The Muscles of the Upper Extremity

- A Visual Guide -

Anatomy & Physiology I
BIOL 121

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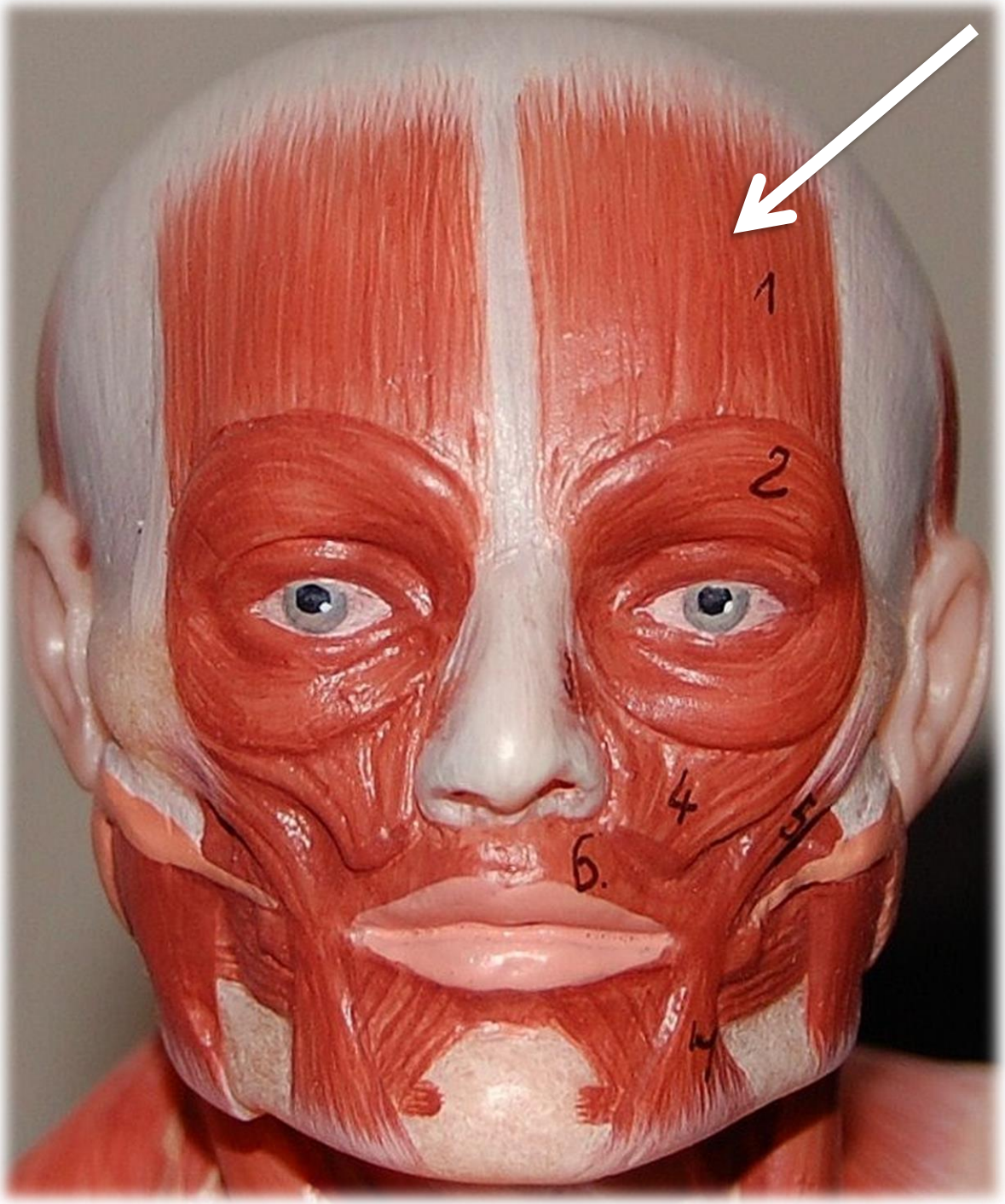
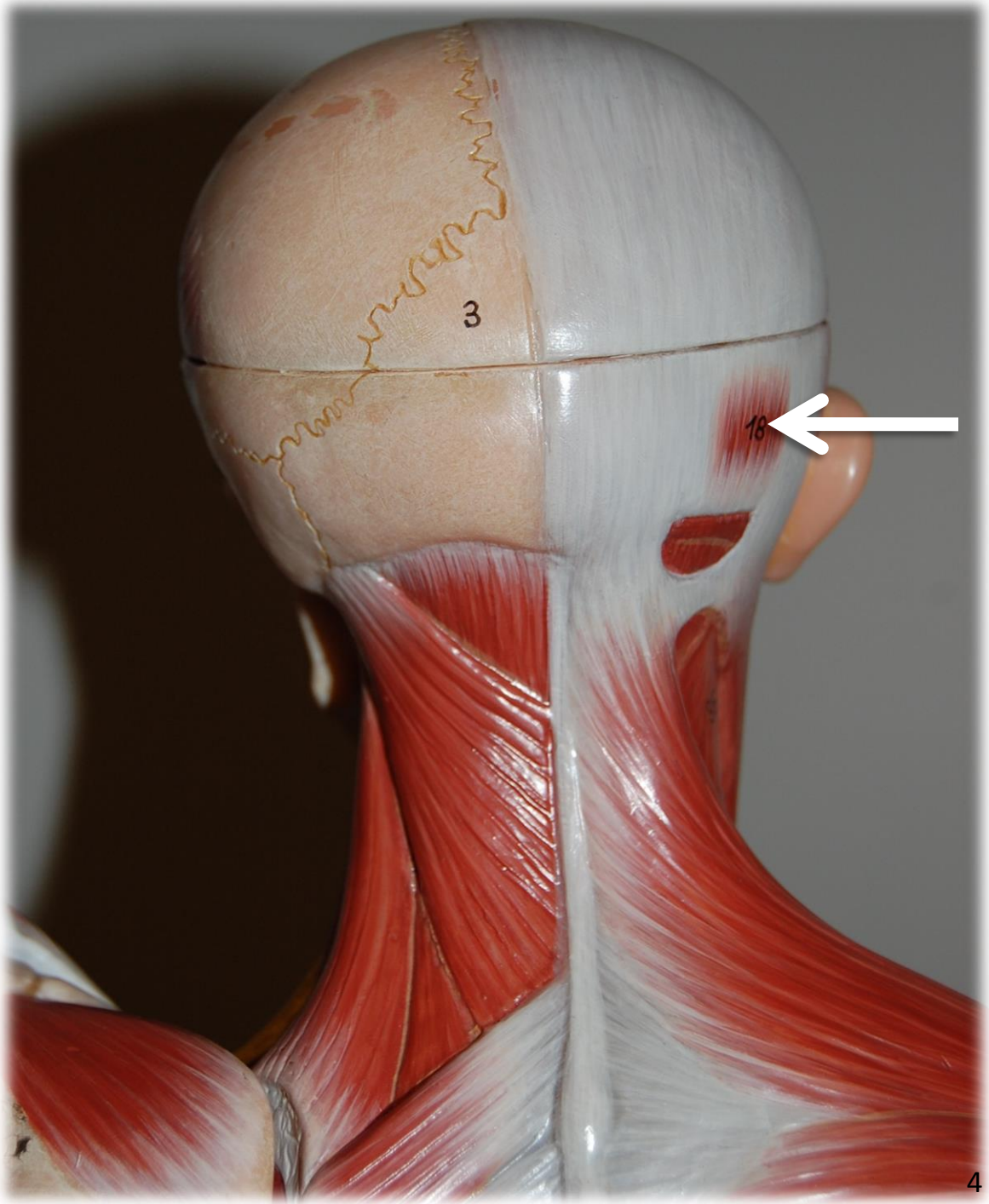
Frontalis

Elevates eyebrows, wrinkles forehead horizontally (surprised look), draws scalp forward (anteriorly)

Frontalis

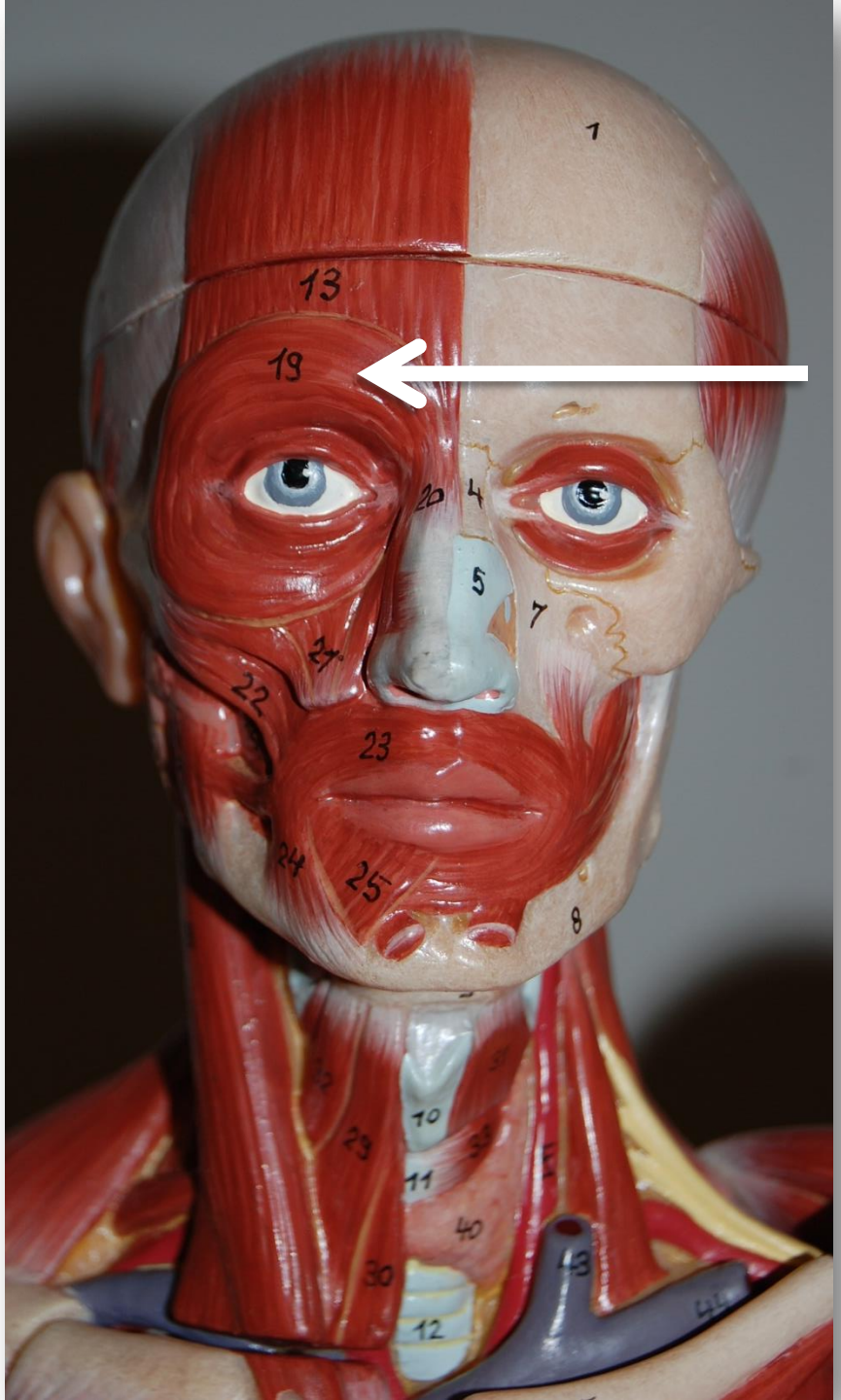


Occipitalis



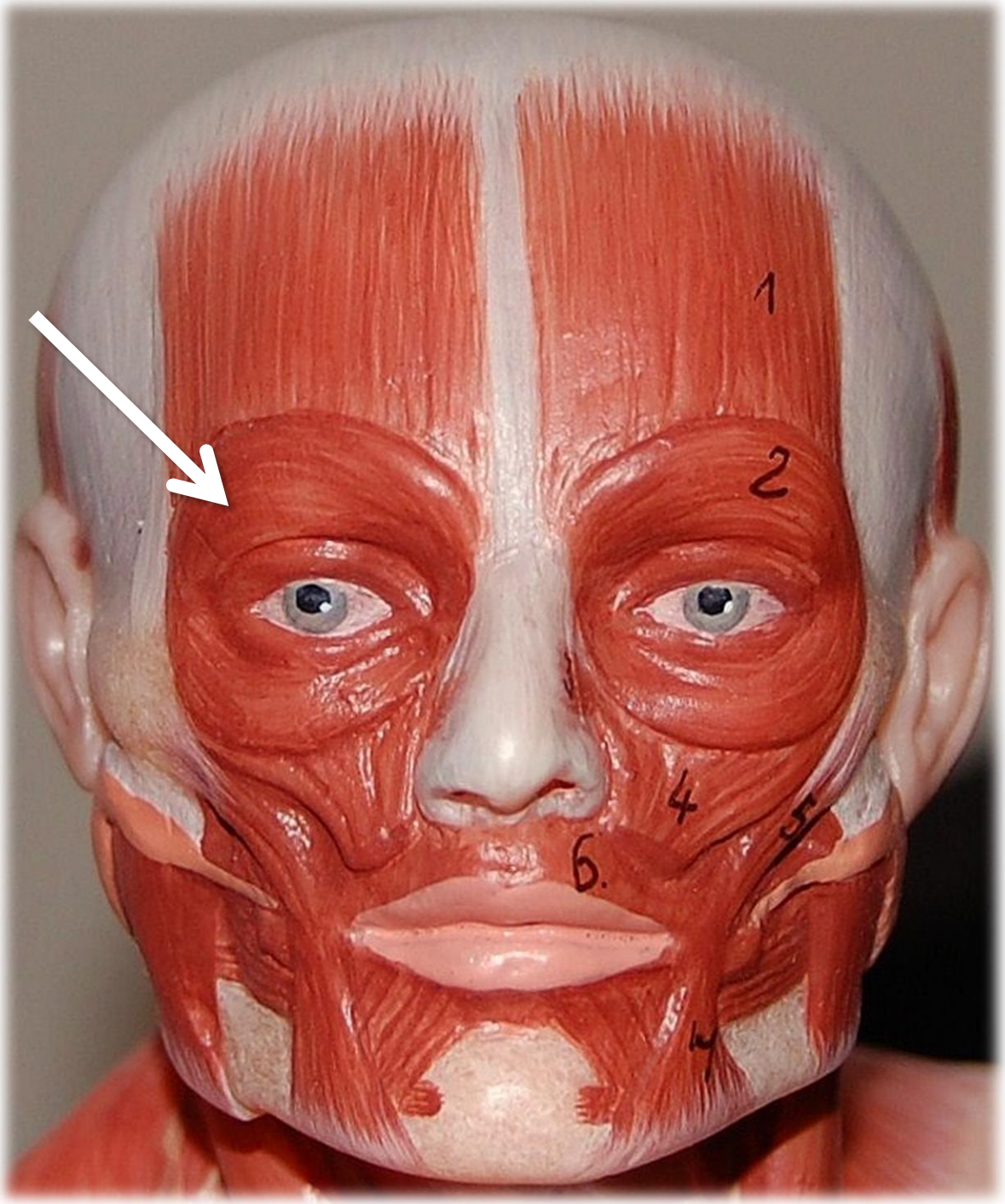
Draws scalp backward (posteriorly)

Orbicularis oculi

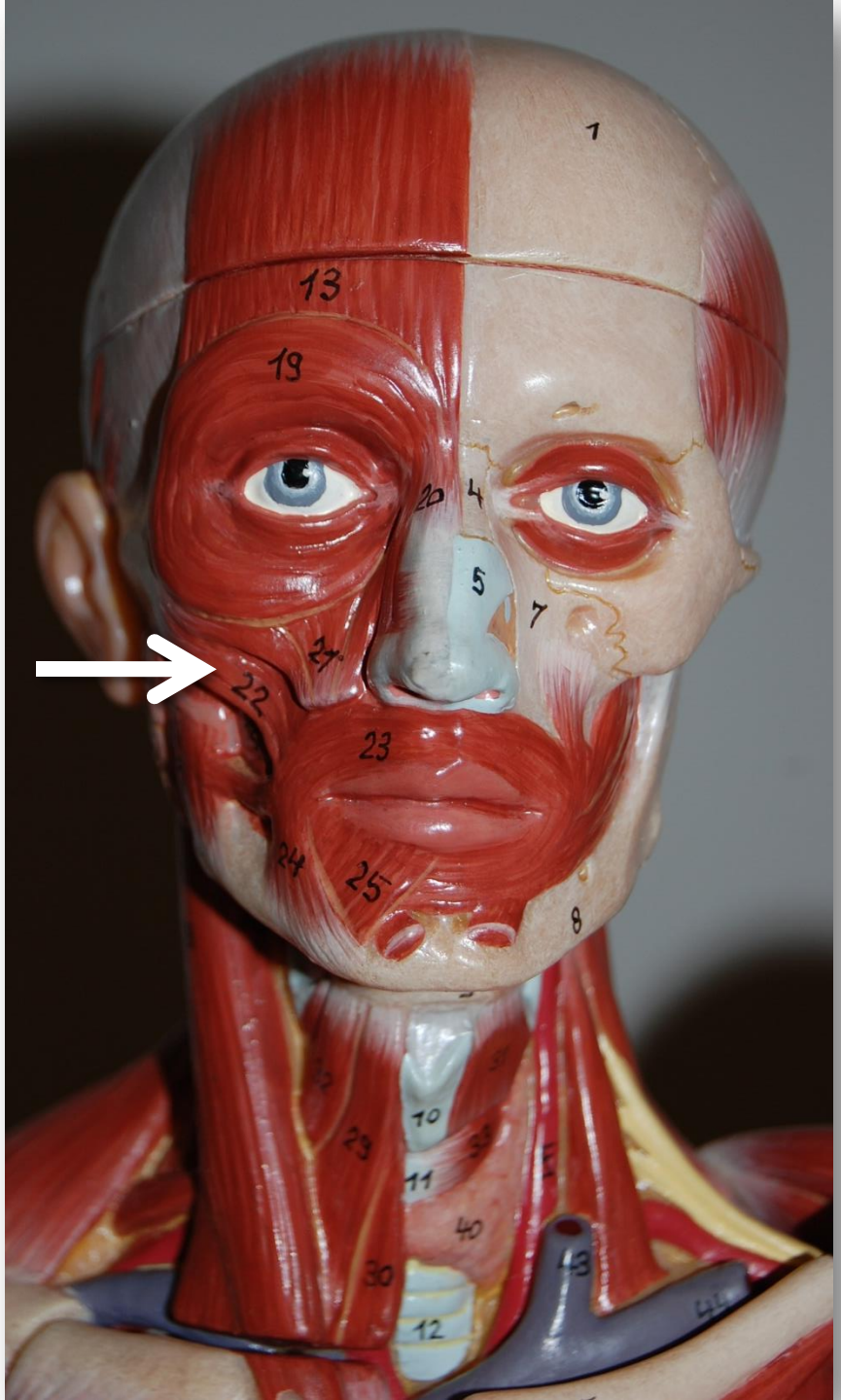


Closes eyelids; used in blinking, winking, and squinting

Orbicularis oculi

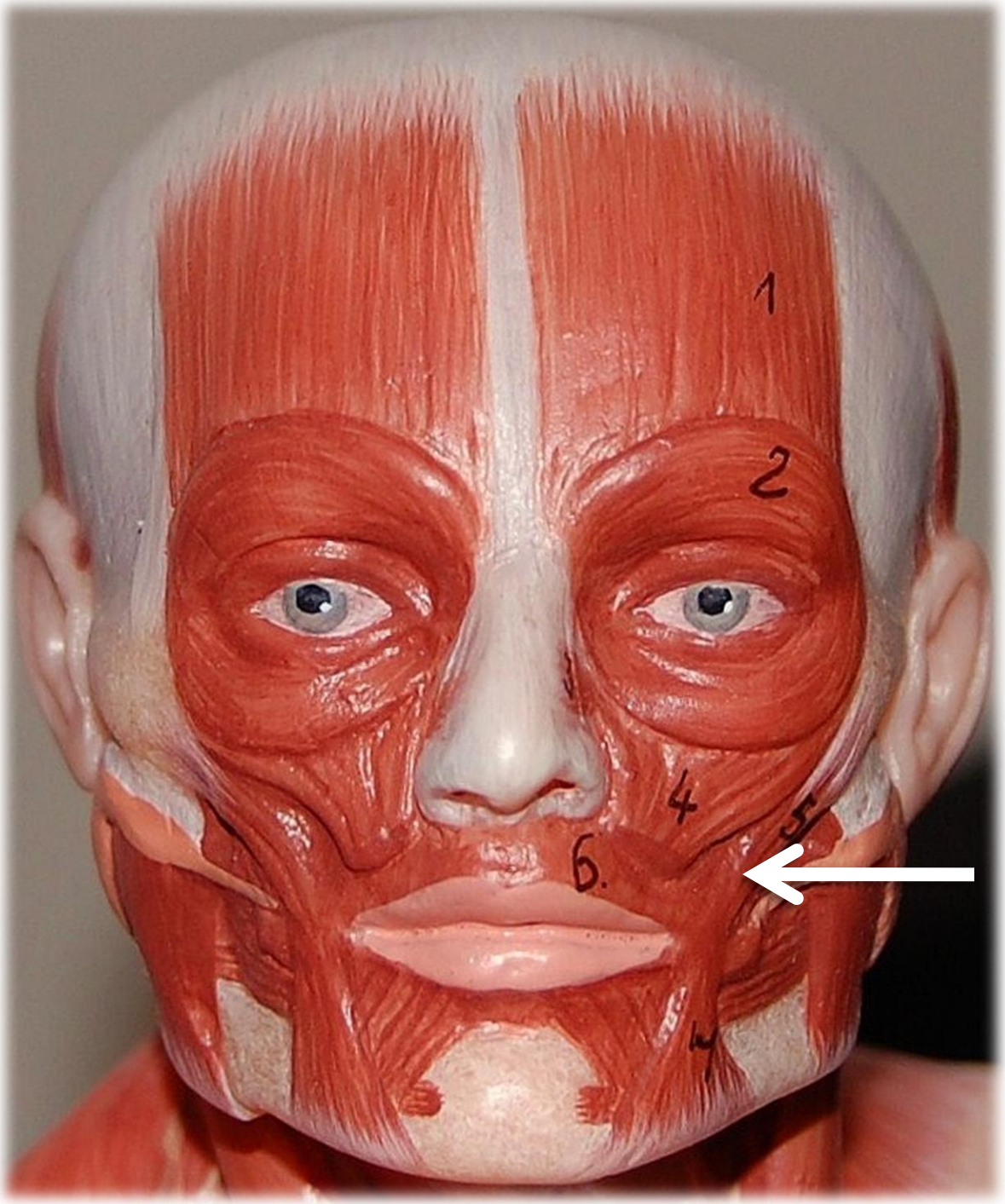


Zygomaticus major

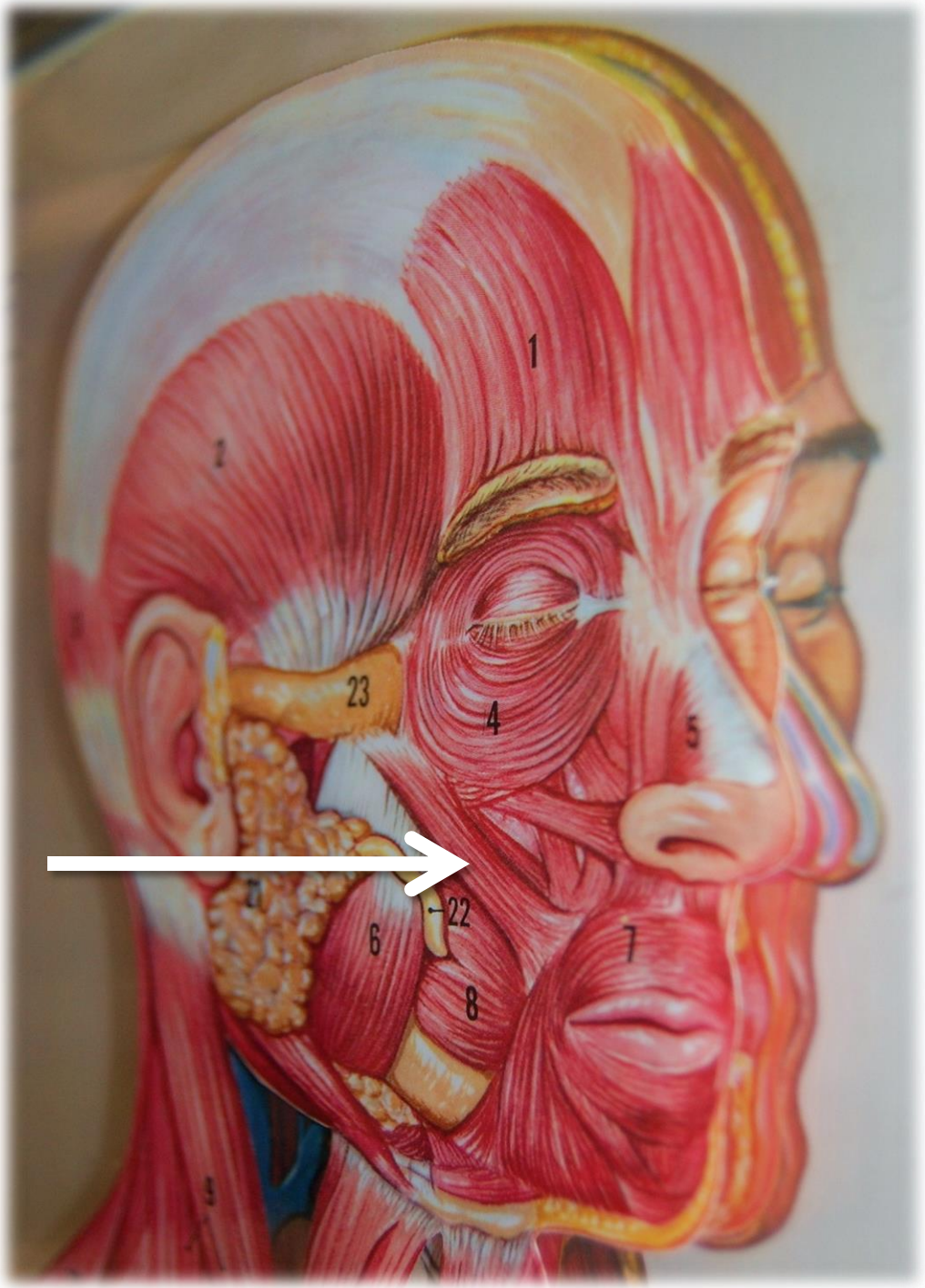


Draws angles of mouth superiorly and laterally; major muscle used in smiling and laughing

