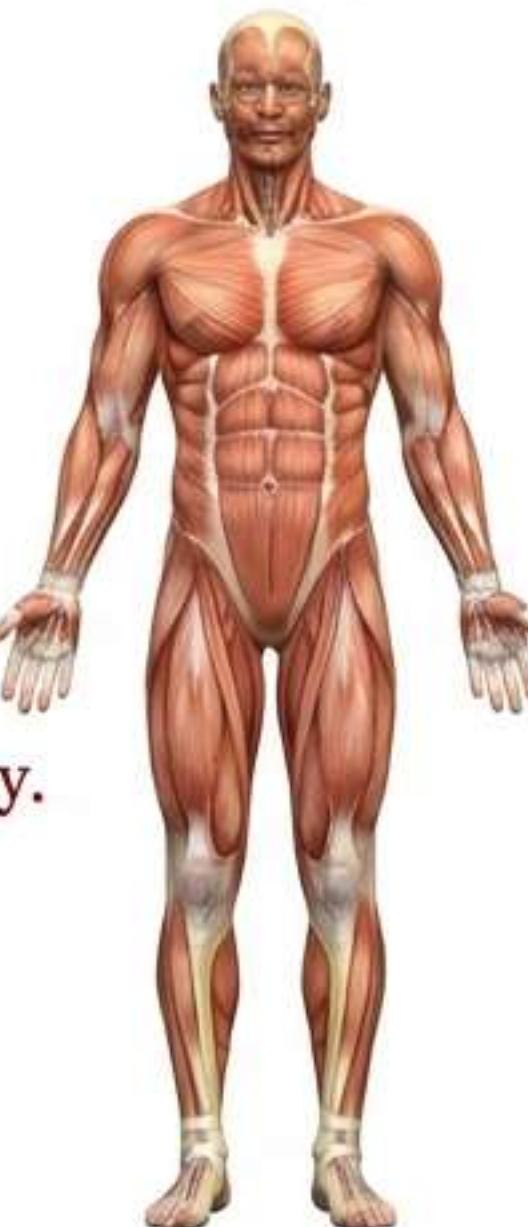
- A- Cardiac muscle is under external nervous dependence
- B- Skeletal muscle is formed of a body and two origins
- C- Among the roles of muscles is thermogenesis
- D- The smallest muscle in the body is the malleus muscle
- E- Muscles represent about 40% of total body weight

Correct: C, E

Muscles are metabolic furnaces; **thermogenesis** (heat production) is key.

They comprise ~40% of body mass.

Correction: The heart has **intrinsic automaticity**. The smallest muscle is the **Stapedius**, not the malleus.



Thermo-Genesis = Generates Heat.

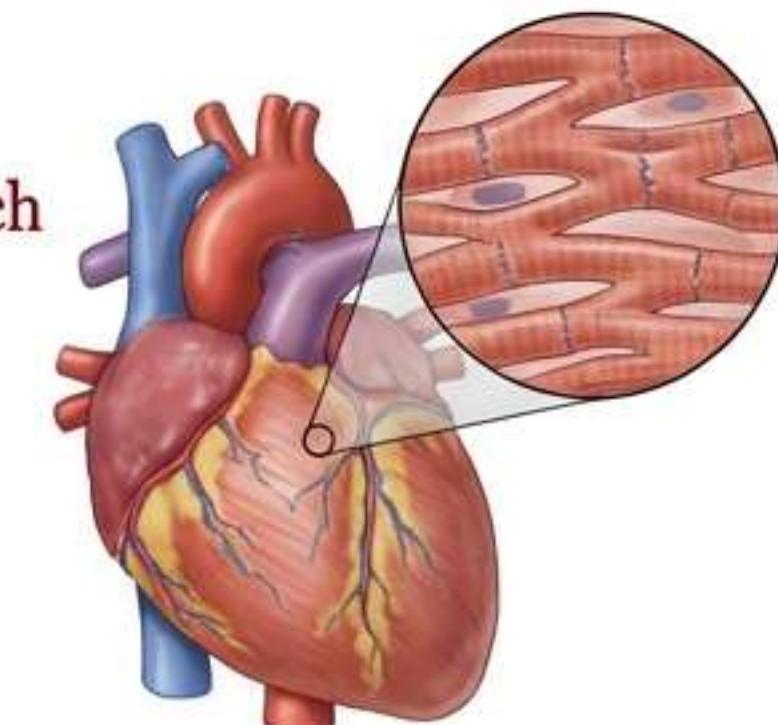
Question 08 | Source: EMD 1 2021

Generalities on myology:

- A- Skeletal muscles can insert on the skin
- B- Cardiac muscle is a striated muscle
- C- There are four types of skeletal muscles: long, short, flat, irregular
- D- Viscera contain smooth muscle
- E- The muscle bundle is the functional unit of the muscle

Correct: B, C, D

While cutaneous muscles attach to skin, ‘skeletal’ implies bone-to-bone in this exam context. **Cardiac muscle** is undeniably **striated**. The functional unit is the **fiber** (cell), not the bundle.



Viscera = Vegetative (Smooth).
Heart = Hard work (Striated).

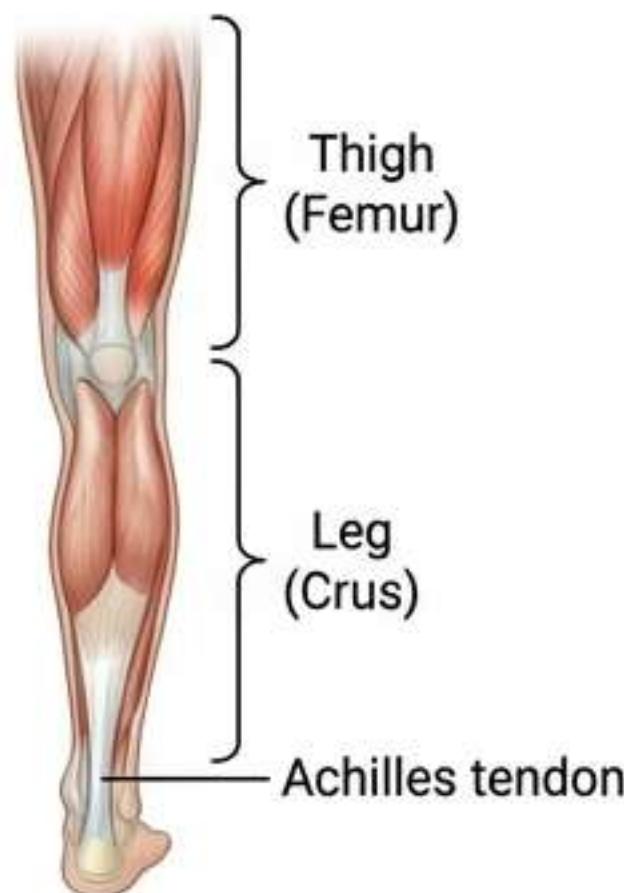
Question 09 | Source: EMD 1 2021

About skeletal muscles:

- A- The quadriceps femoris is located on the anterior face of the leg
- B- The terminal tendon of the triceps sural is called the Achilles tendon
- C- The orbicularis oris is a cutaneous muscle
- D- The muscles of the hand are long muscles
- E- The gluteus maximus is a flat muscle

Correct: B, C, E

Anatomical precision: The **Leg (Crus)** is below the knee; the **Thigh (Femur)** is above. The Quadriceps is on the *thigh*. Hand muscles (interossei) are **short**. The **Achilles tendon** anchors the Triceps Sural (calf).



Mnemonic: Quadriceps = **Thigh-ceps.** (Leg = Tibia/Fibula).