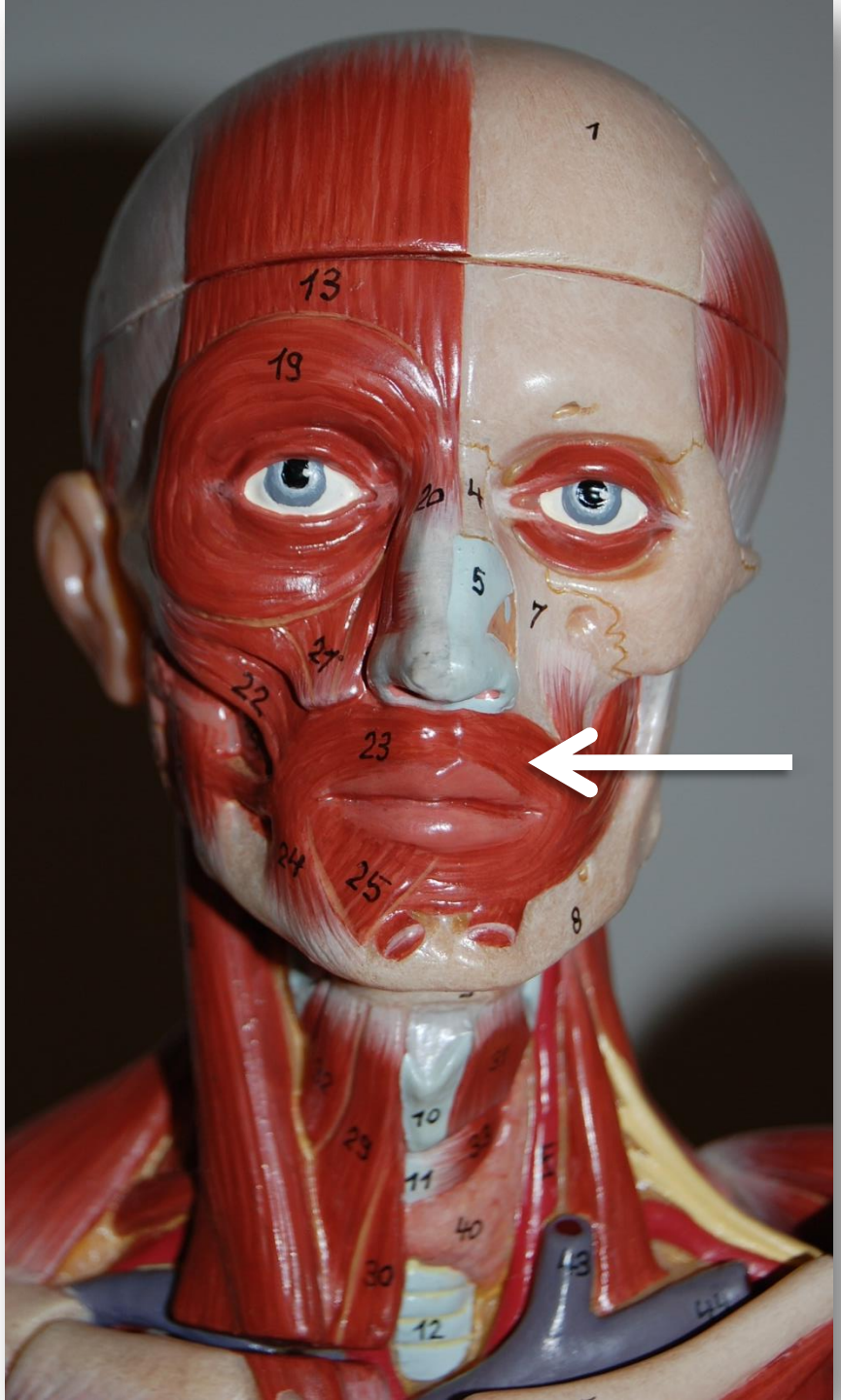
Zygomaticus major



Zygomaticus major

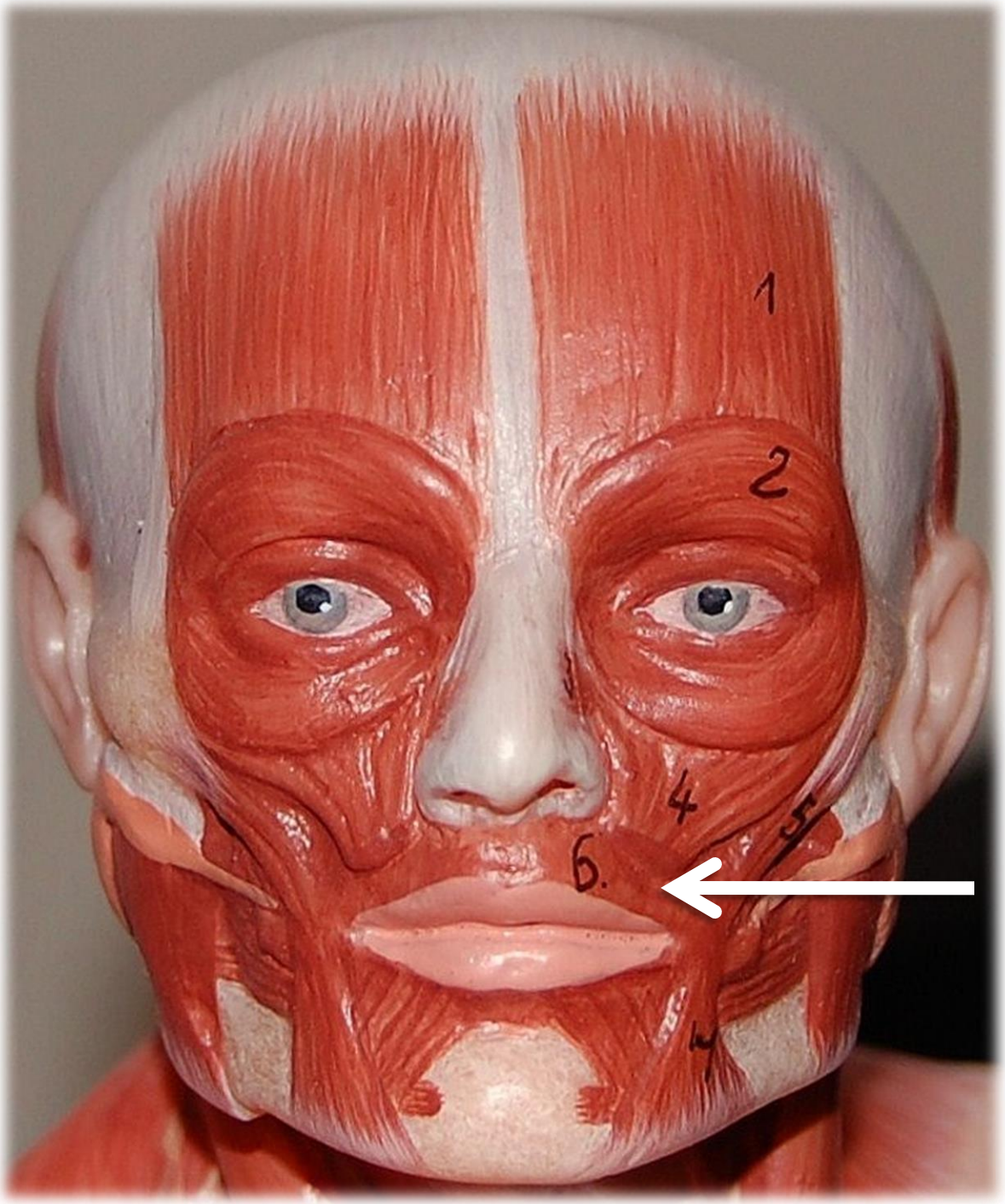


Orbicularis oris

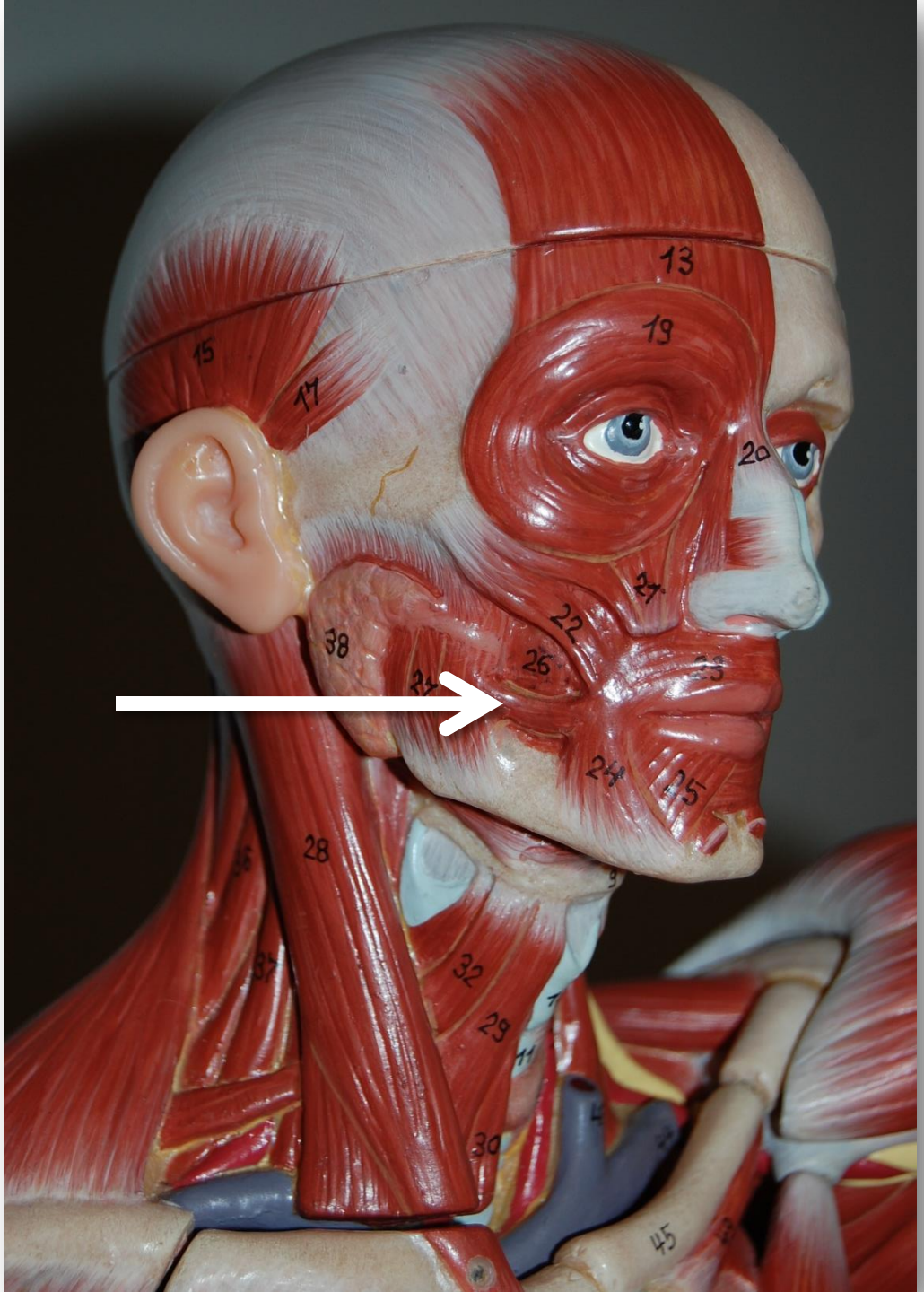


Closes and protrudes lips; the "kissing muscle“; used in whistling and forming many letters during speech

Orbicularis oris

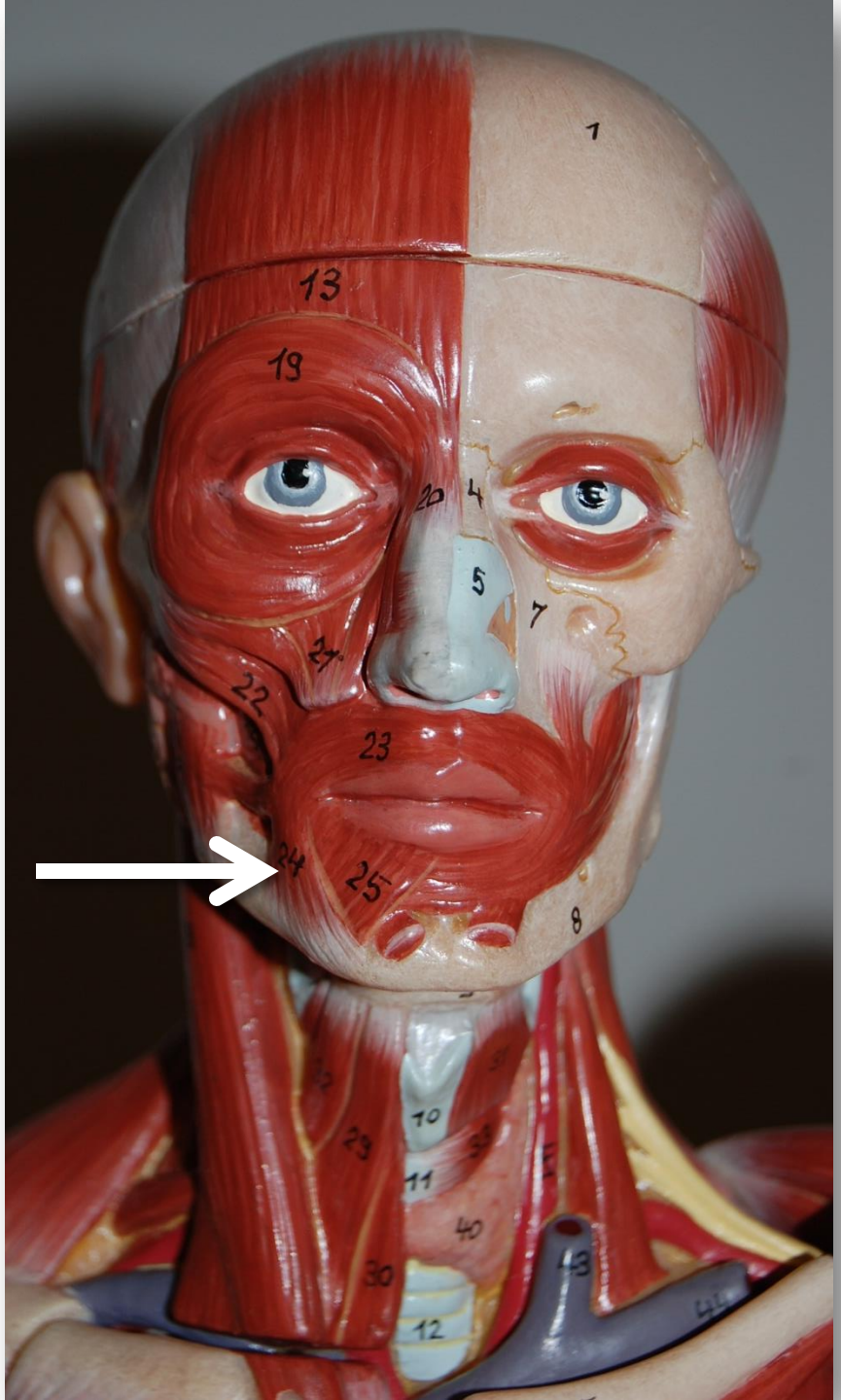


Risorius



Draws angles of mouth laterally (grimacing)

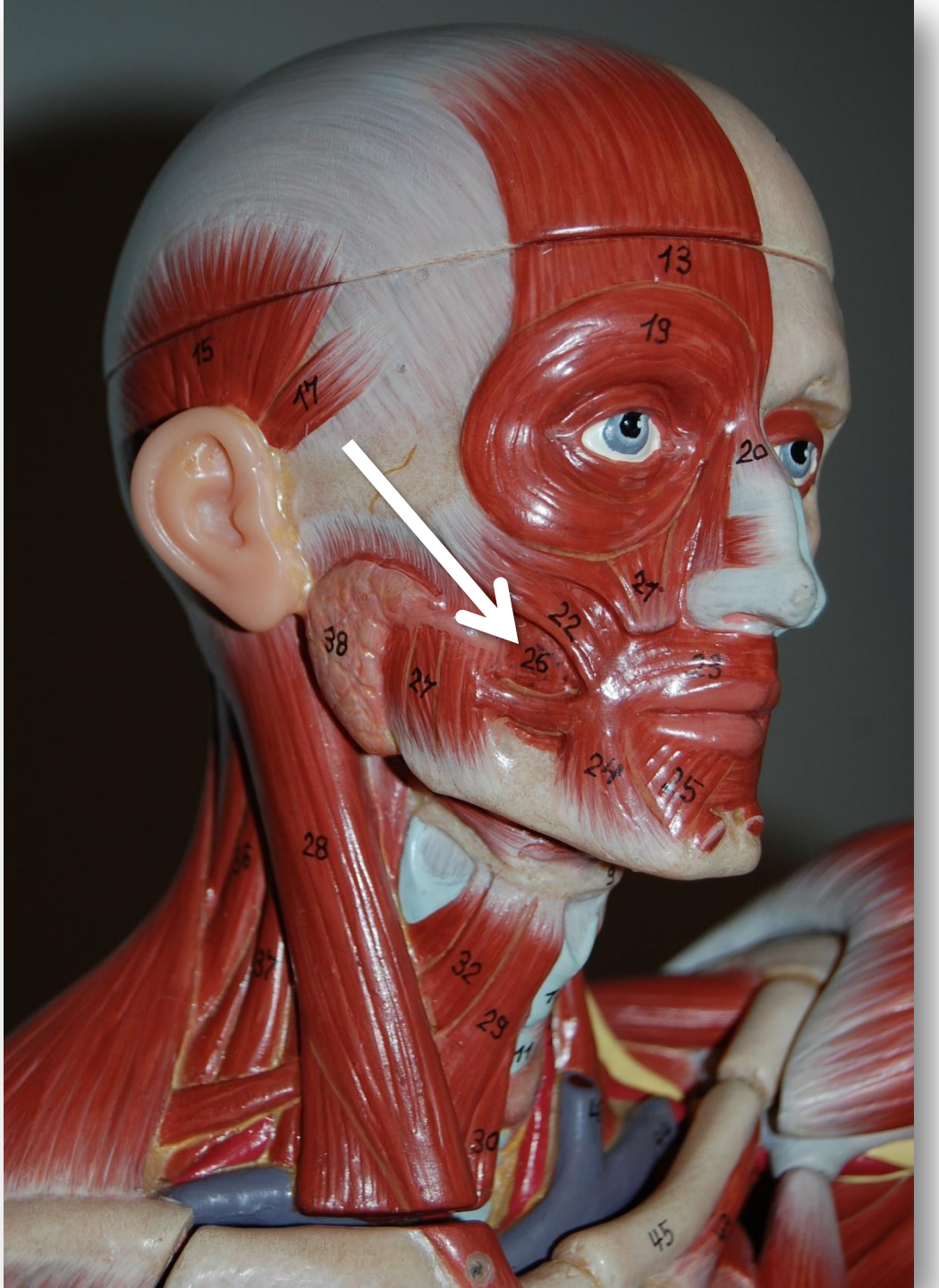
Depressor anguli oris (Triangularis)



Draws angles of mouth inferiorly and laterally when opening mouth; used in frowning

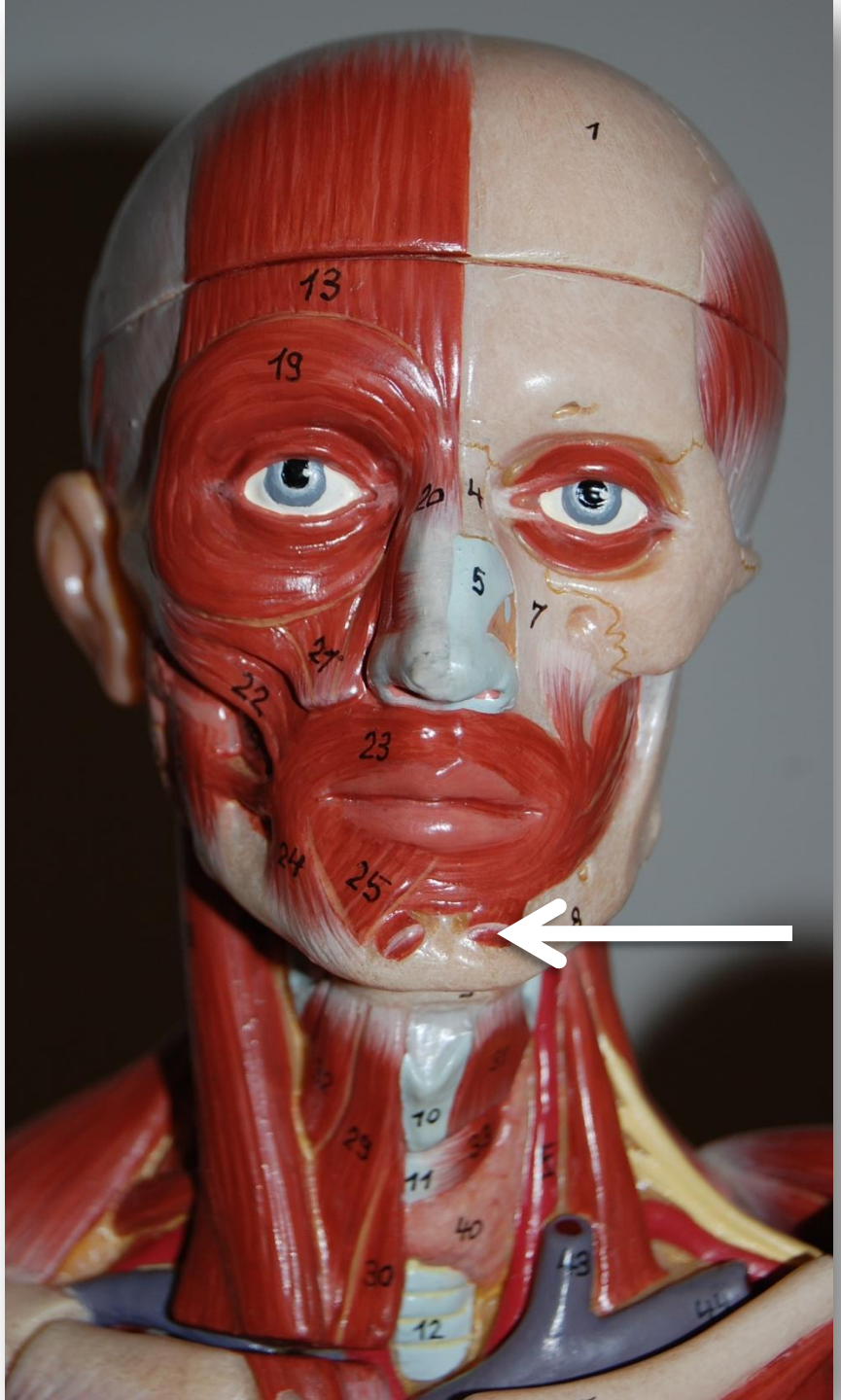
Depressor anguli oris (Triangularis)

Buccinator



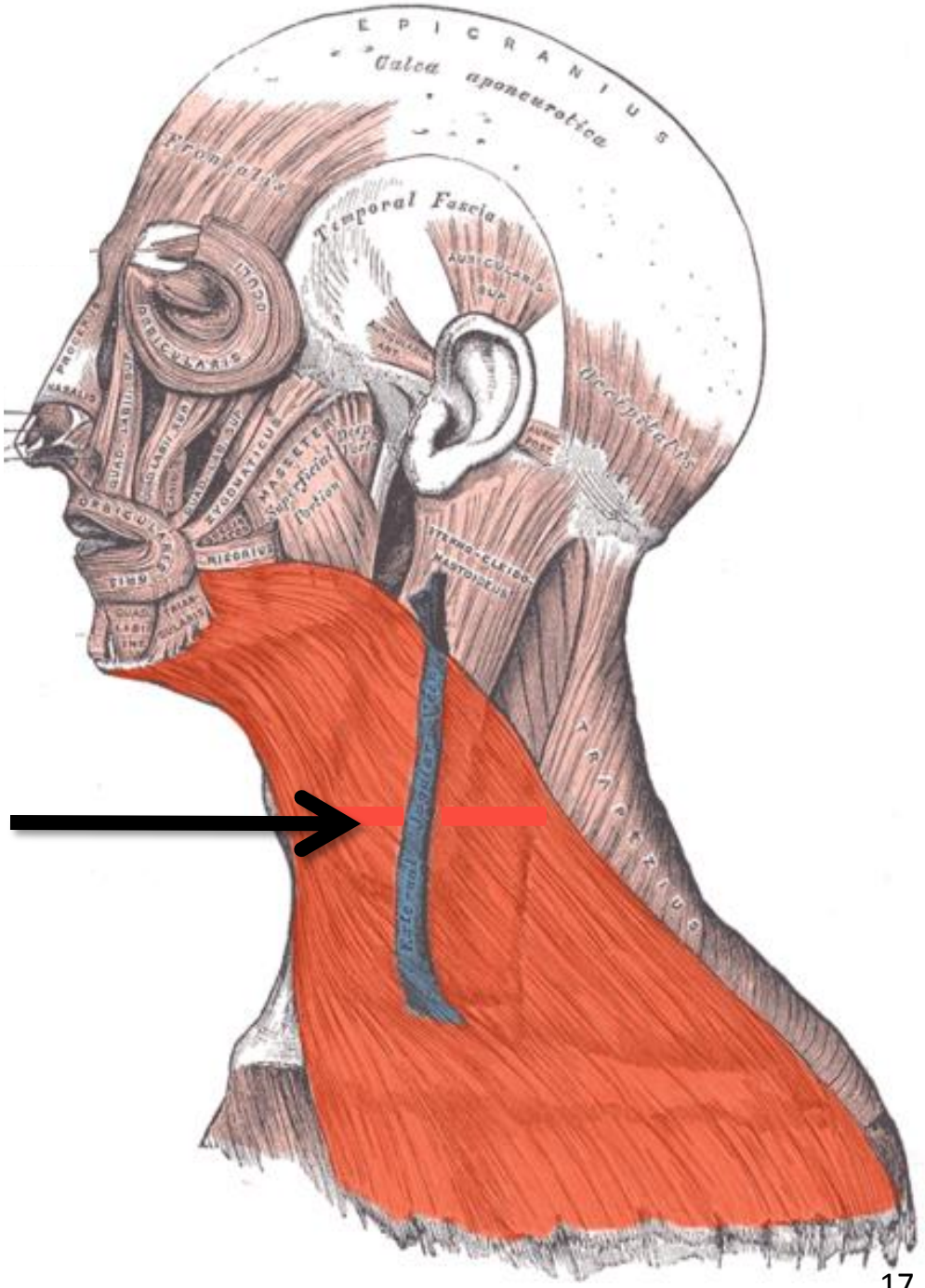
Pulls in lips and cheeks; used in whistling, blowing, sucking

Mentalis



Elevates and protrudes lower lip (pouting)

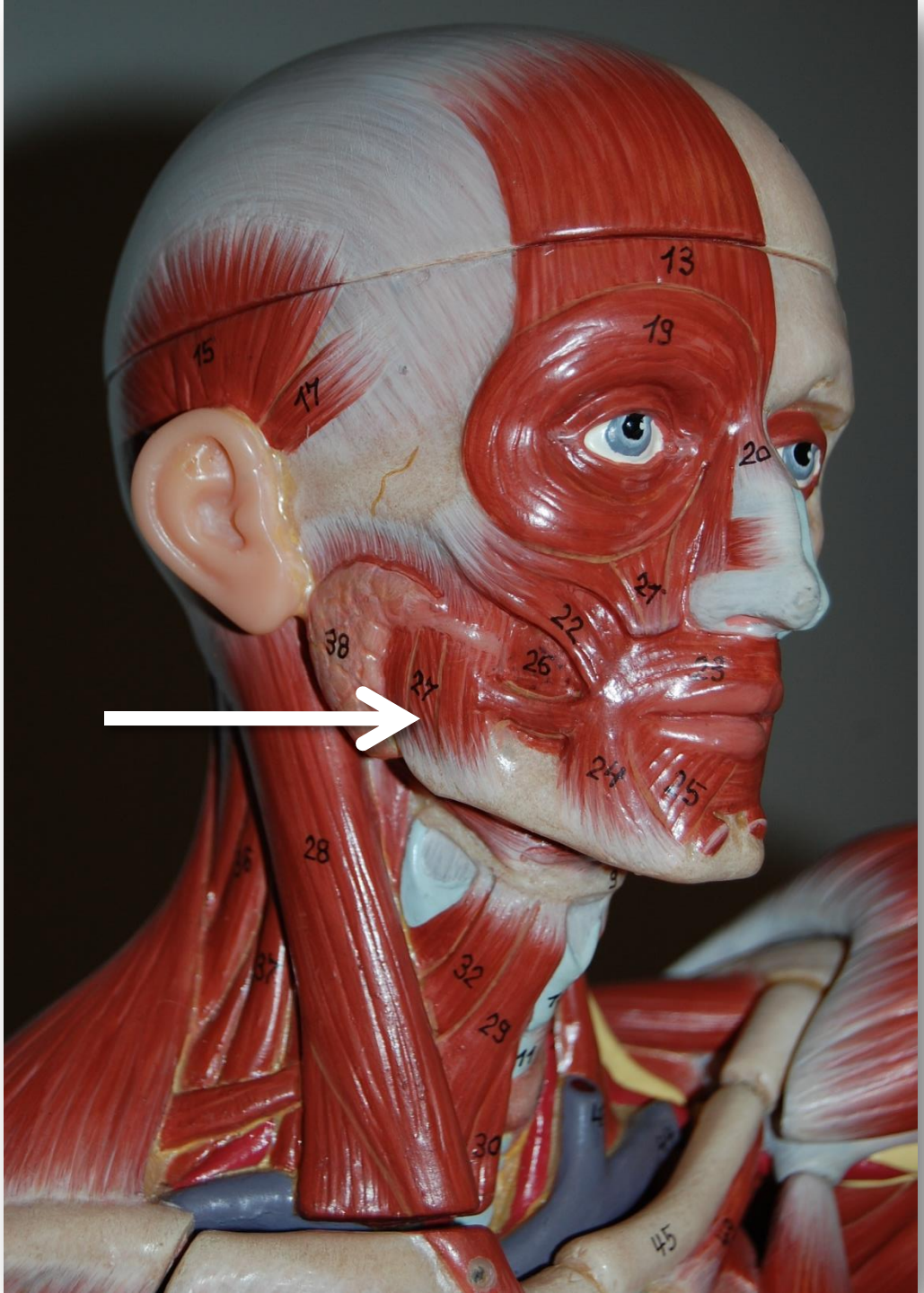
Platysma



Depresses mandible; draws lower lip inferiorly and posteriorly (pouting)

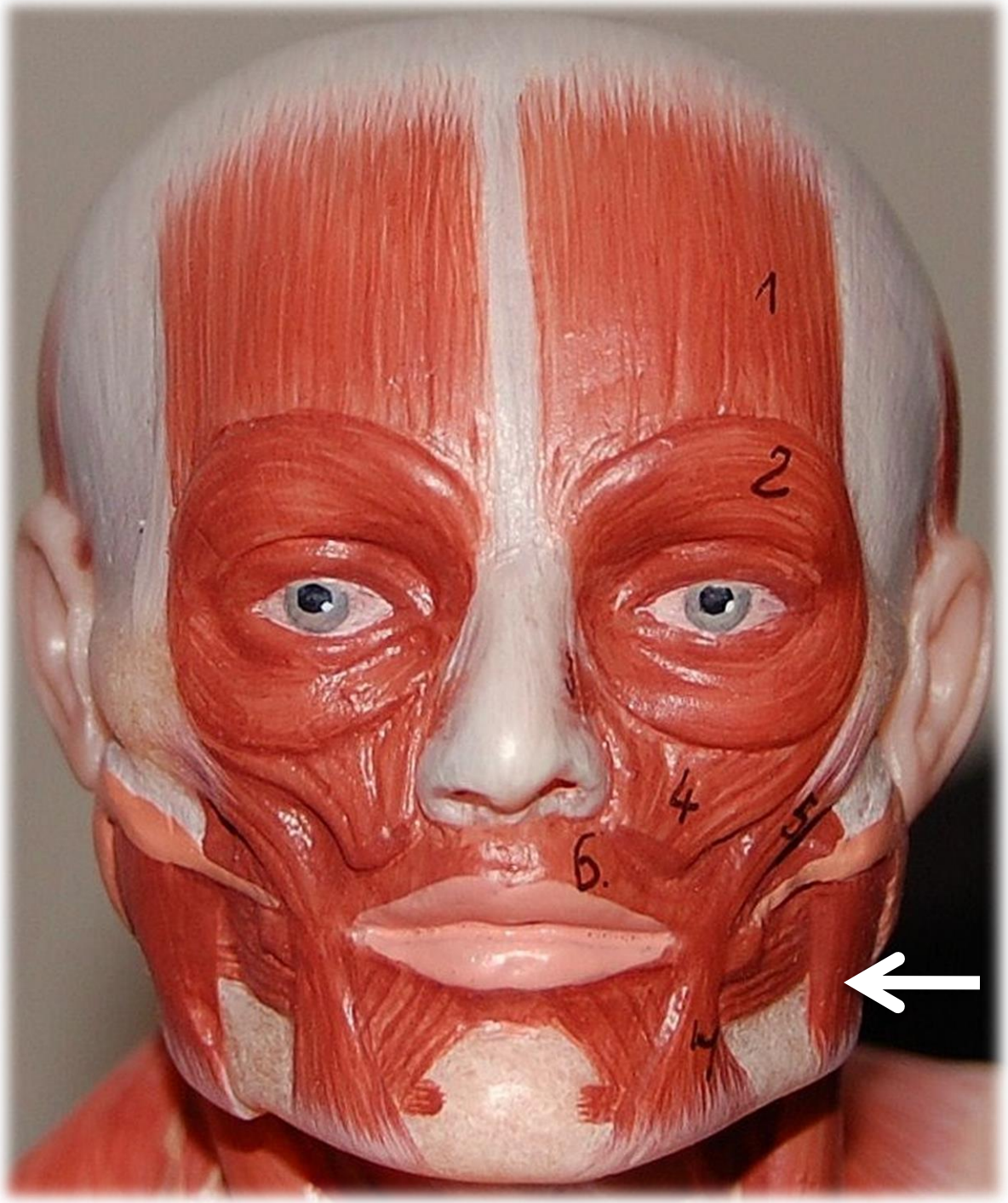
http://commons.wikimedia.org/wiki/File:Platysma.png