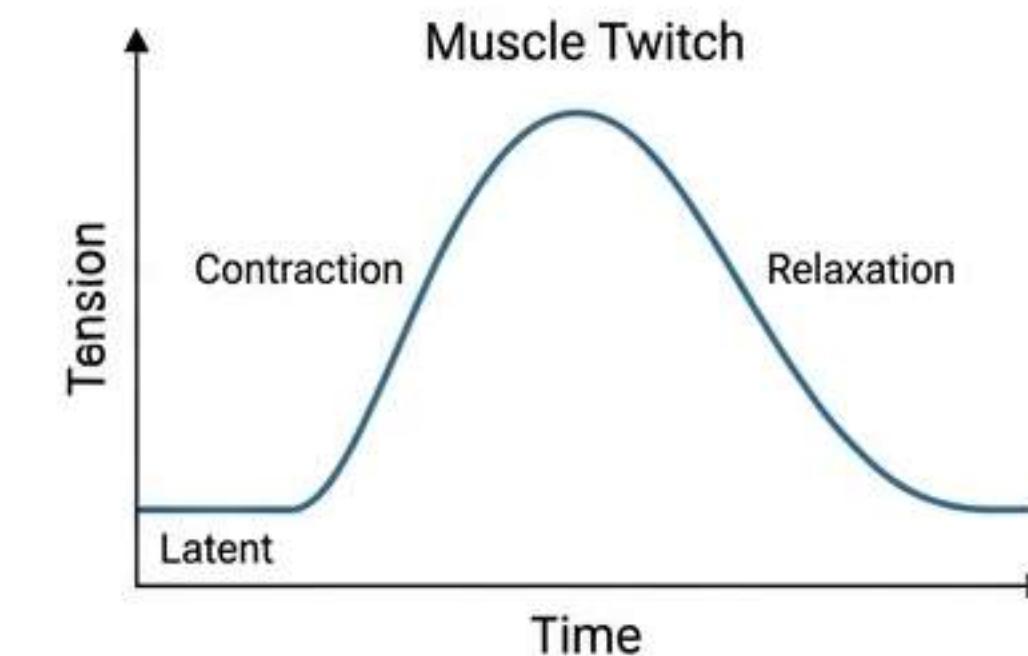
Question 10 | Source: EMD 1 2020

The muscle is endowed with the following properties EXCEPT:

- A- Tonicity
- B- Contractility
- C- Rigidity
- D- Elasticity
- E- Excitability

Correct: C

Healthy muscle is dynamic. It possesses **Tone** (baseline tension), **Elasticity** (recoil), **Excitability** (response), and **Contractility**. **Rigidity** is a pathological state (e.g., rigor mortis), never a physiological property.



Mnemonic: **TEEC** Properties: **Tone, Elasticity, Excitability, Contractility.** (Rigidity is **Wrong**).

Question 11 | Source: EMD 1 2020

Striated muscle is characterized by:

- A- Constitutes the walls of viscera
- B- Has voluntary contraction
- C- Does not fatigue
- D- Constitutes the muscles of the locomotor apparatus
- E- Has smooth cells

Correct: B, D

Striated skeletal muscles drive the **locomotor apparatus**. They are powerful and voluntary but **fatigable** (consume ATP rapidly). Only smooth and cardiac muscles are effectively fatigue-resistant.



Mnemonic:

Skeletal = Sprint (Fast but tires).

Question 12 | Source: EMD 1 2019

These propositions concern muscles:

- A- There are two types: striated muscles and smooth muscles
- B- All striated muscles are voluntary
- C- The human body contains 400 muscles
- D- Smooth muscles are specific to viscera
- E- A muscle is called digastric when it possesses a single belly

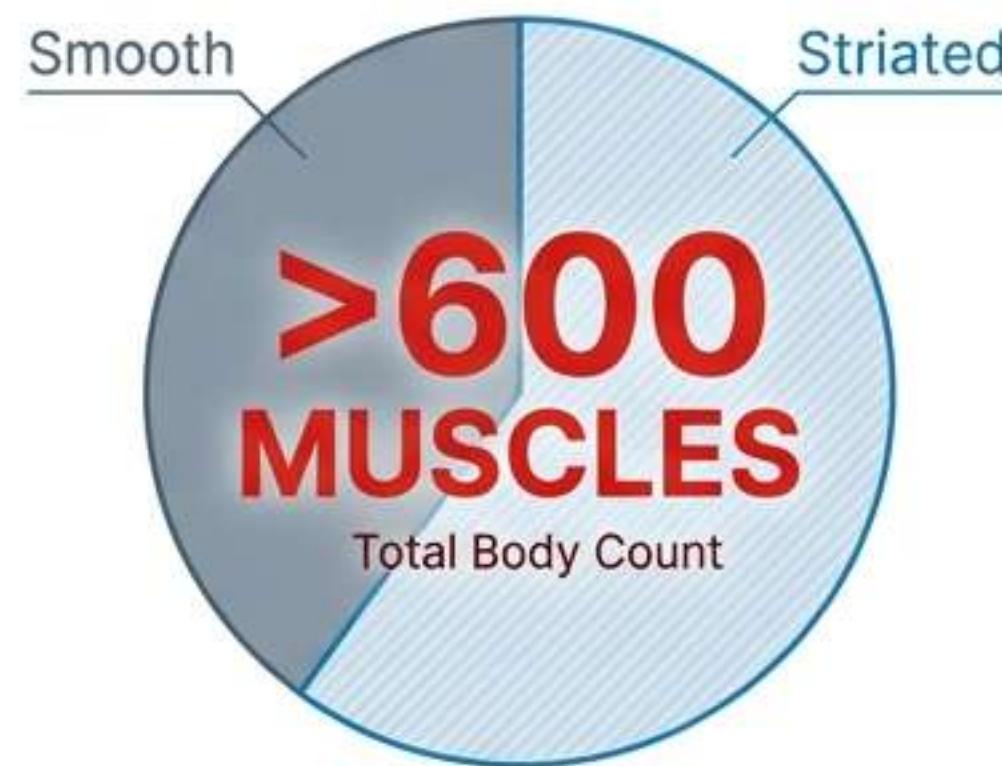
Correct: A, D

Broadly, tissue is either **Striated** (striped) or **Smooth** (plain).

Correction on B: The **Heart** is striated but involuntary.

Correction on C: The body contains over **600** muscles.

Digastric means **two** bellies.



Mnemonic:

600+ Soldiers (Muscles) in the Army.