Masseter

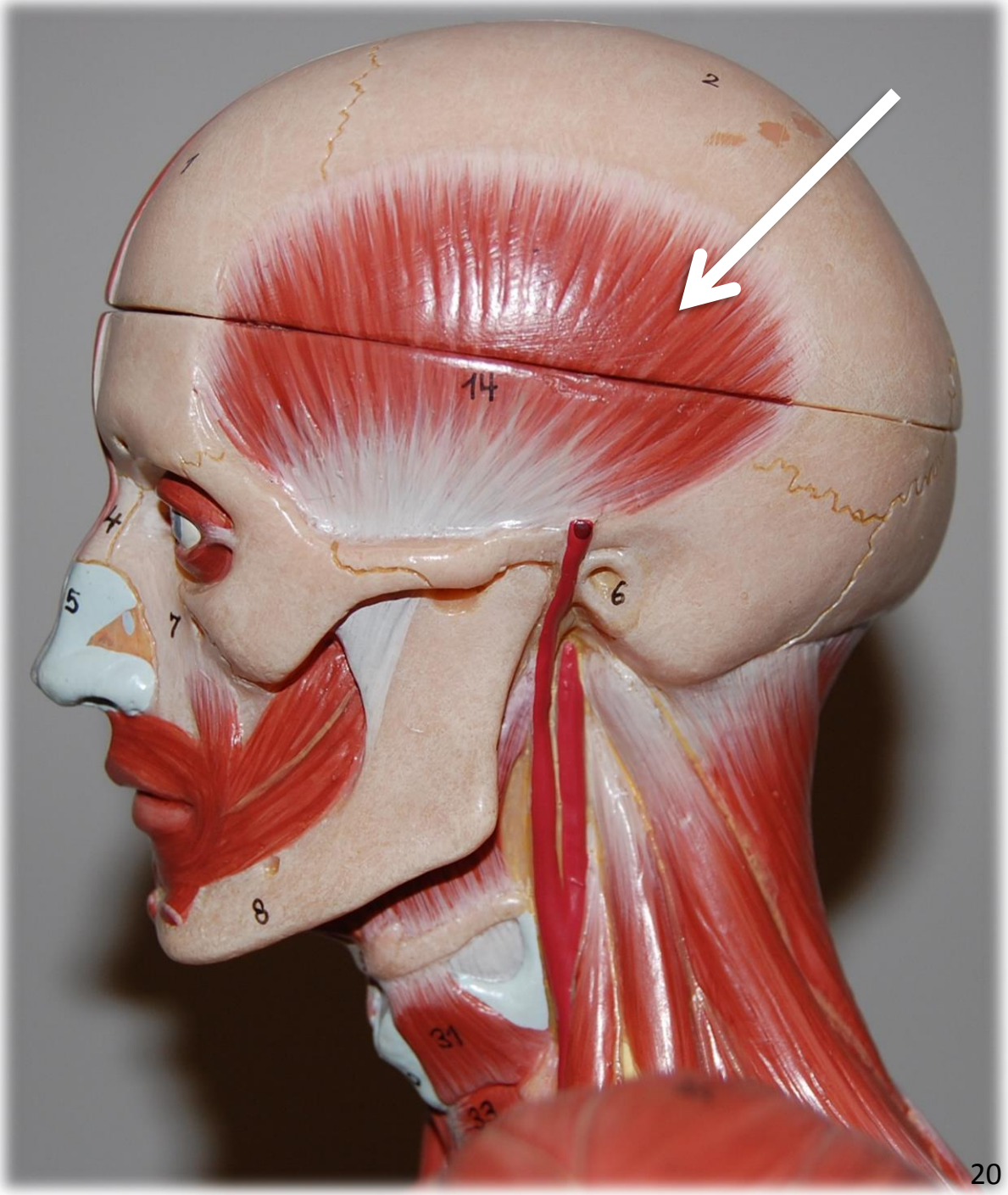


Elevates mandible (closes mouth) when chewing and slightly protracts it

Masseter

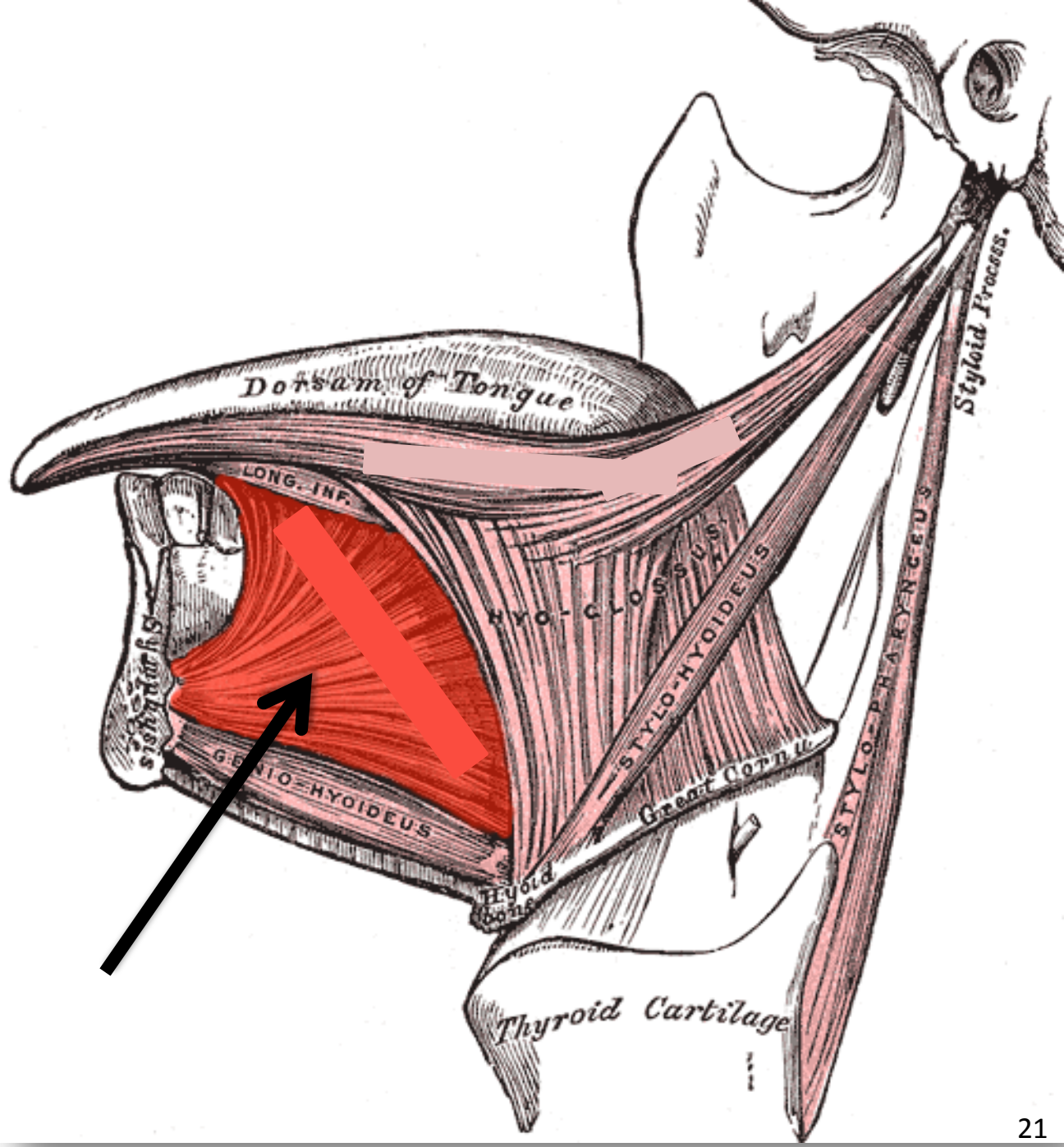


Temporalis



Elevates, retracts, and assists in side-to-side movement of mandible

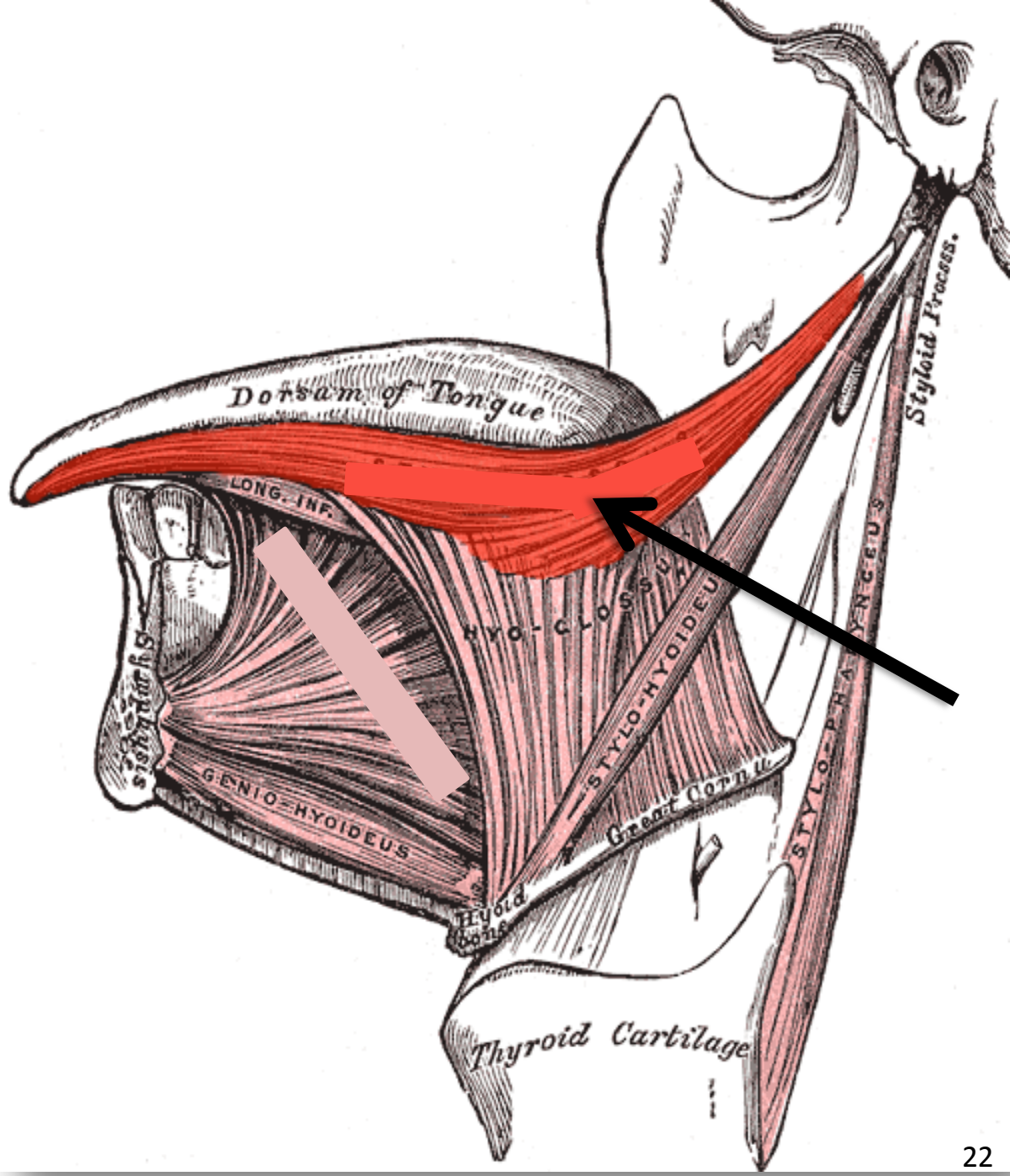
Genioglossus



Protracts and depresses tongue

http://commons.wikimedia.org/wiki/File:Genioglossus.png

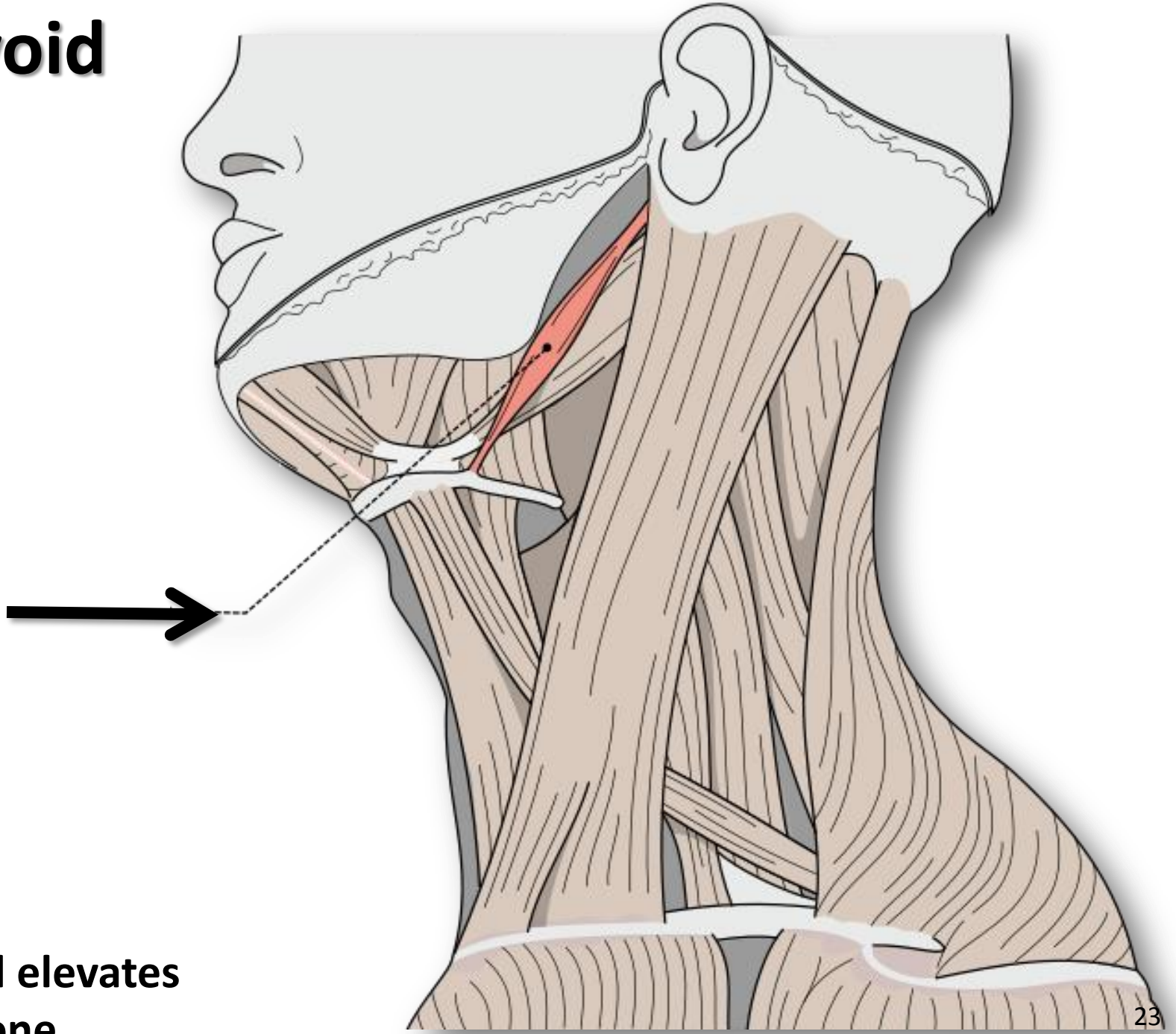
Styloglossus



Retracts and elevates tongue

http://commons.wikimedia.org/wiki/File:Styloglossus.png

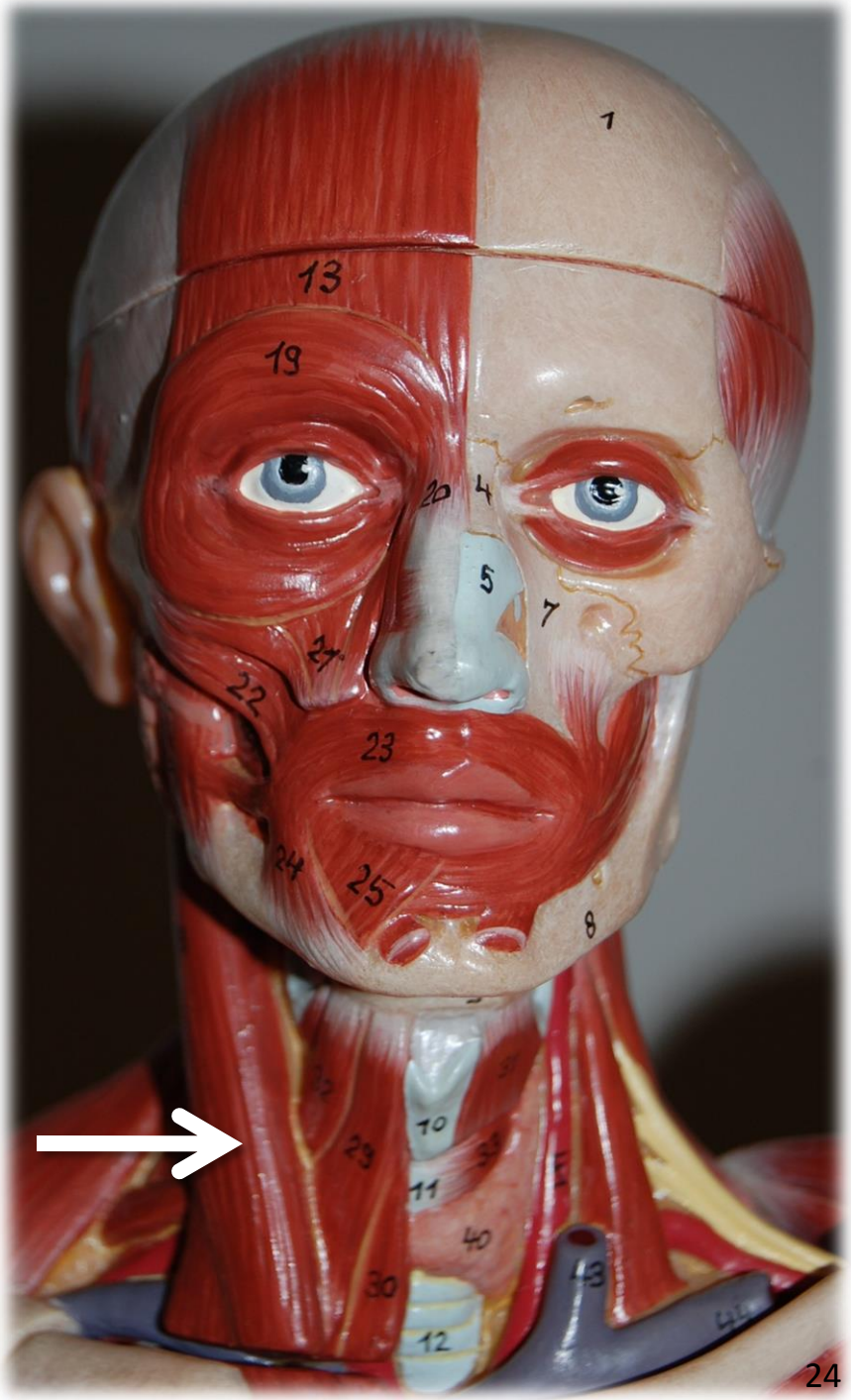
Stylohyoid



Retracts and elevates the hyoid bone

http://commons.wikimedia.org/wiki/File:Musculi_colli_stylohyoideus.svg

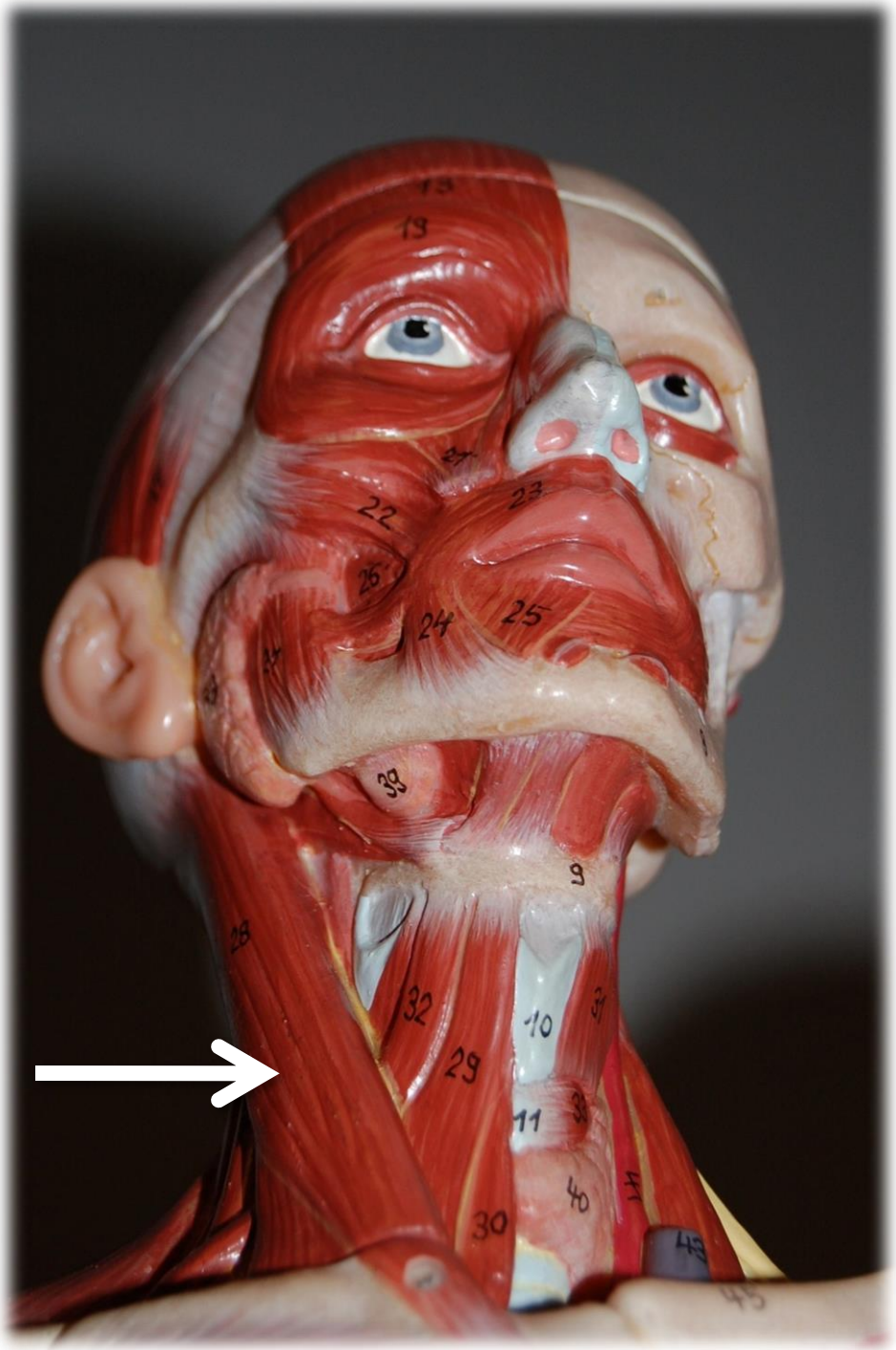
Sternocleidomastoid



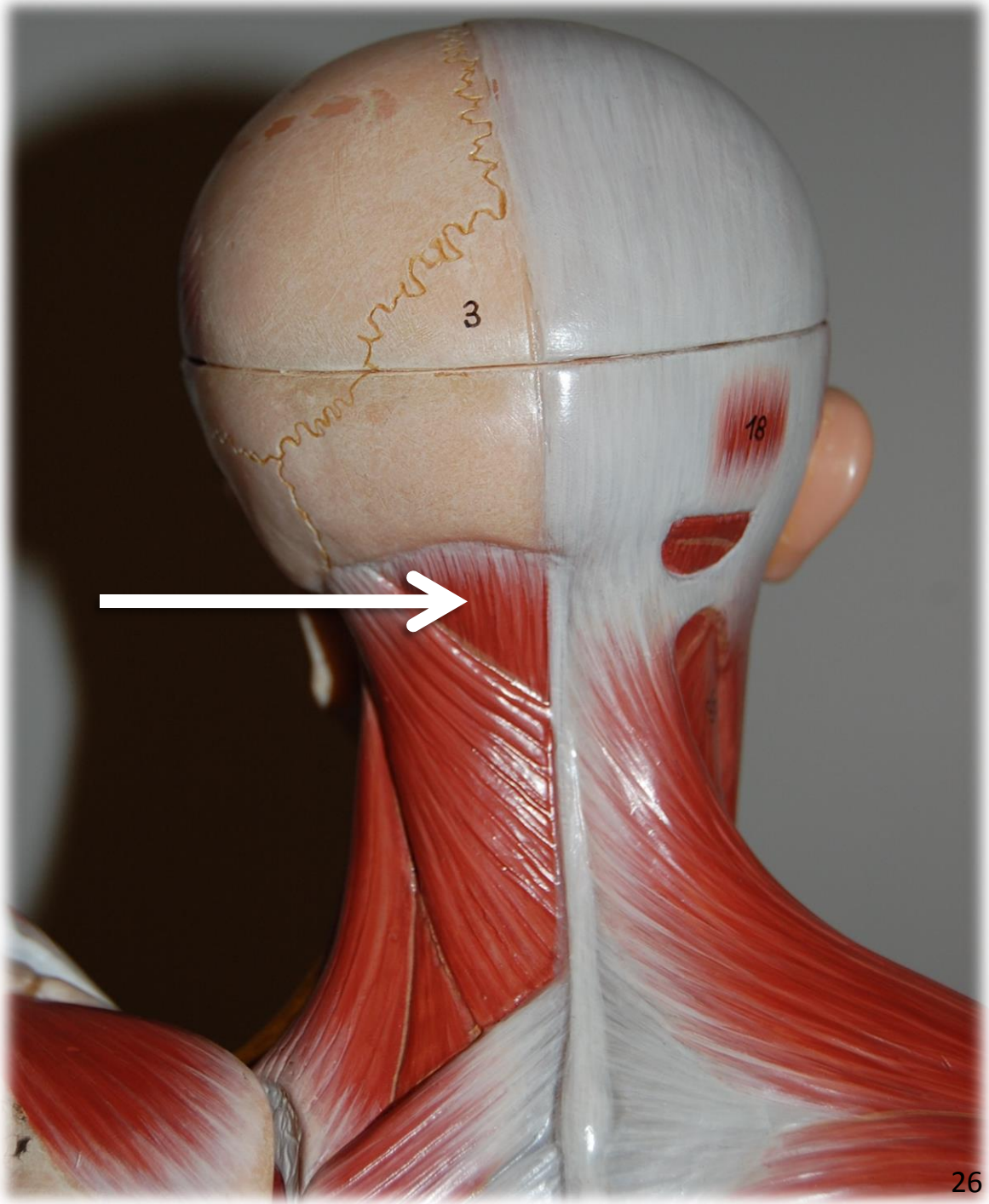
***Both sides contract*: flexes neck on chest**

***One side contracts*: laterally flex neck and head to same side and rotate head to opposite side**

Sternocleidomastoid

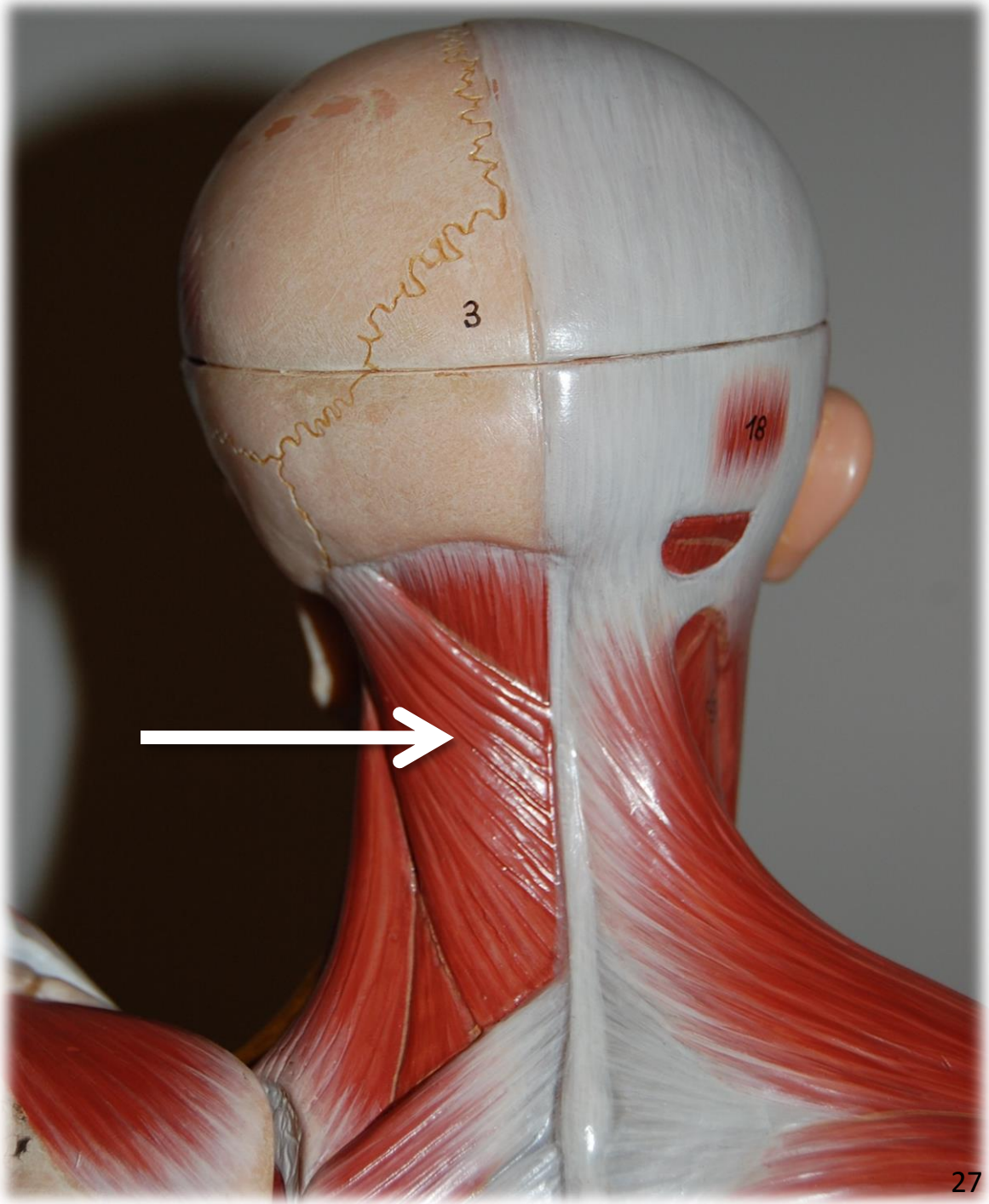


Semispinalis capitis



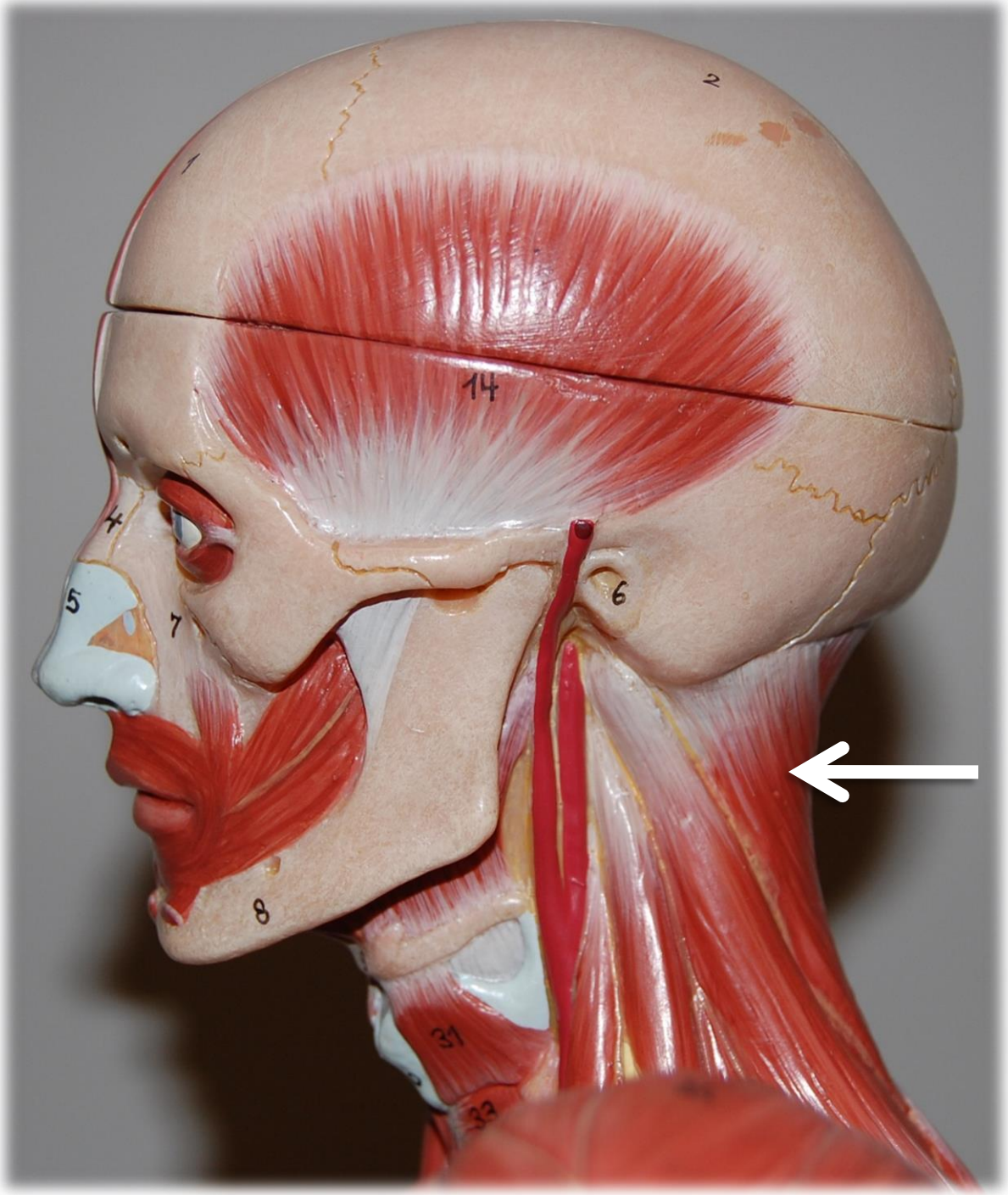
***Both sides contract*:**
extends head
***One side contracts*:**
rotates head to opposite side