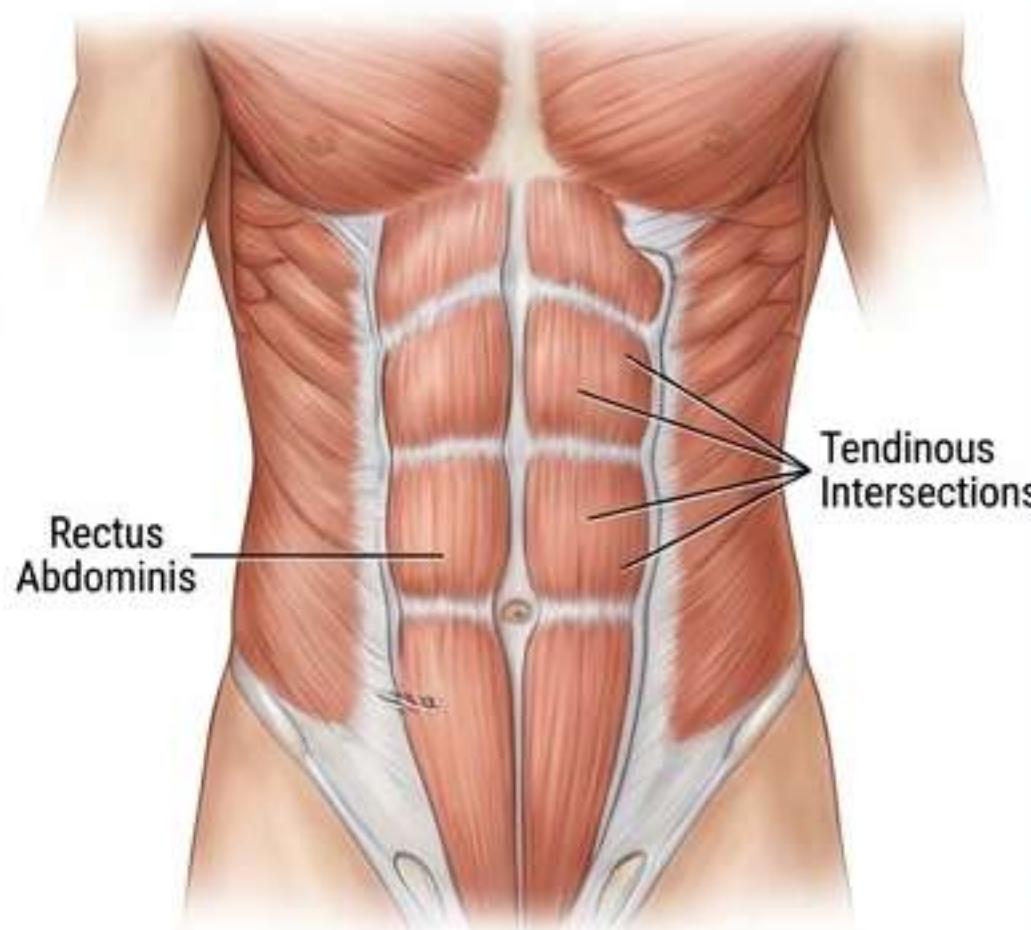
Question 13 | Source: EMD 1 2017

These propositions concern muscles:

- A- There are two types of muscles: striated and smooth
- B- All striated muscles are dependent on the will
- C- There are more than 600 in the human body
- D- As with bones, we distinguish flat, short, and long muscles
- E- A muscle is called poly-gastric when it possesses a single body

Correct: A, C, D

We categorize muscle shapes like bones: **Long** (limbs), **Flat** (trunk), and **Short**. **Polygastric** means "Many Bellies" (like the Rectus Abdominis with its tendinous intersections), not one.



Mnemonic: Poly = Plenty of bellies.

Question 14 | Source: EMD3 2015

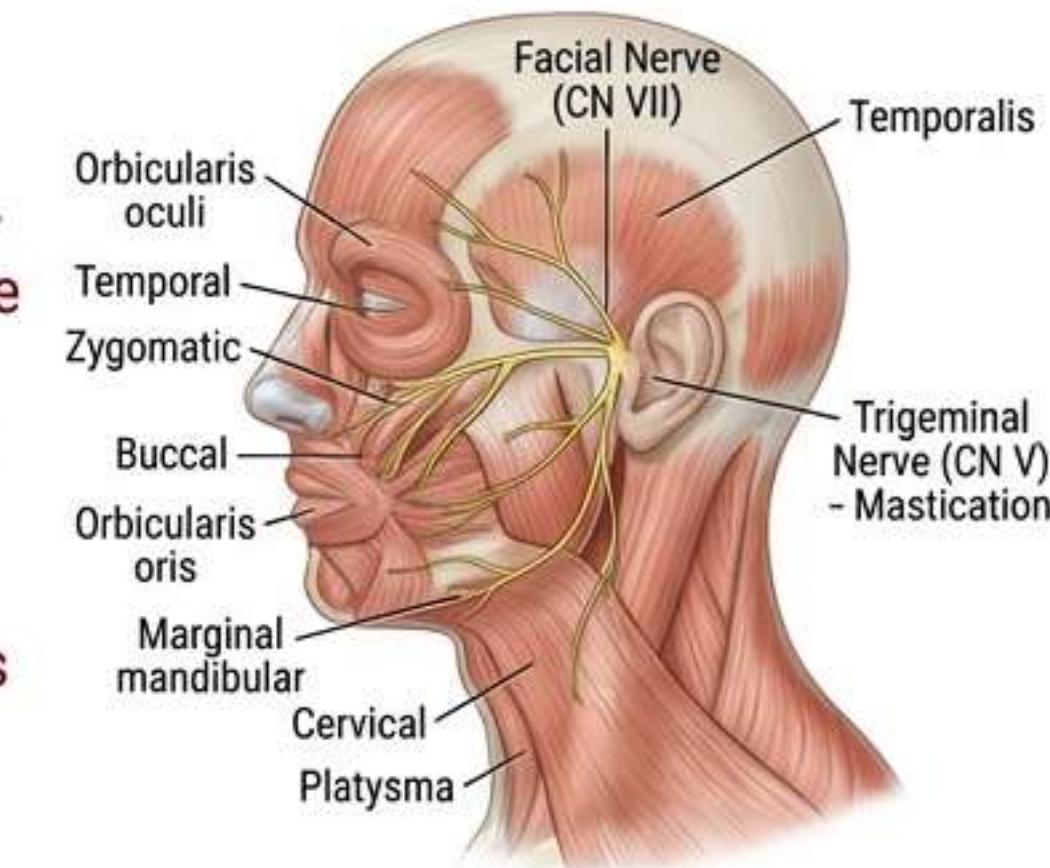
Check the **FALSE** proposition(s):

- A- Cutaneous muscles have a mobile insertion on the deep face of the skin
- B- They are all innervated by the trigeminal nerve
- C- They are divided into three groups: muscles of the skull, neck, and face
- D- The occipito-frontalis muscle is connected by the epicranial aponeurosis
- E- The platysma (neck) inserts above at the level of the zygomatic arch

Correct: B, C

CRITICAL ALERT:

Muscles of facial expression are innervated by the **Facial Nerve (VII)**. The Trigeminal (V) is sensory to the face and motor *only* to mastication. Grouping usually focuses on Face and Scalp; platysma is distinct.



Mnemonic: Face moves with Facial (VII). Chew with Trigeminal (V).

Question 15 | Source: EMD3 2015

Check the extrinsic muscles of the ATM (TMJ):

- A- Lateral external ligament
- B- Internal lateral ligament
- C- Stylo-mandibular ligament**
- D- Pterygo-mandibular ligaments
- E- Spheno-mandibular ligament
- C, E**



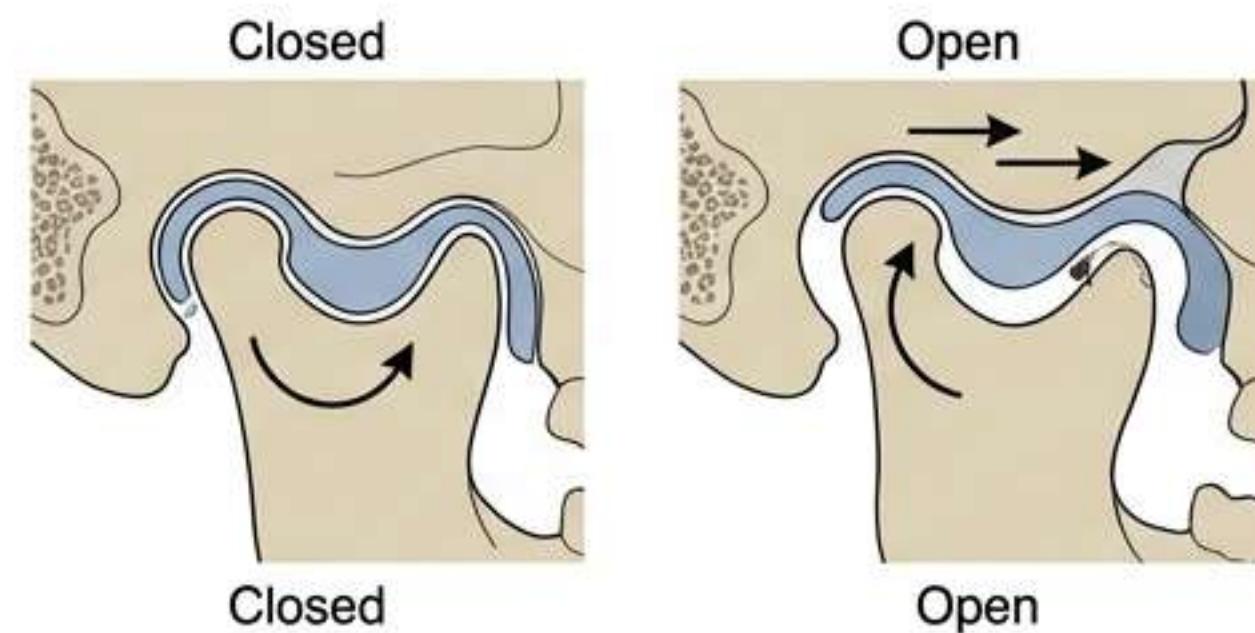
This question asks for "extrinsic" stabilizers (ligaments). The **Spheno-mandibular** and **Stylo-mandibular** ligaments are accessory stabilizers located at a distance from the joint capsule, distinct from the intrinsic lateral ligaments.