Splenius capitis

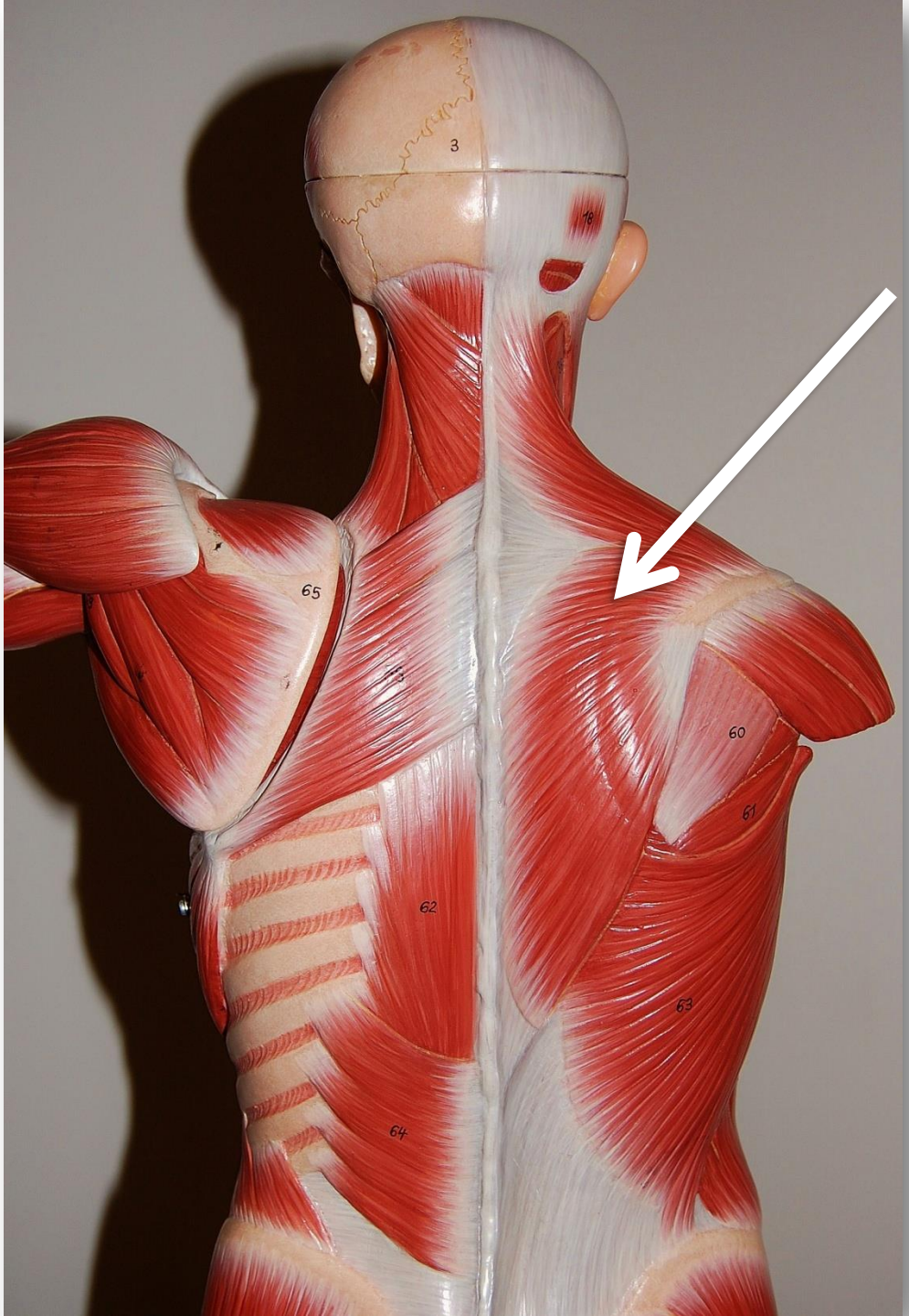


Extends head

Splenius capitis



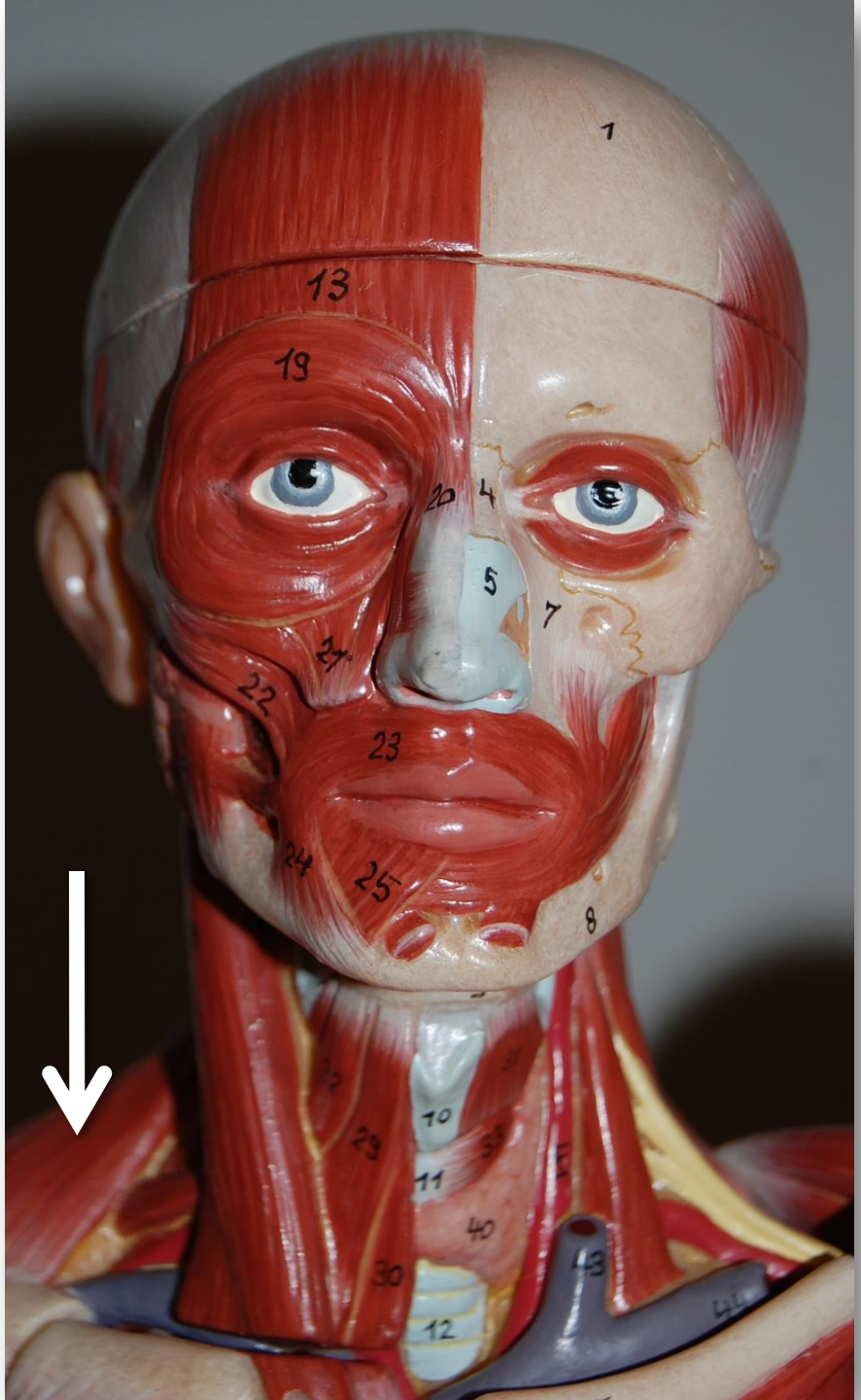
Trapezius



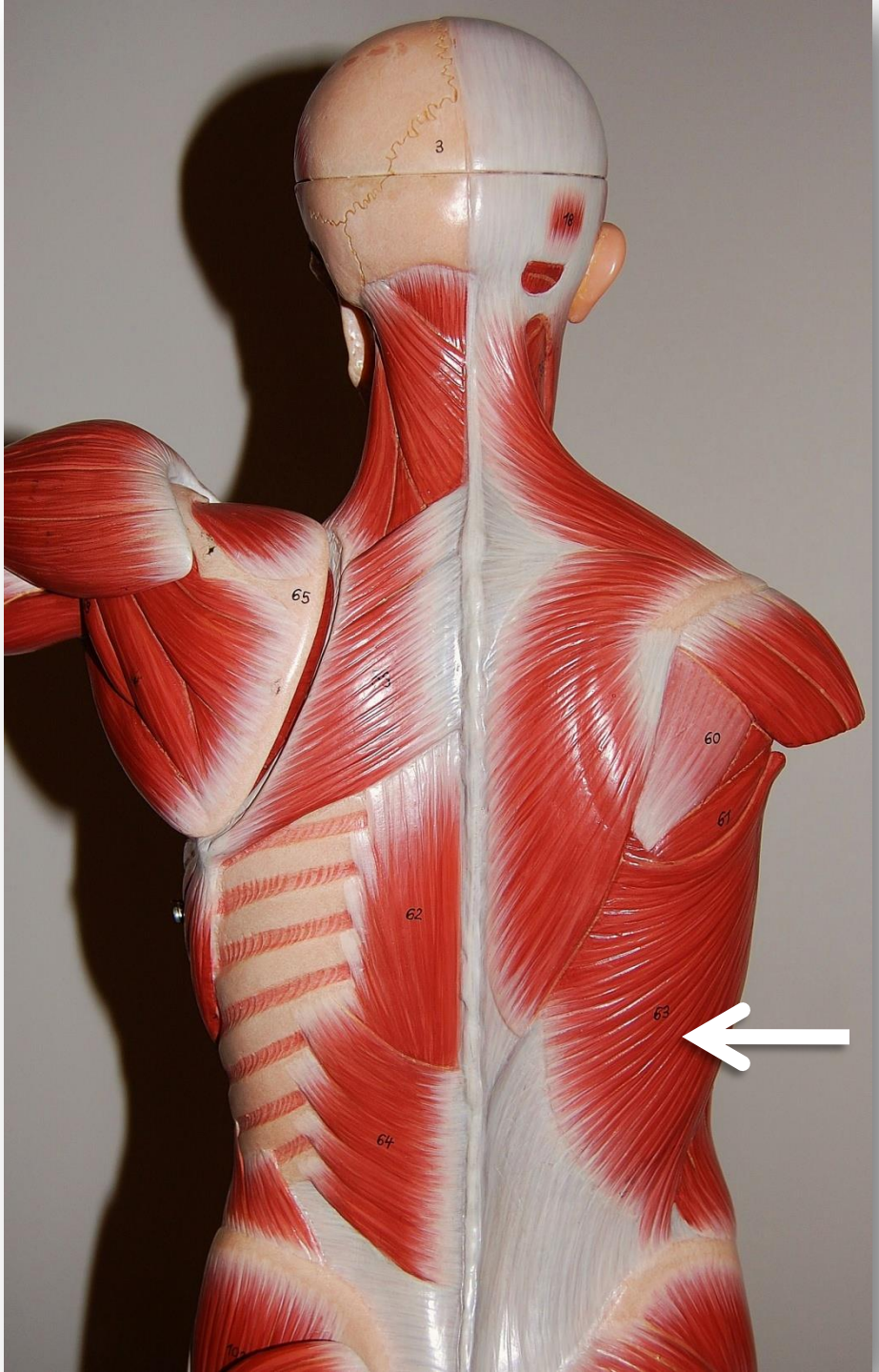
Rotates, adducts, depresses, and elevates scapulae; extends head

Trapezius

Trapezius

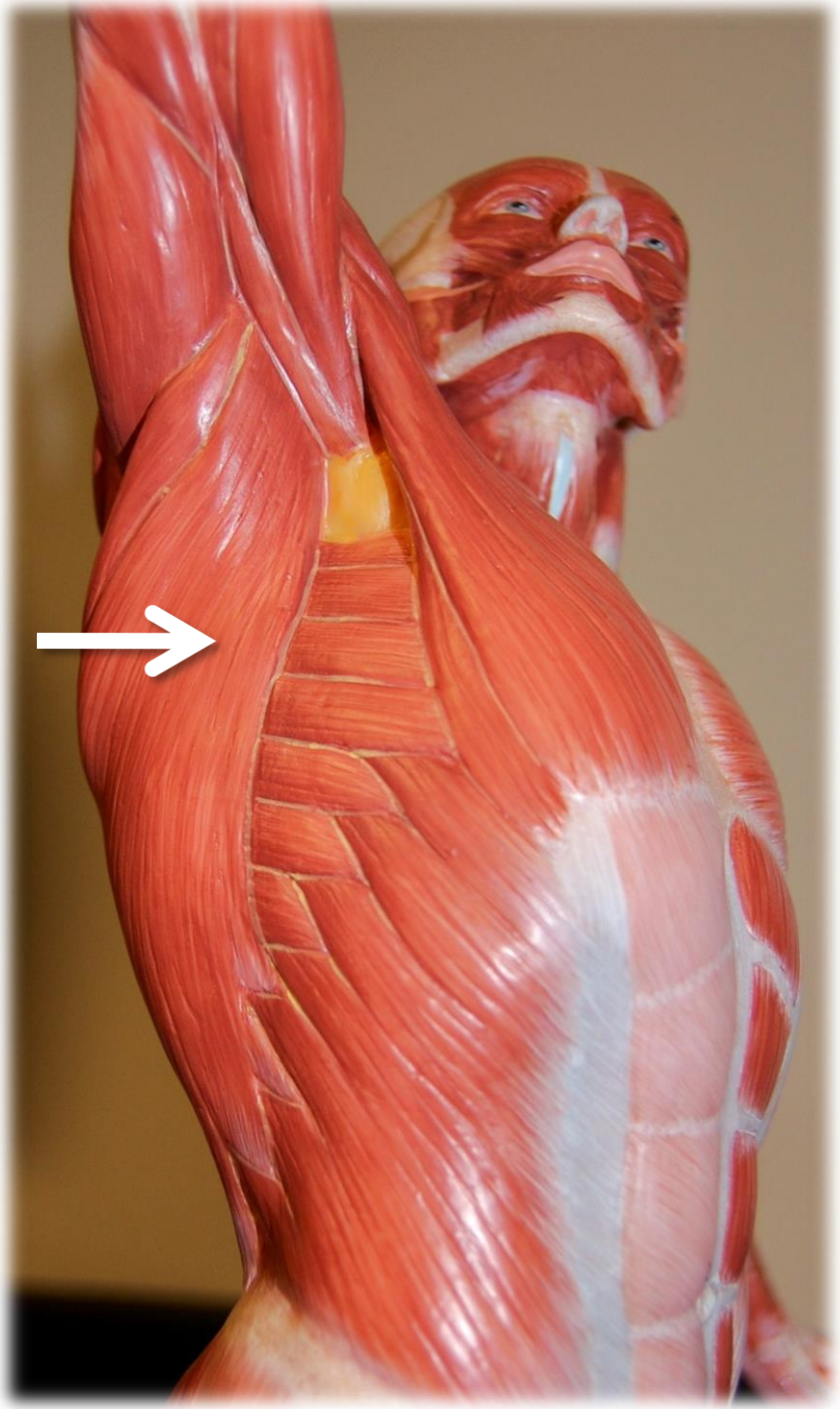


Latissimus dorsi

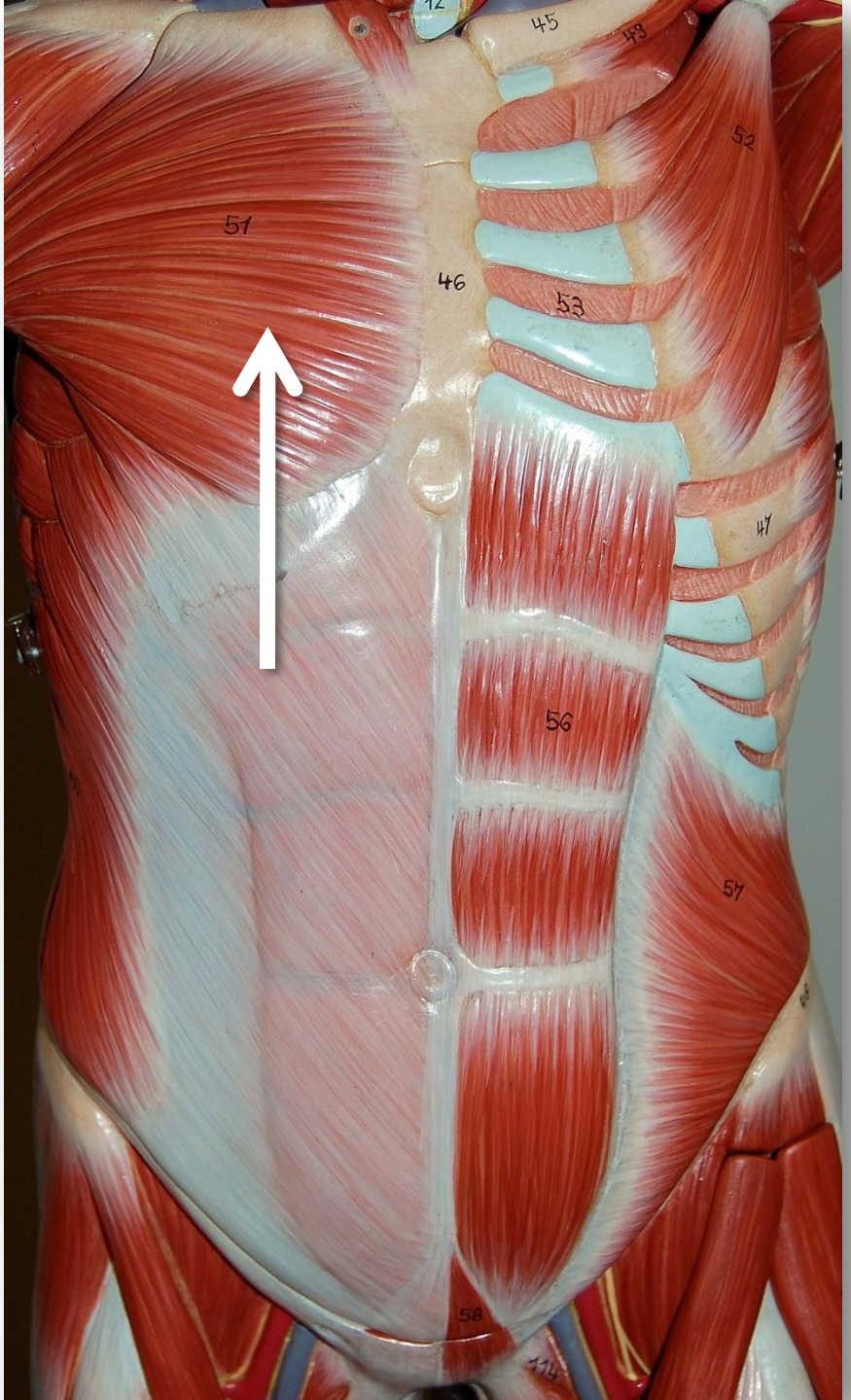


Extends, adducts, and medially rotates arm at shoulder; draws arm inferiorly and posteriorly

Latissimus dorsi

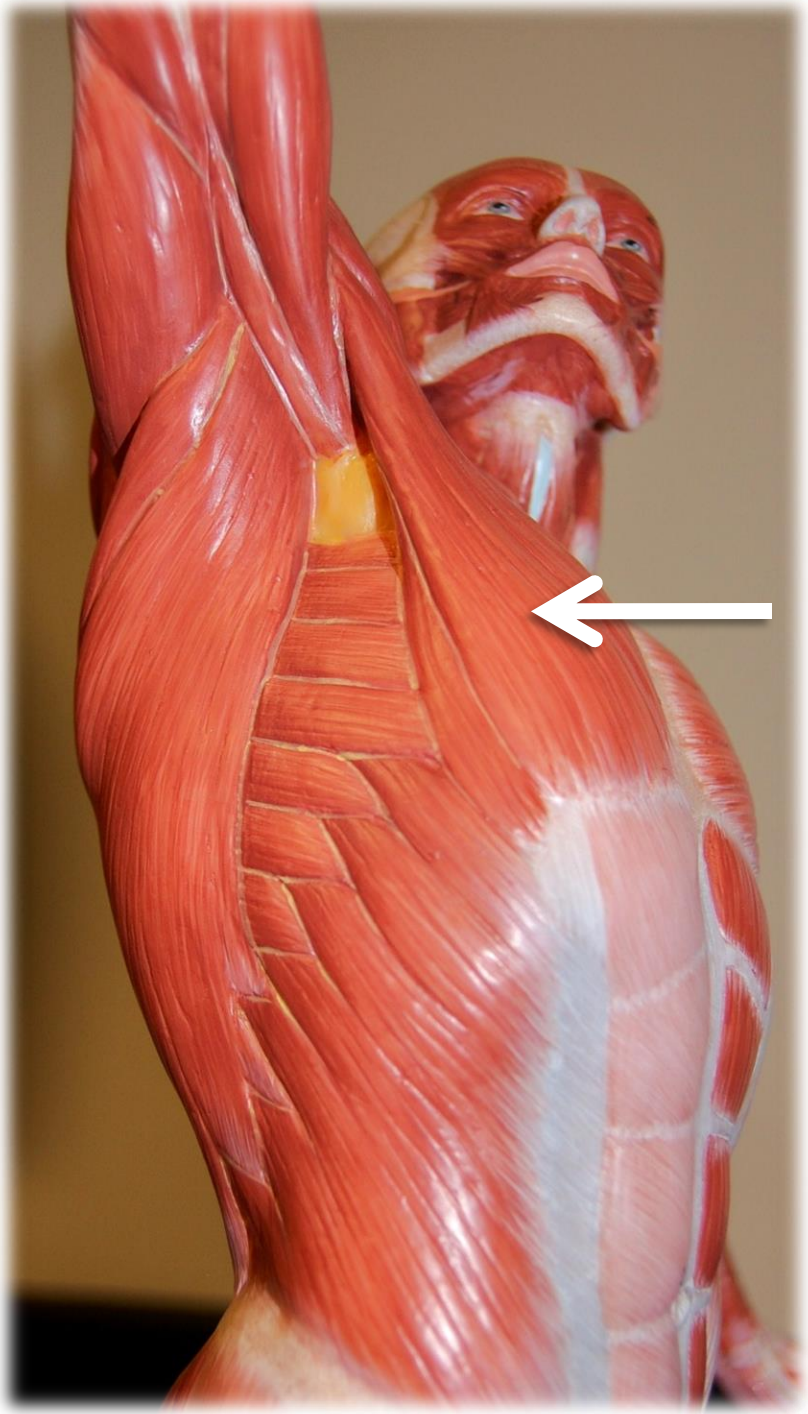


Pectoralis major

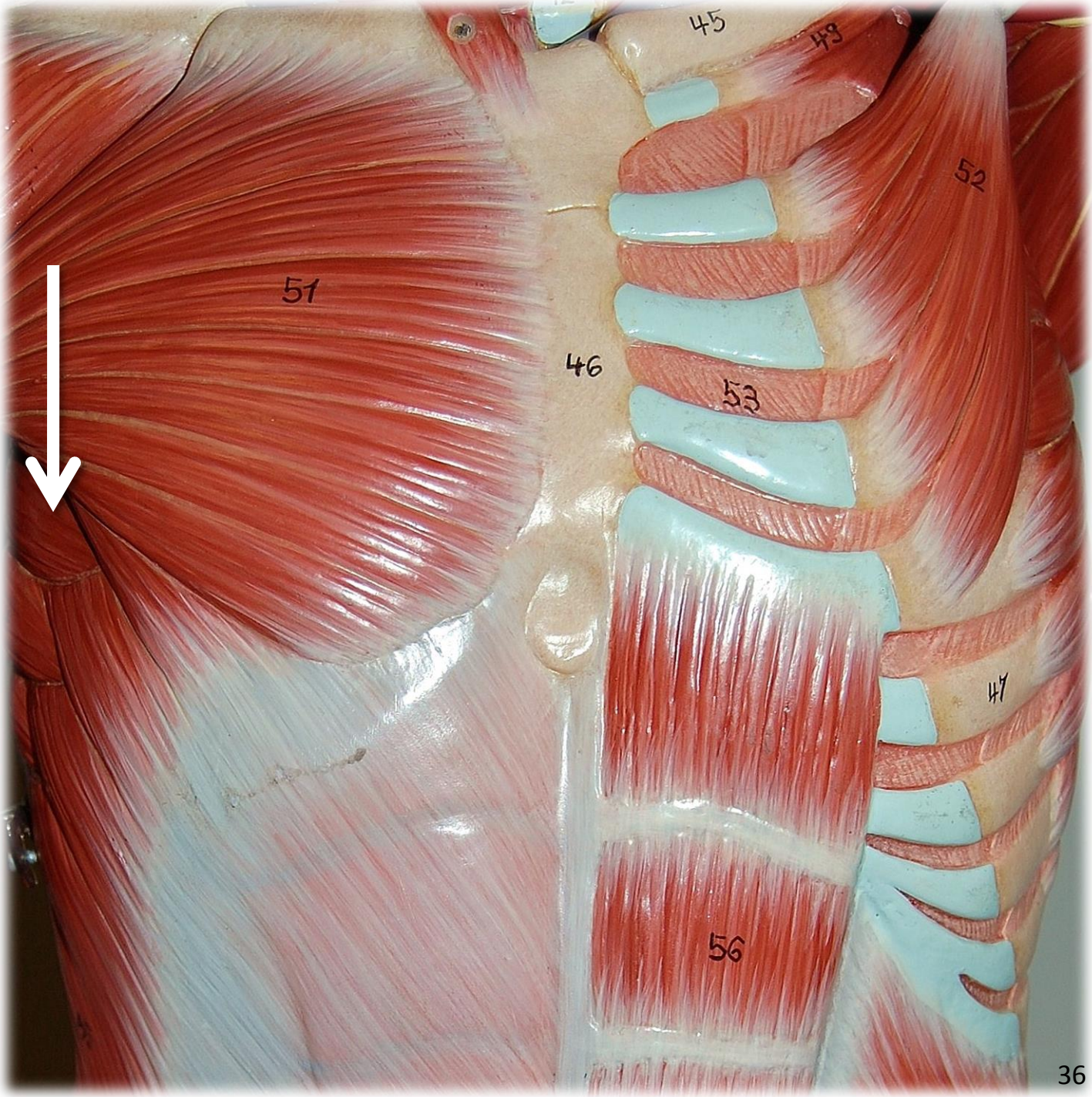


Adducts and medially rotates arm at shoulder; flexes arm

Pectoralis major

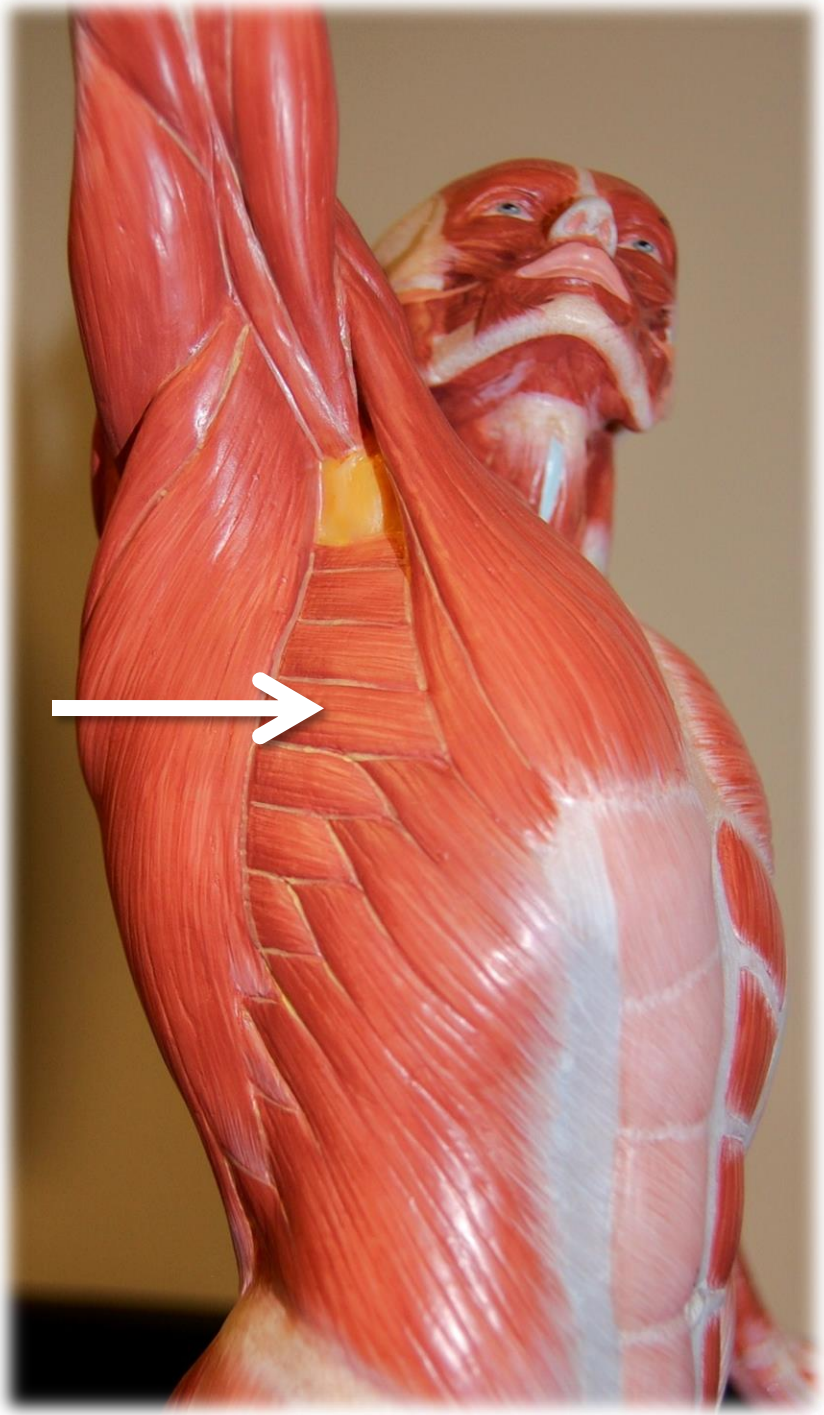


Serratus anterior

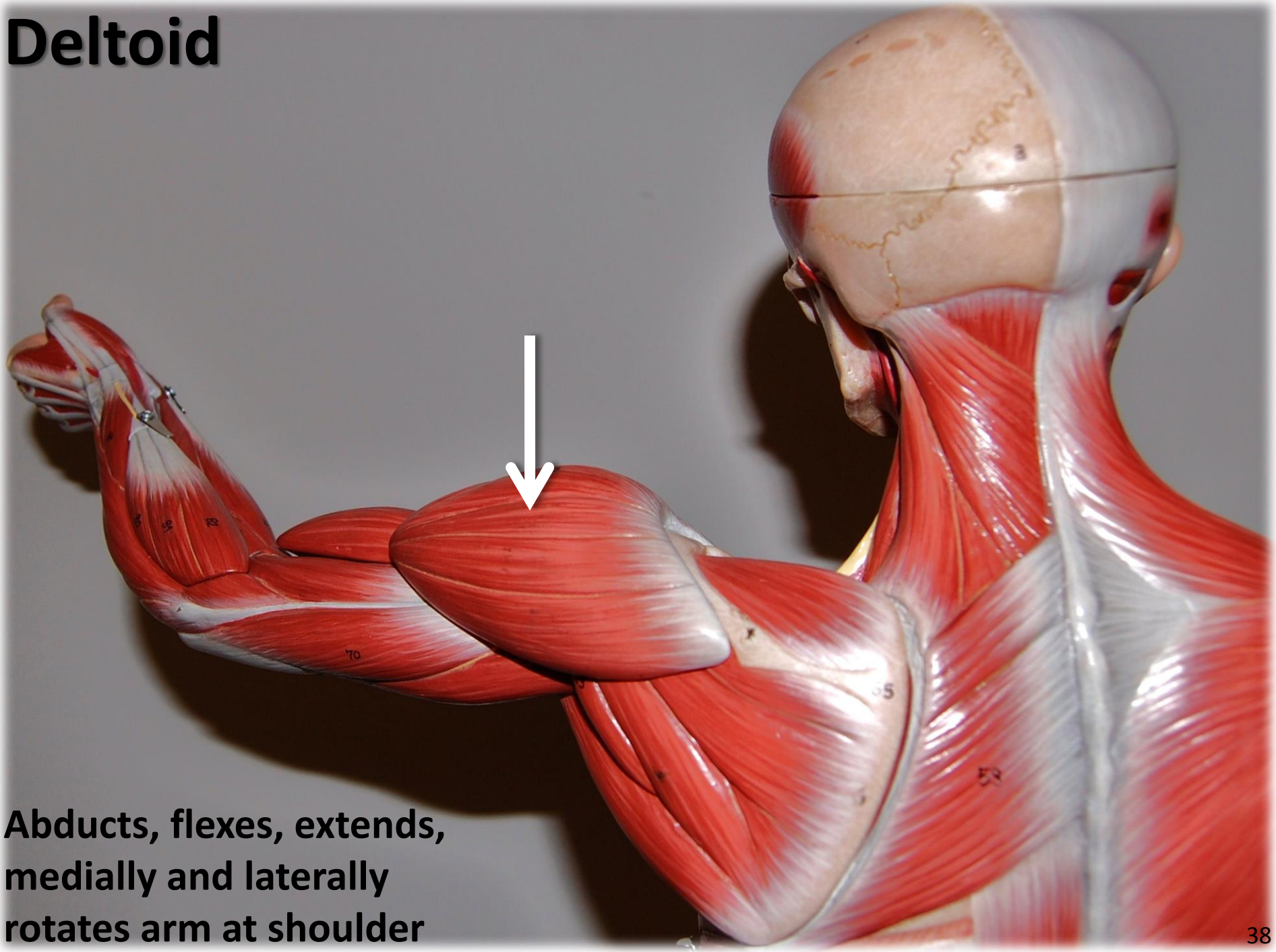


Abducts scapula and rotates it upward; elevates ribs; “the boxer’s muscle”