Spheno & Stylo = Stable & Separate (Extrinsic).

Question 16 | Source: EMD3 2015

The movements of lowering and raising of the ATM: check the correct answer

- A- They happen in the vertical plan
- B- They happen in the horizontal plan**
- C- They are produced by non-simultaneous rotation of condyles
- D- The initial phase is determined by forward translation of both condyles
- E- All these answers are false



TMJ mechanics are complex. Opening involves **Rotation** (lower compartment) followed by **Translation** (upper compartment). The exam key highlights **B**. Remember: Condyles must move simultaneously for healthy opening.

Opening = Rotate then Slide.

Question 17 | Source: EMD3 2015

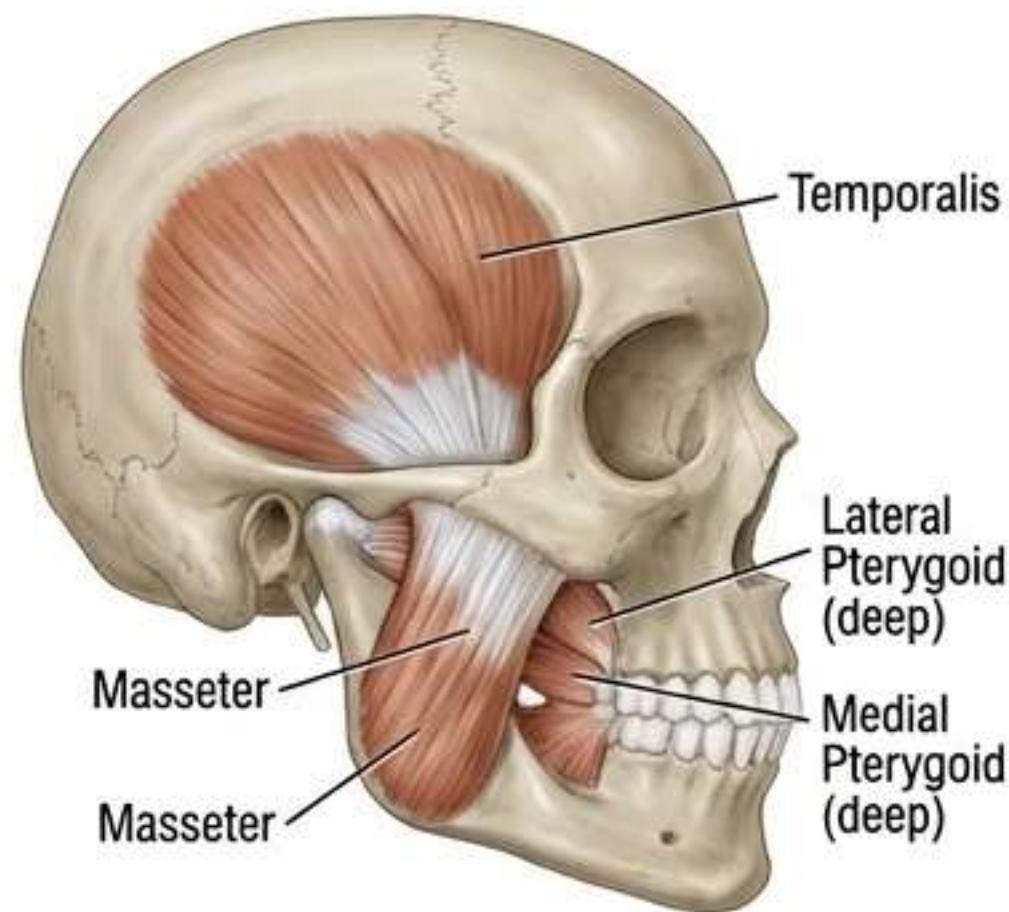
Check the masticatory muscles:

- A- Muscle mylo-hyoid
- B- Muscle temporal
- C- Muscle masseter
- D- Muscle medial pterygoid
- E- Muscle lateral pterygoid

Correct: B, C, D

The primary muscles of mastication are the **Temporal, Masseter, and the two Pterygoids**. The Mylohyoid (A) forms the floor of the mouth.

Note: Lateral Pterygoid is also a masticator, though this specific key omits it.



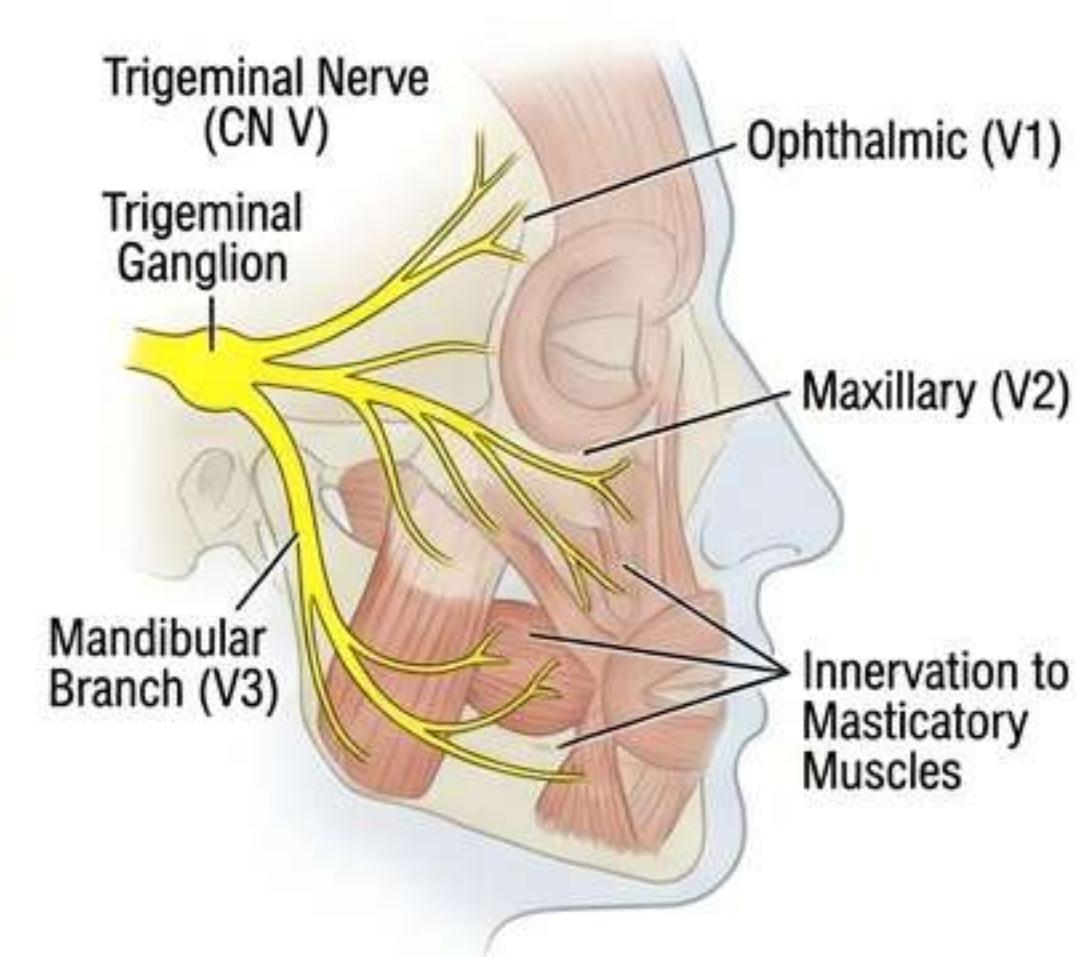
M.O.M. = Time To Munch Pie (Temporal, Masseter, Pterygoids).

Question 18 | Source: EMD3 2015

The masticatory muscles are innervated by: check the correct answer

- A- Facial nerve
- B- Trigeminal nerve**
- C- Vagus nerve
- D- Glossopharyngeal nerve
- E- Facial and trigeminal nerves

The **Trigeminal Nerve (CN V)**, specifically the Mandibular branch (V3), powers chewing. The Facial Nerve (CN VII) powers lips and cheeks to keep food inside, but the shooting, but the heavy lifting of the jaw is entirely Trigeminal.



Trigeminal = Tri to chew.