Serratus anterior



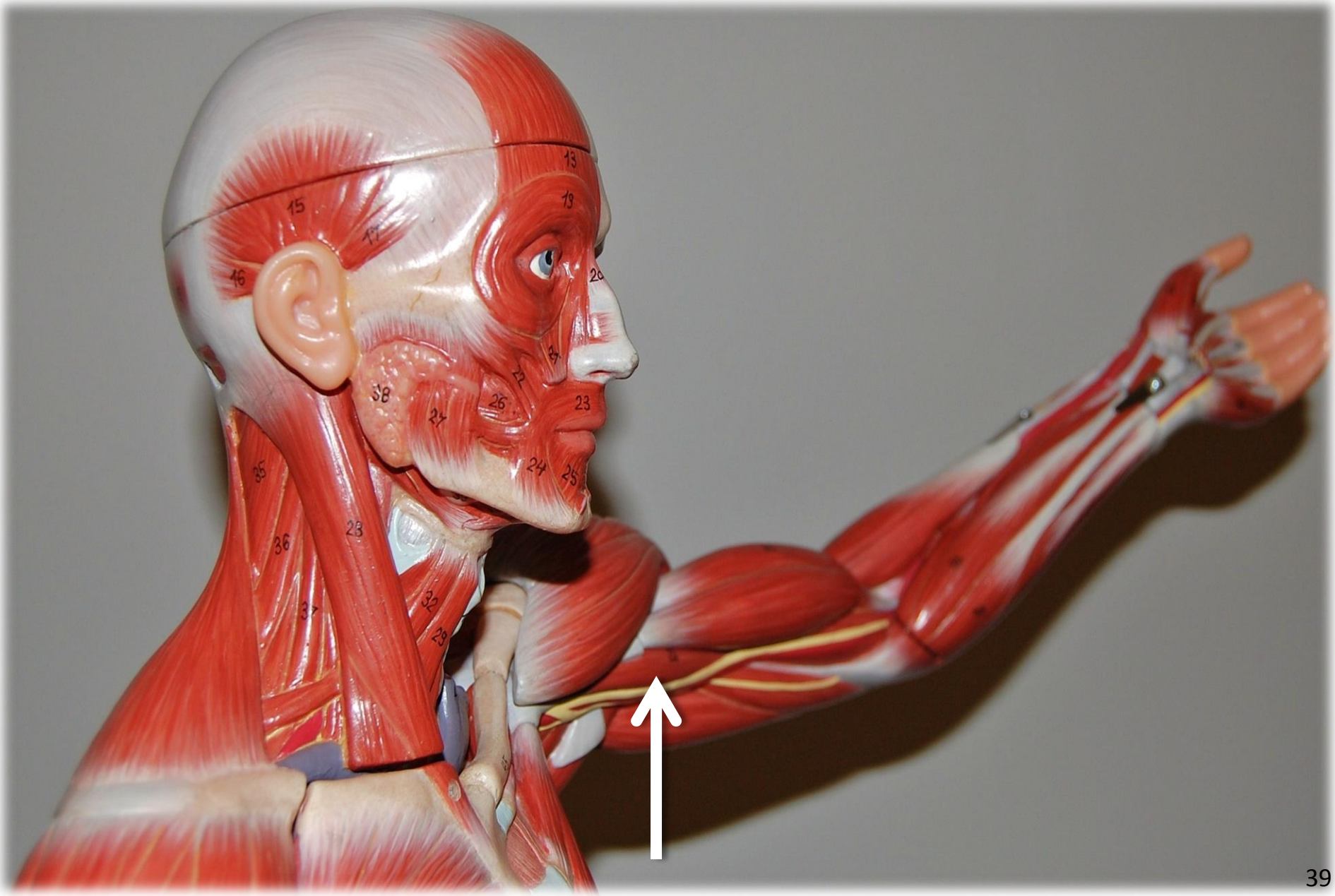
Deltoid



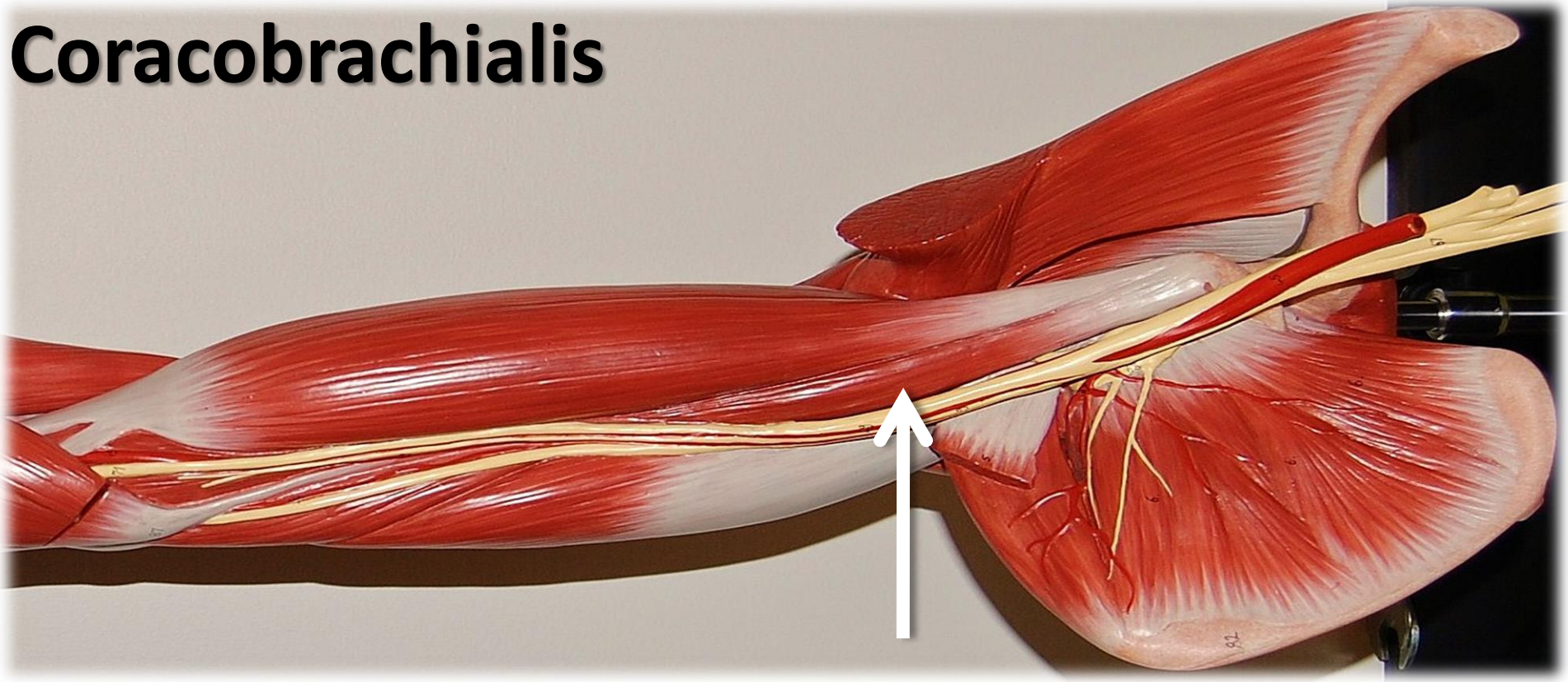
Abducts, flexes, extends, medially and laterally rotates arm at shoulder

Coracobrachialis

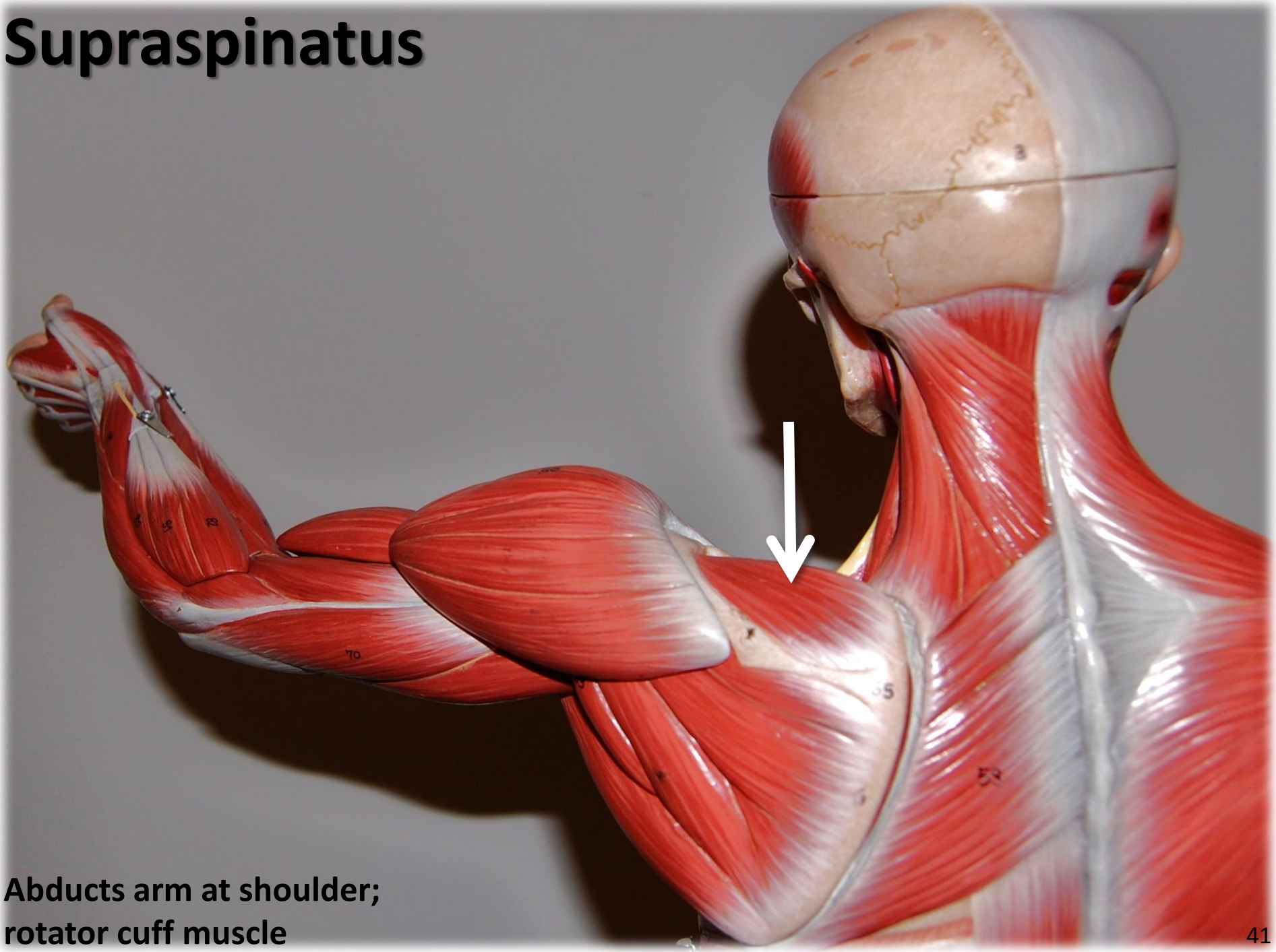
Adducts and flexes arm at shoulder



Coracobrachialis

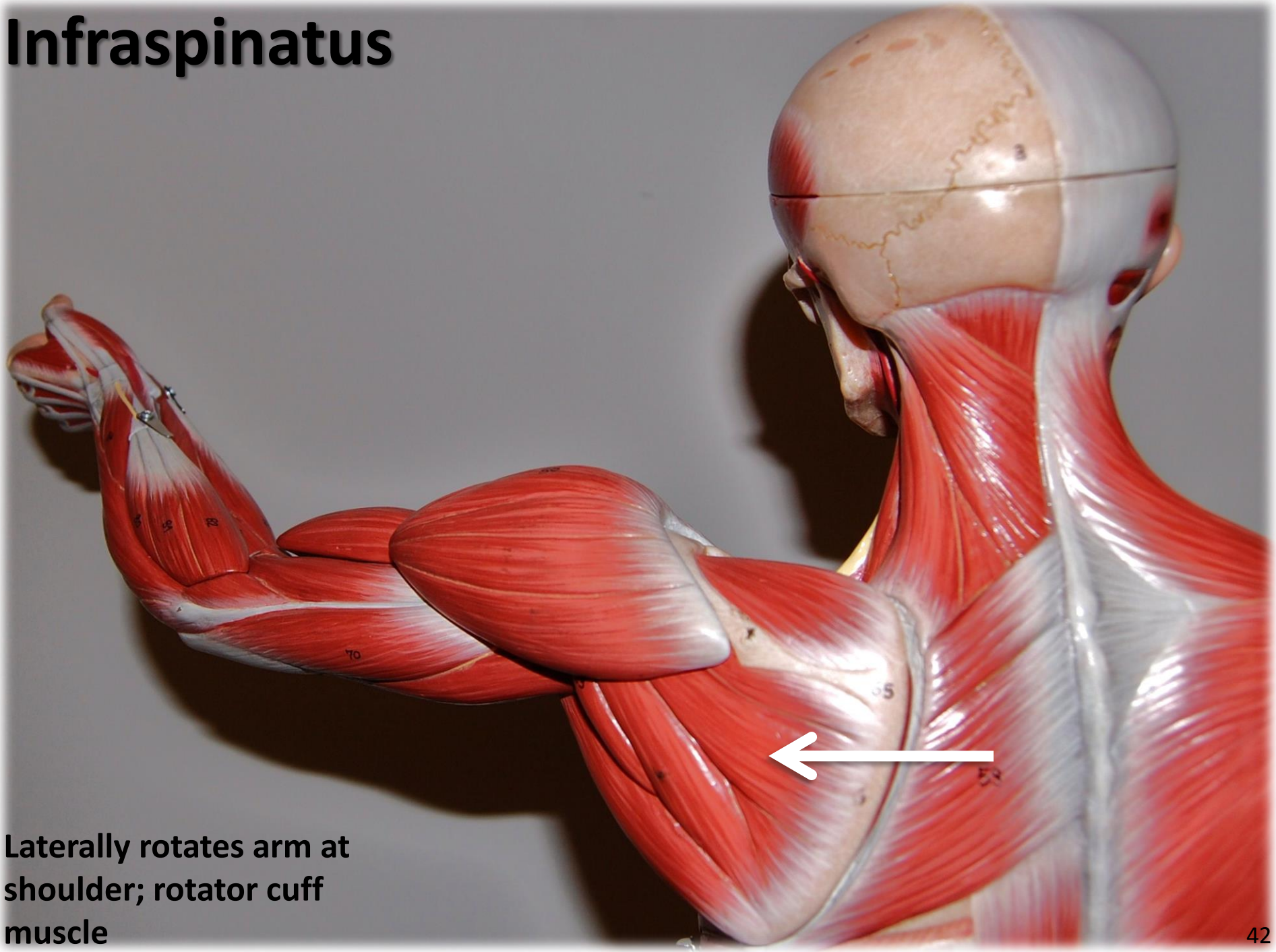


Supraspinatus



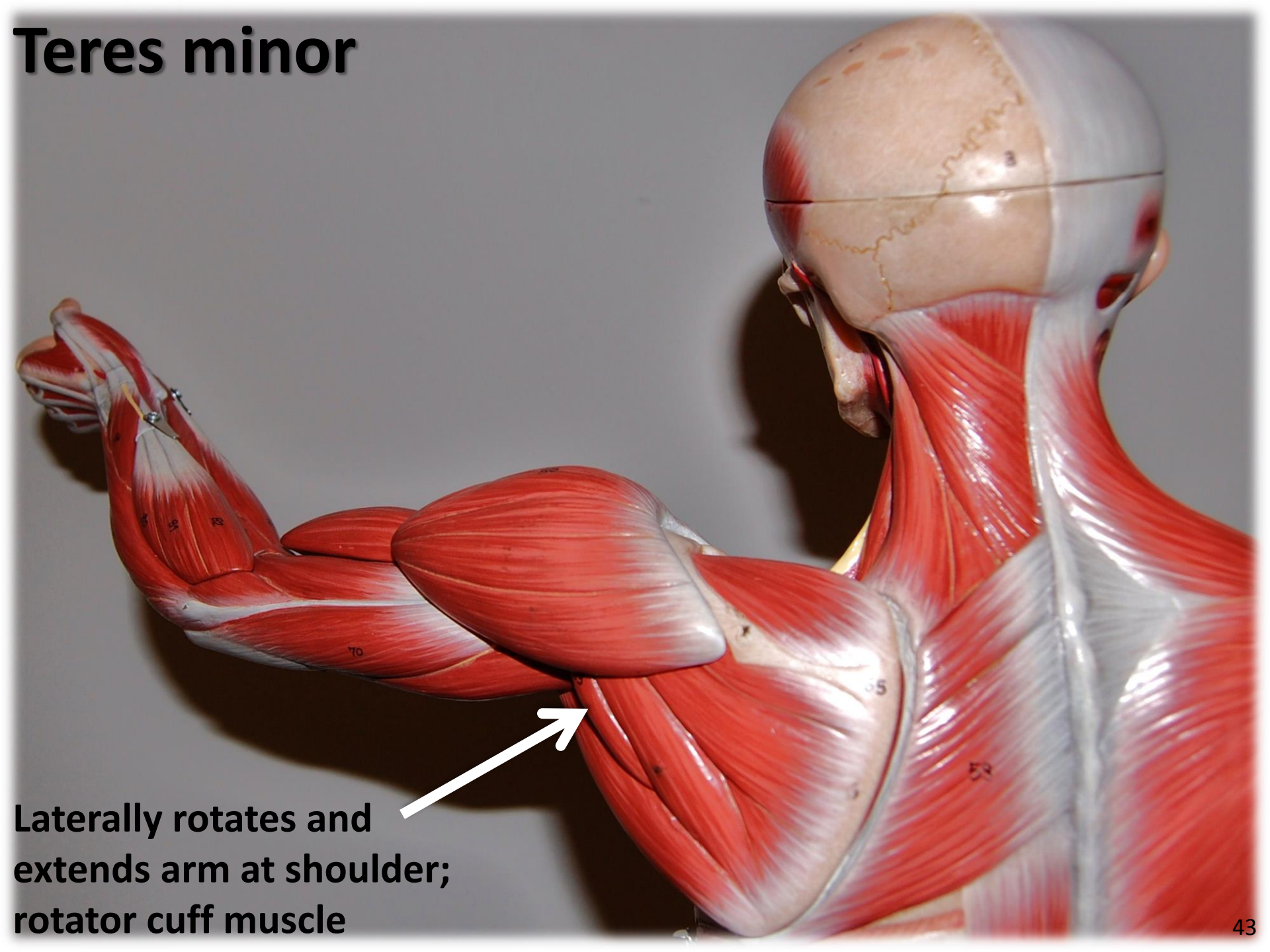
Abducts arm at shoulder;
rotator cuff muscle

Infraspinatus



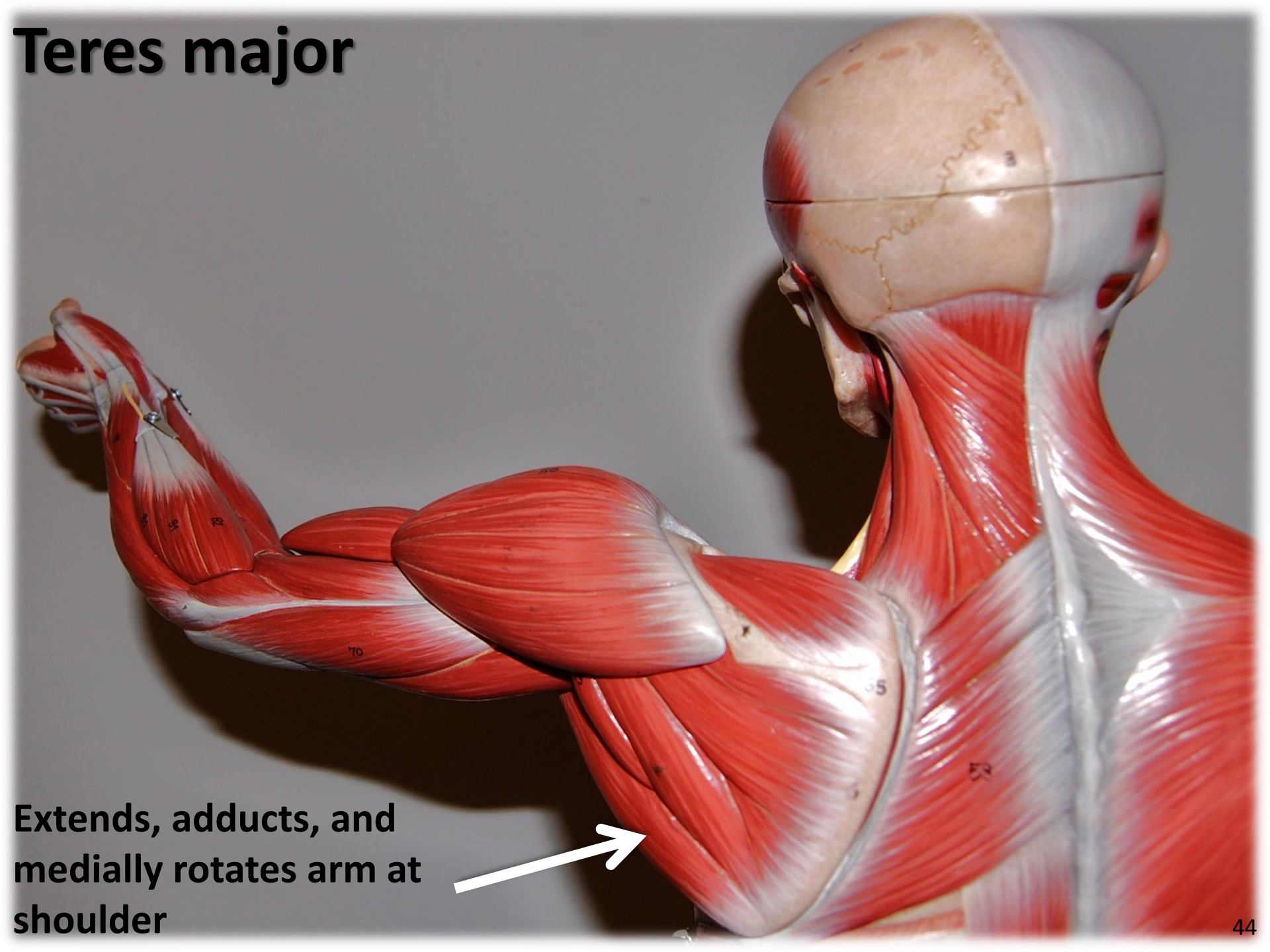
Laterally rotates arm at shoulder; rotator cuff muscle

Teres minor



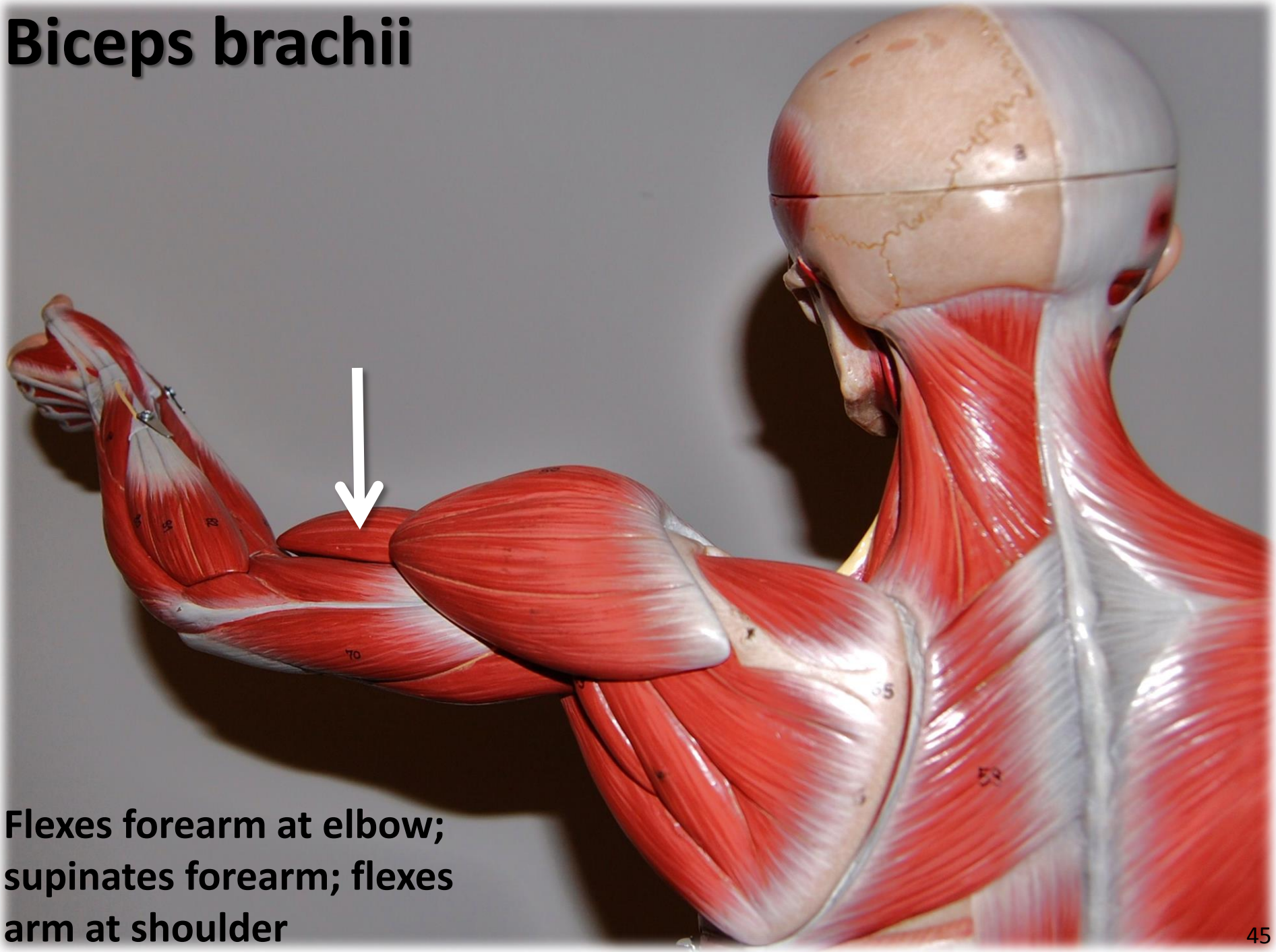
Laterally rotates and extends arm at shoulder; rotator cuff muscle

Teres major



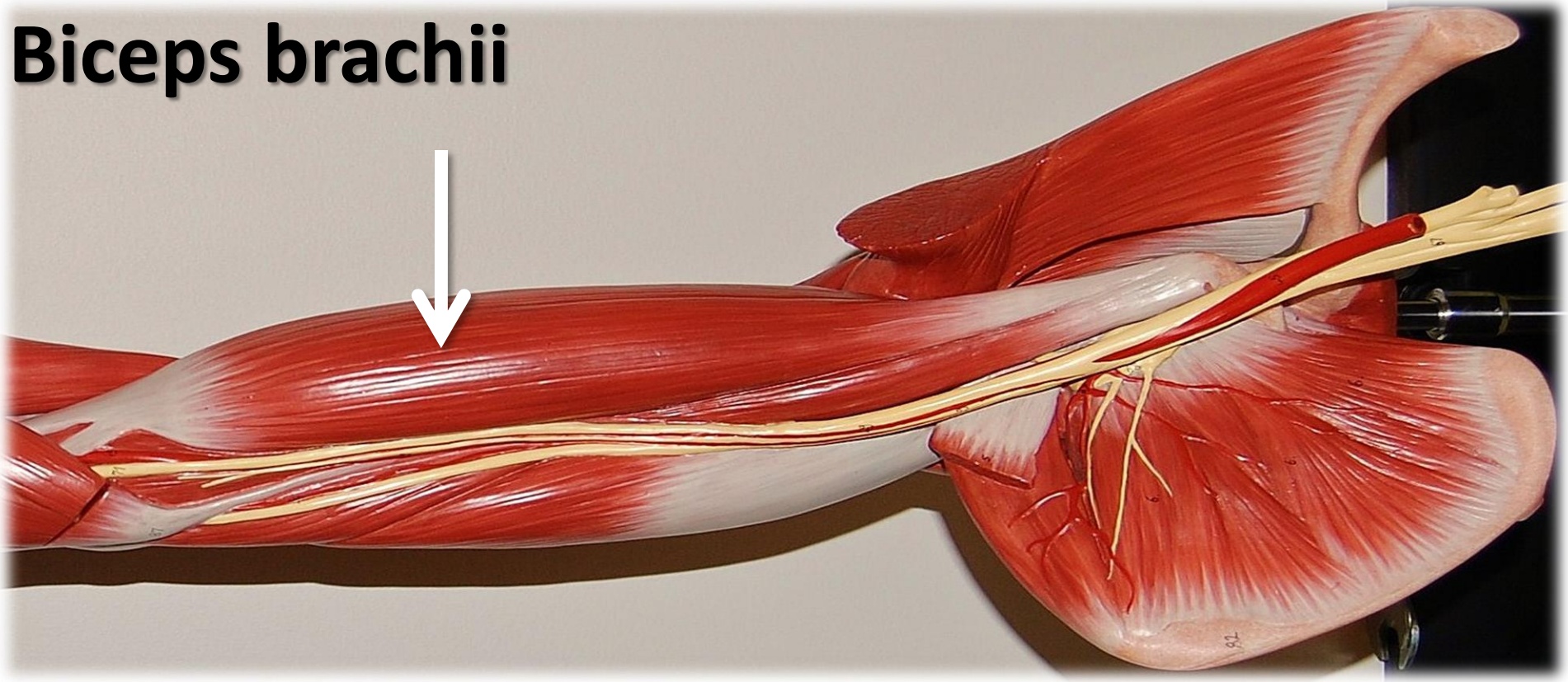
Extends, adducts, and medially rotates arm at shoulder

Biceps brachii

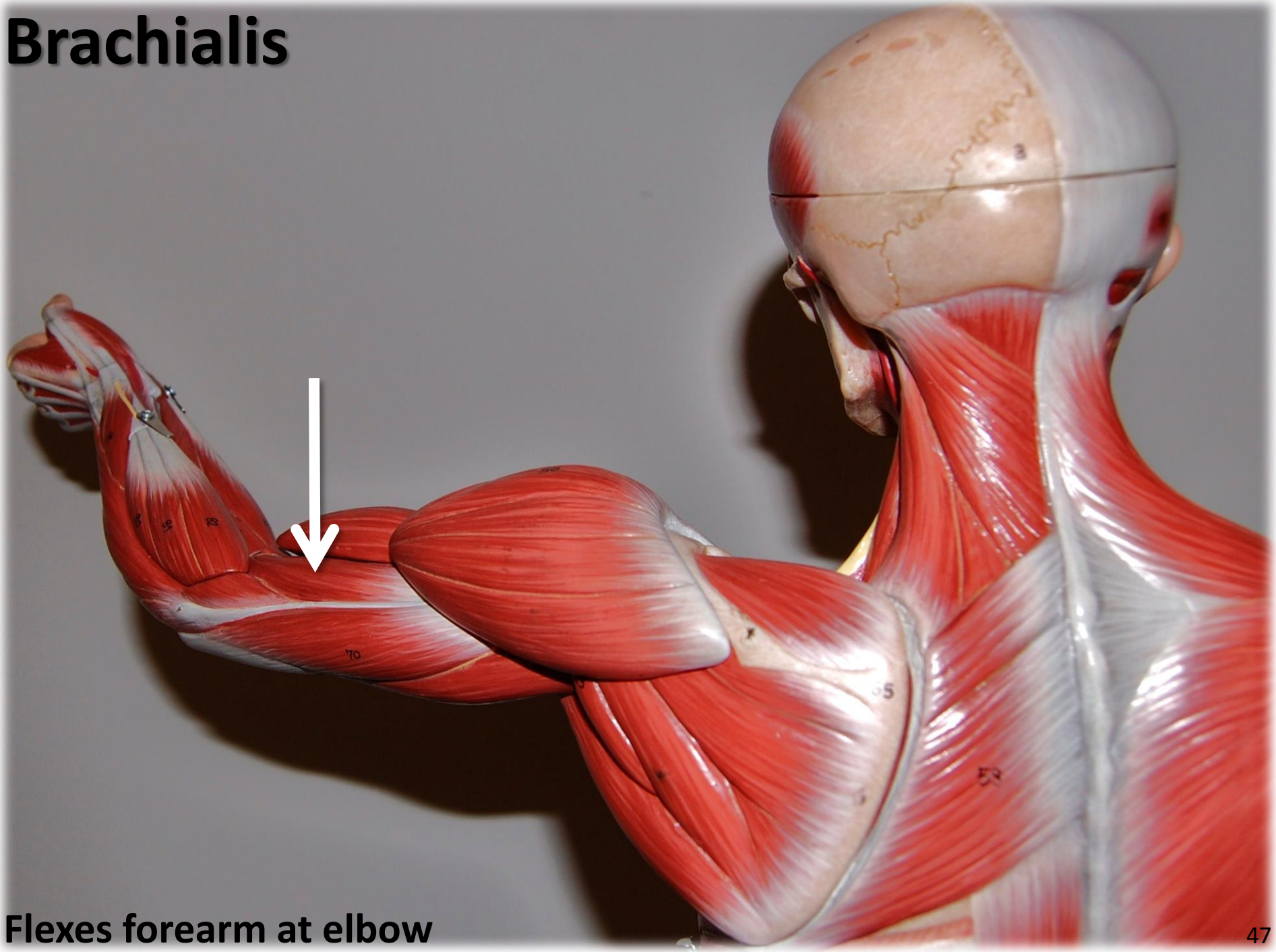


Flexes forearm at elbow; supinates forearm; flexes arm at shoulder

Biceps brachii

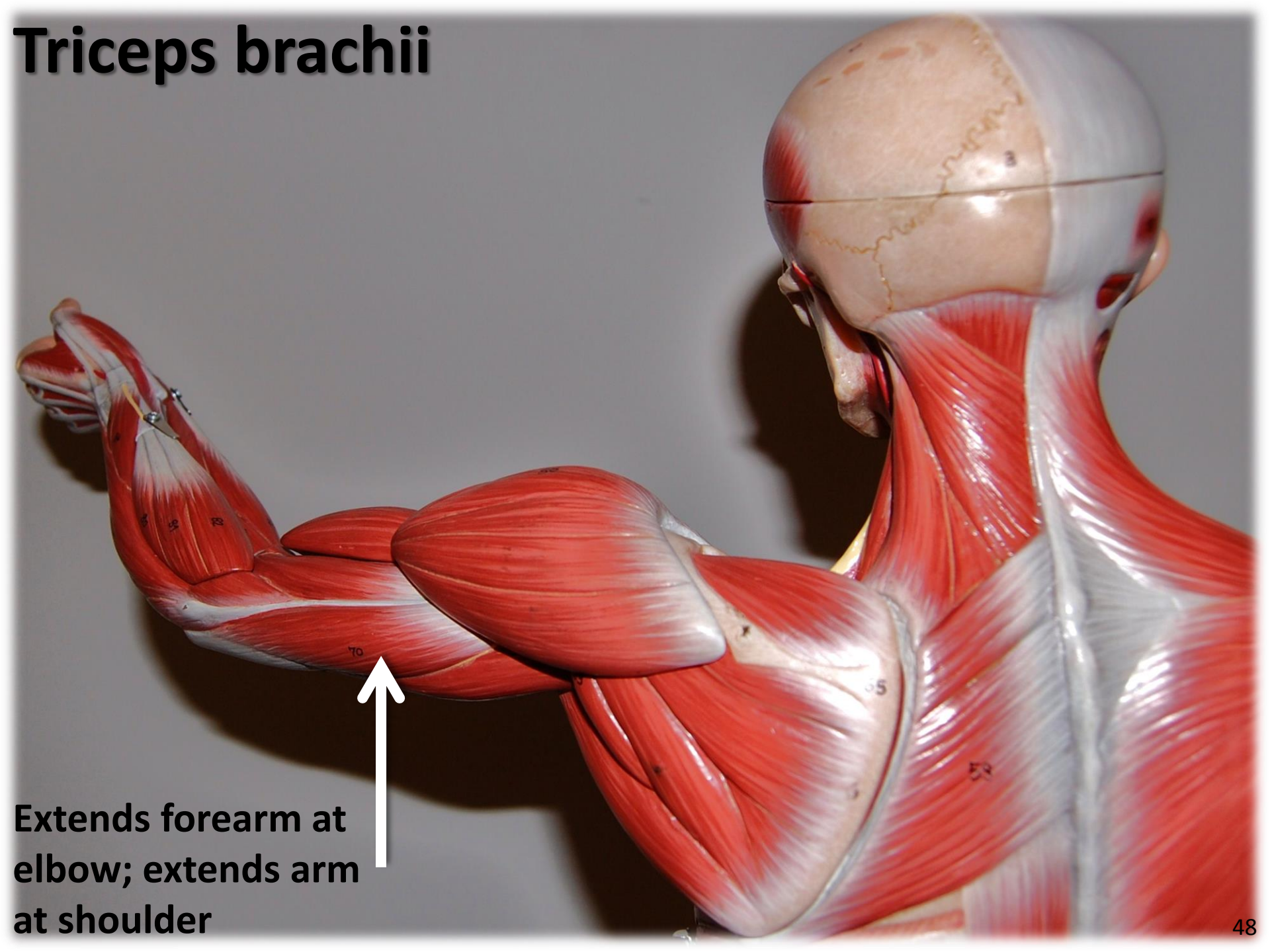


Brachialis



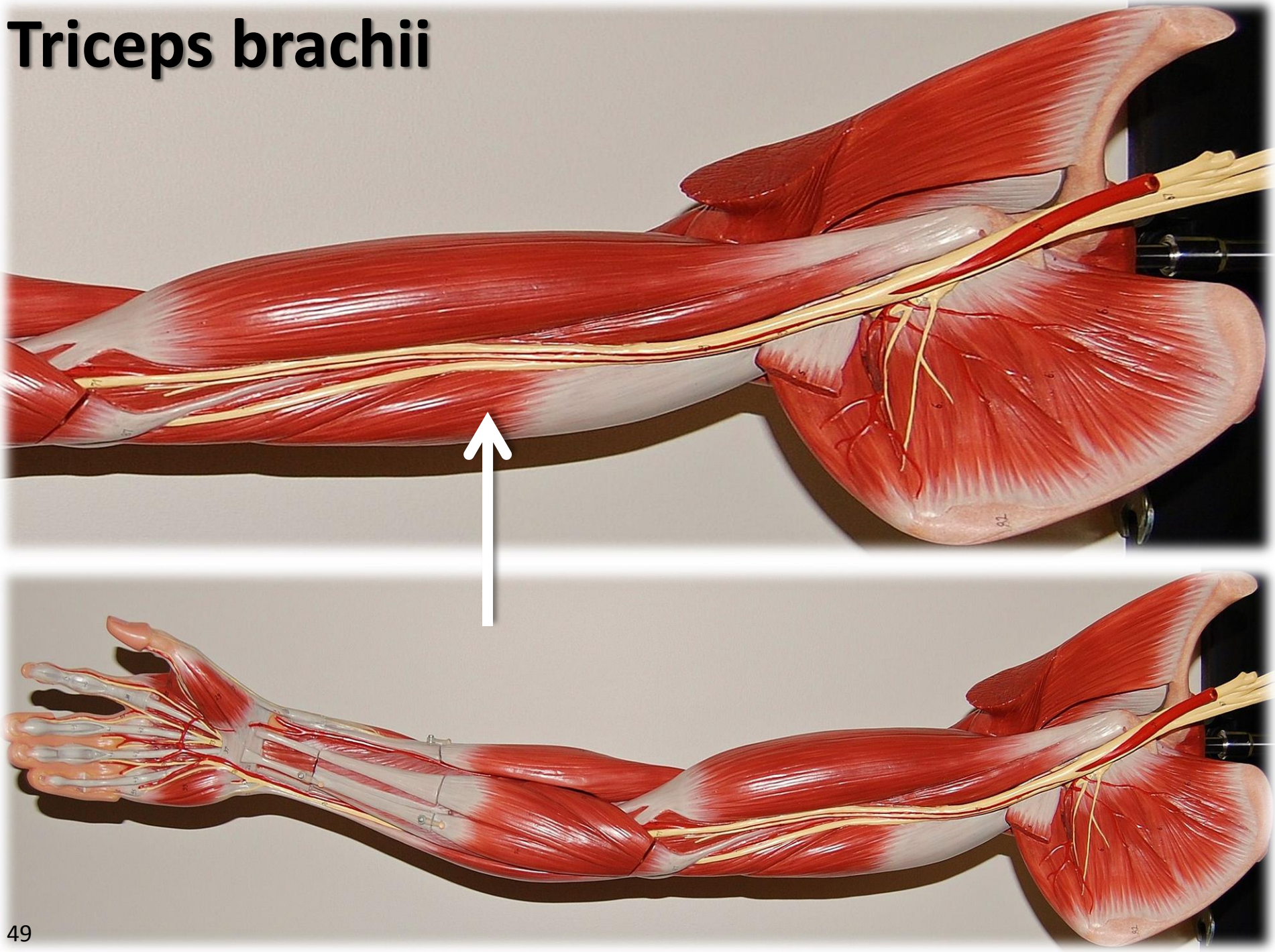
Flexes forearm at elbow

Triceps brachii



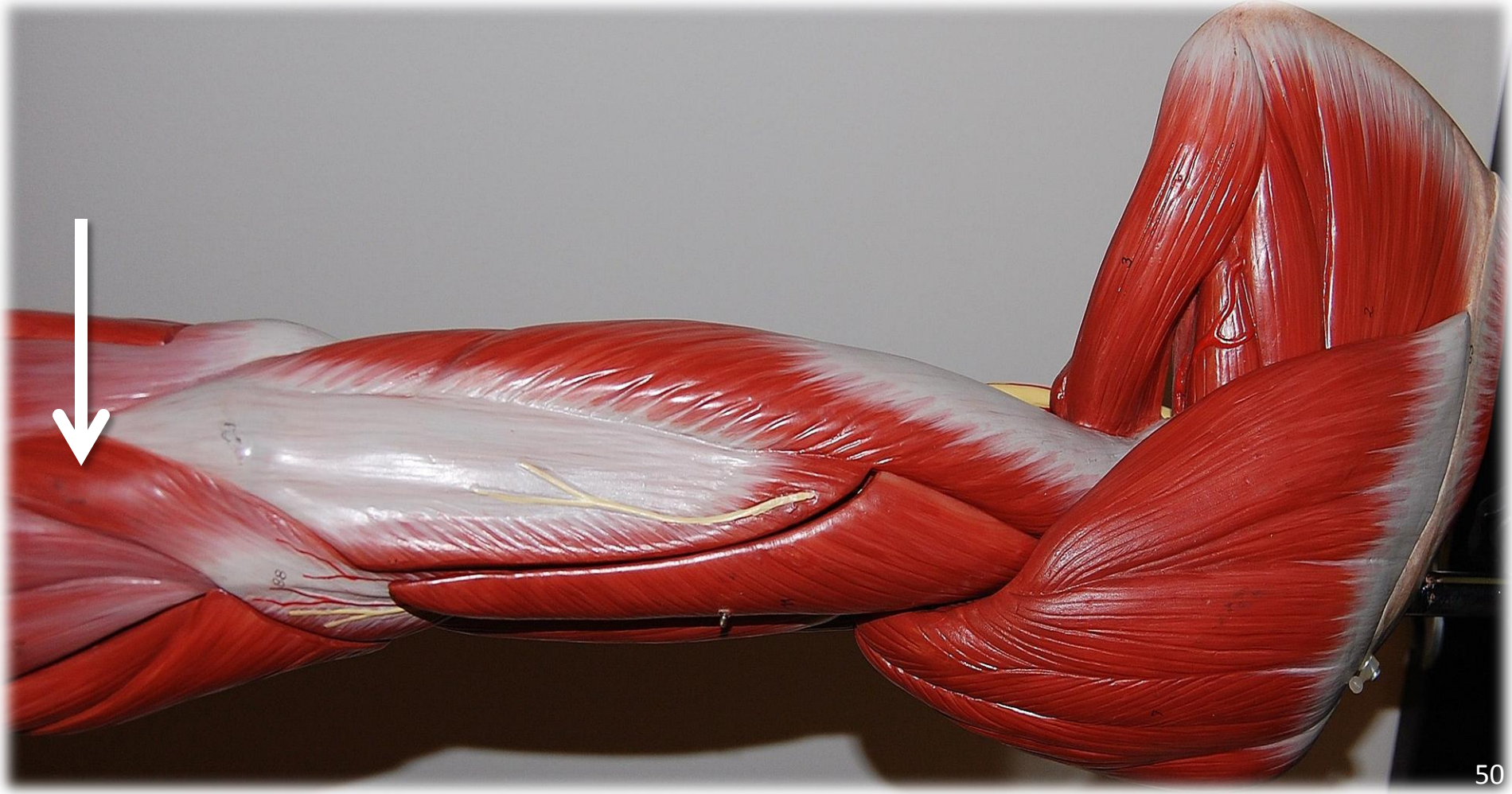
Extends forearm at elbow; extends arm at shoulder

Triceps brachii

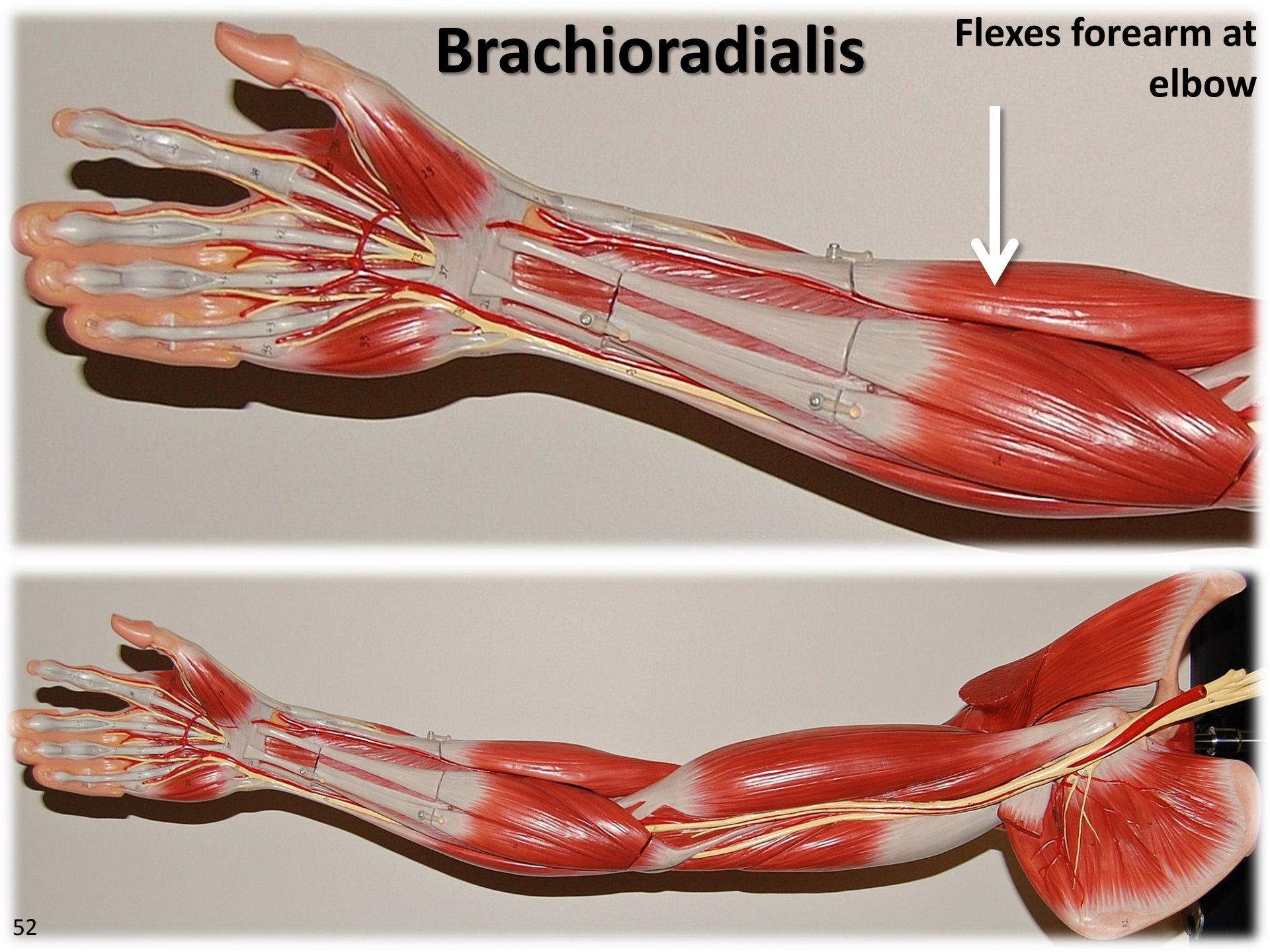


Anconeus

Extends forearm at elbow

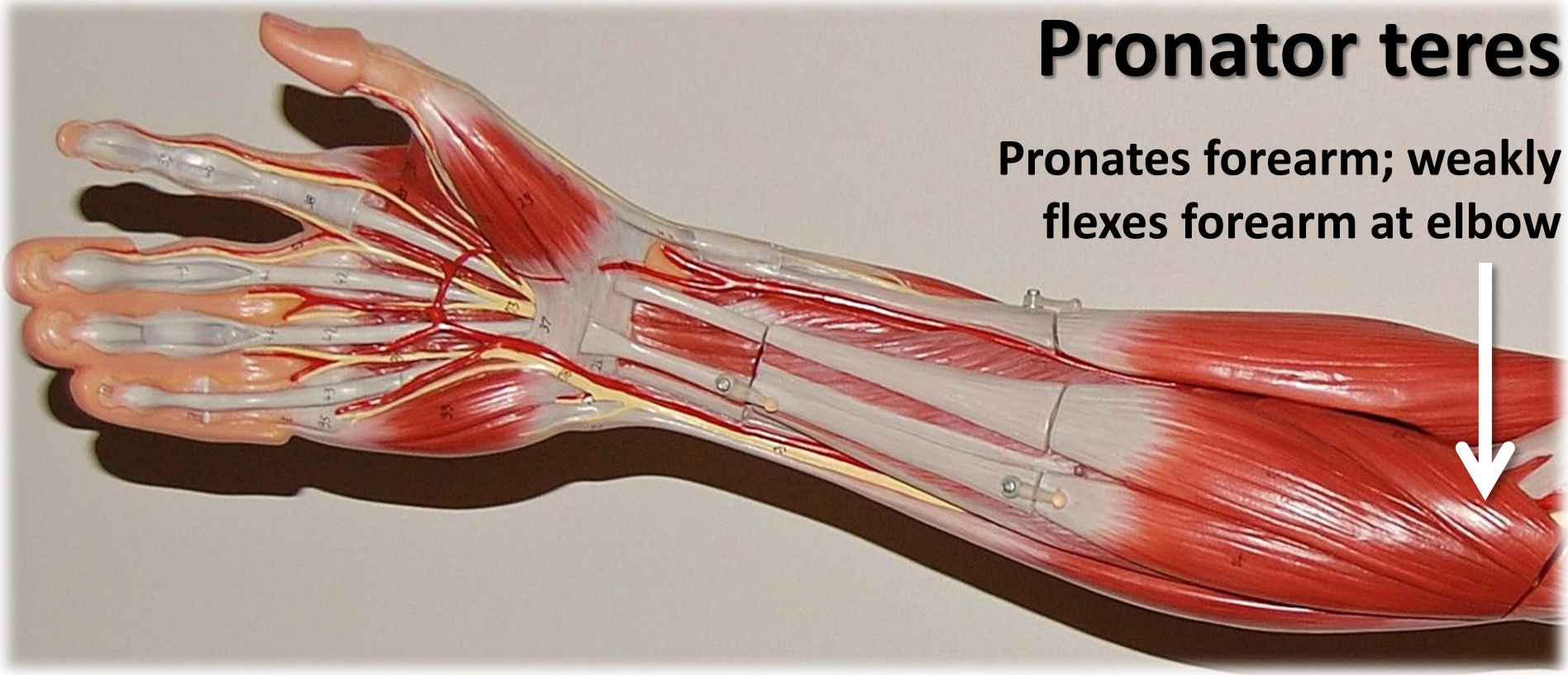


Anconeus


Brachioradialis
Flexes forearm at elbow

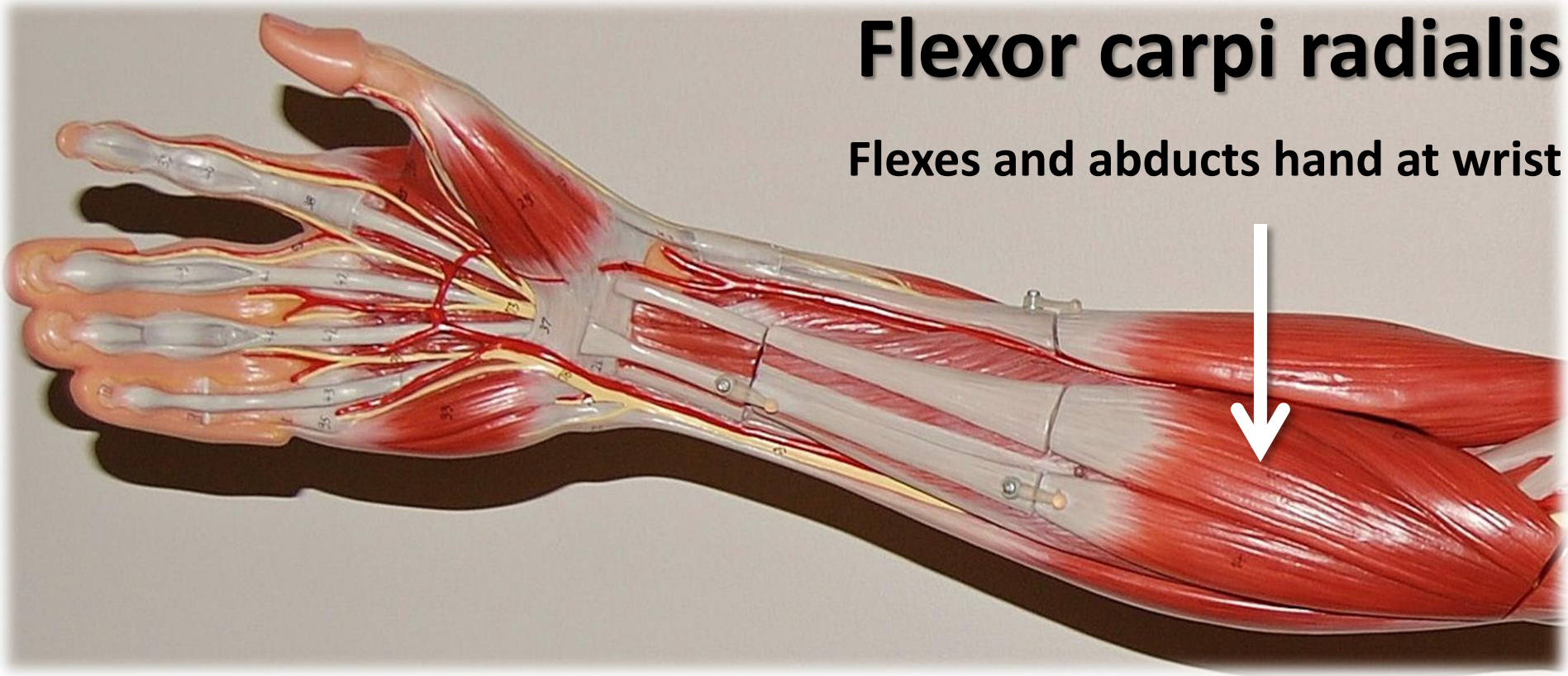
Pronator teres

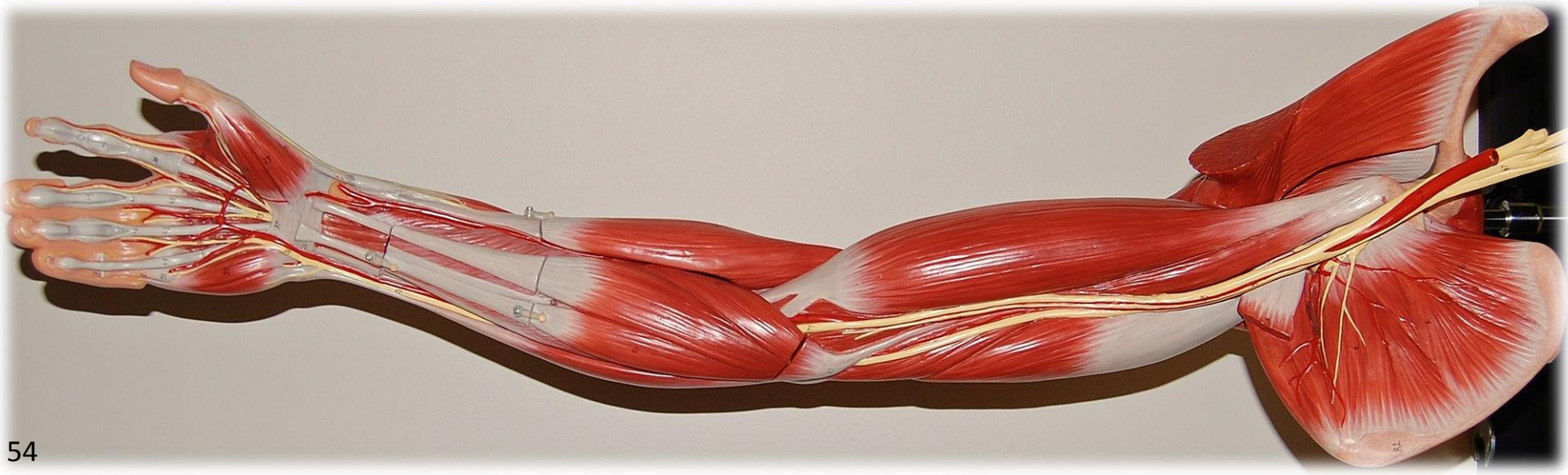
Pronates forearm; weakly flexes forearm at elbow



Flexor carpi radialis

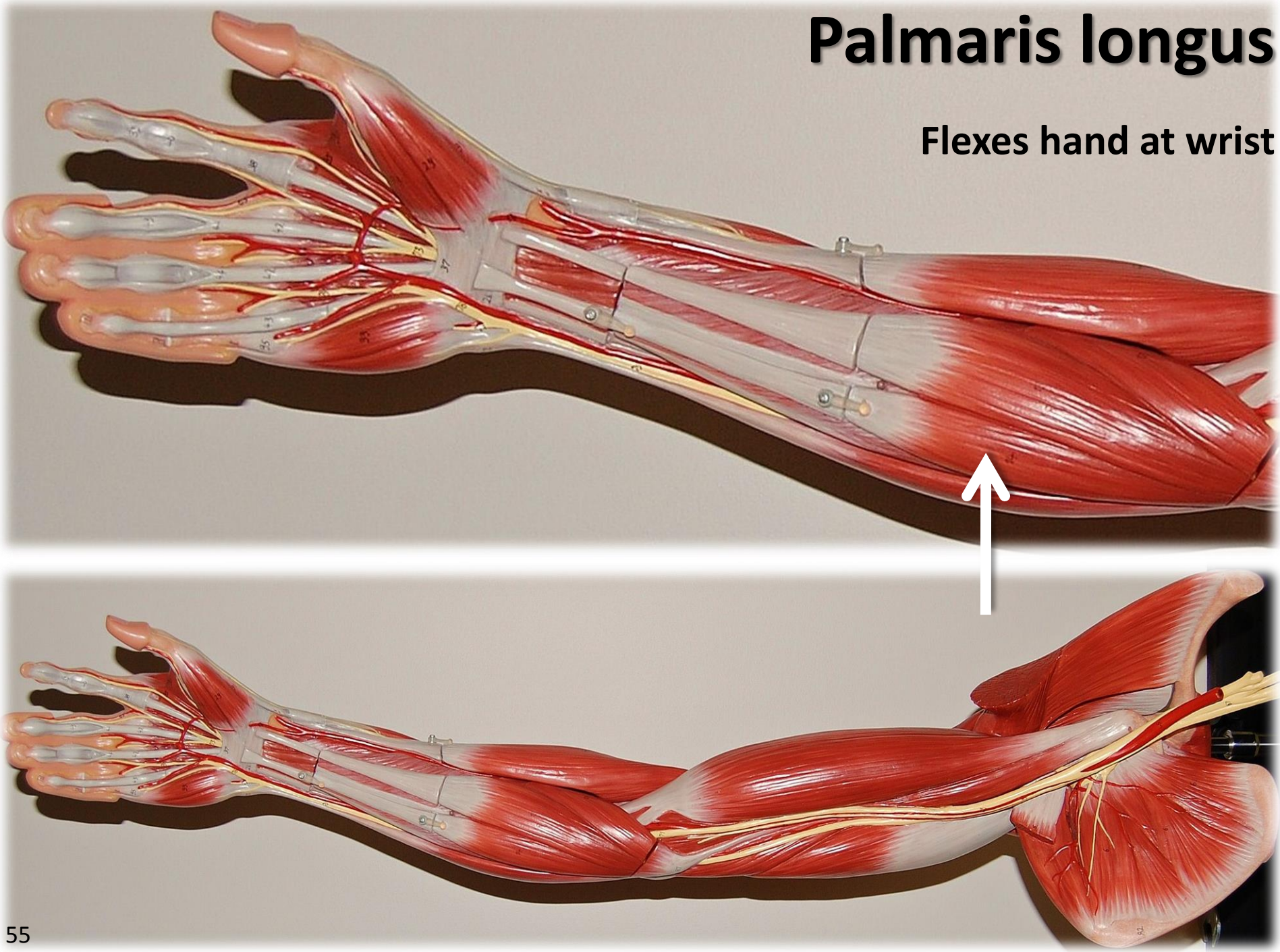
Flexes and abducts hand at wrist





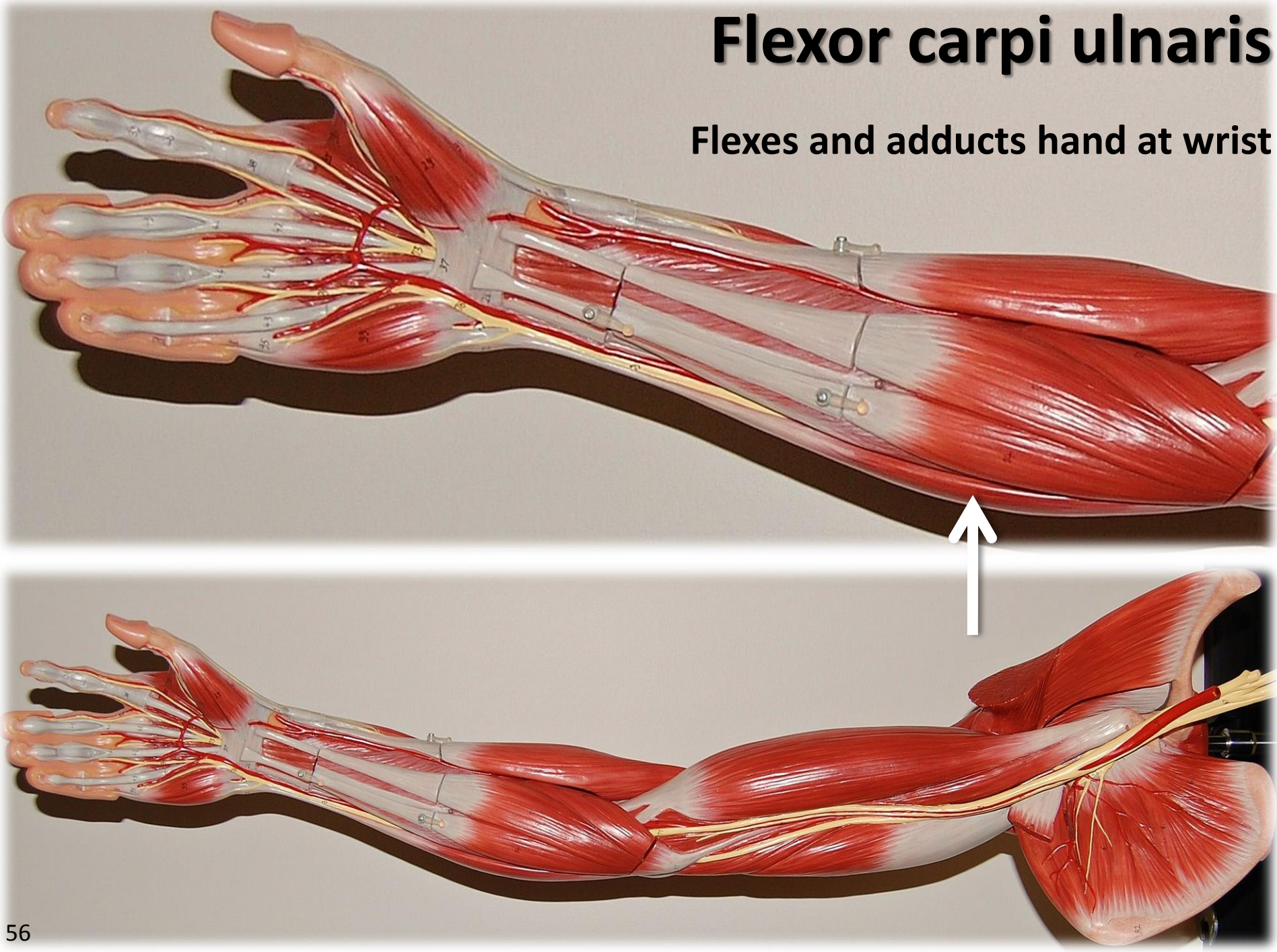
Palmaris longus

Flexes hand at wrist



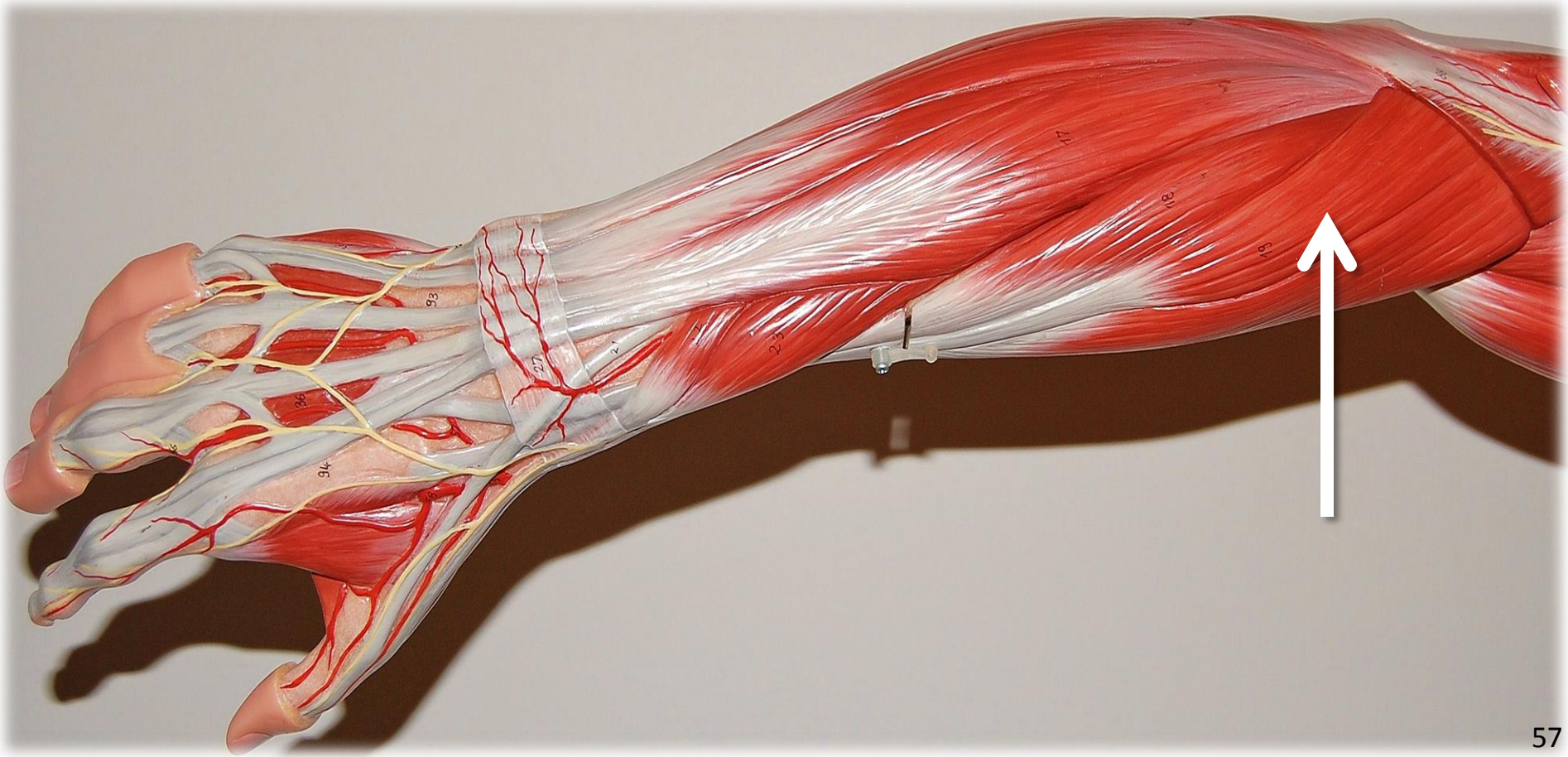
Flexor carpi ulnaris

Flexes and adducts hand at wrist



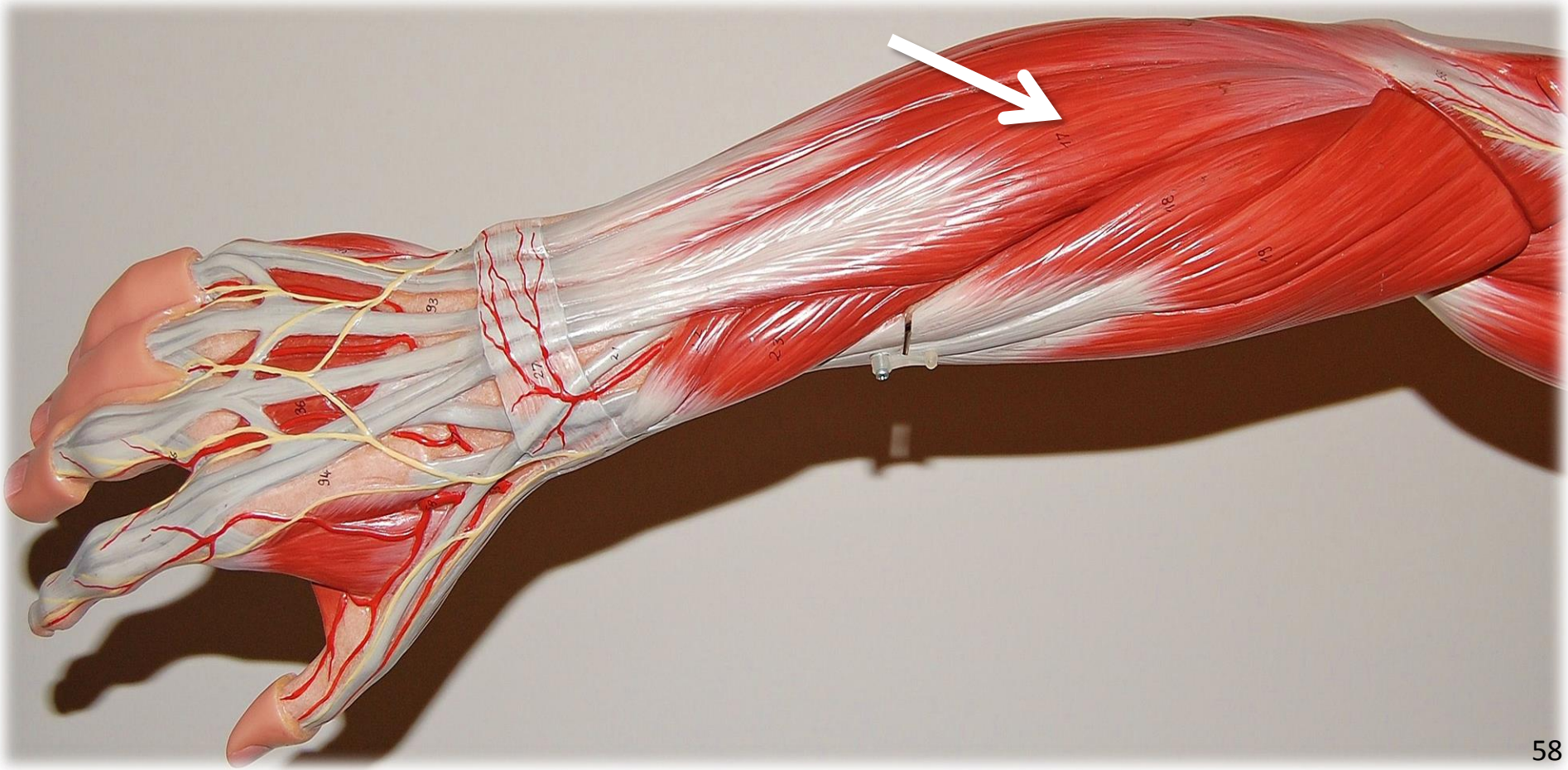
Extensor carpi radialis longus

Extends and abducts hand at wrist

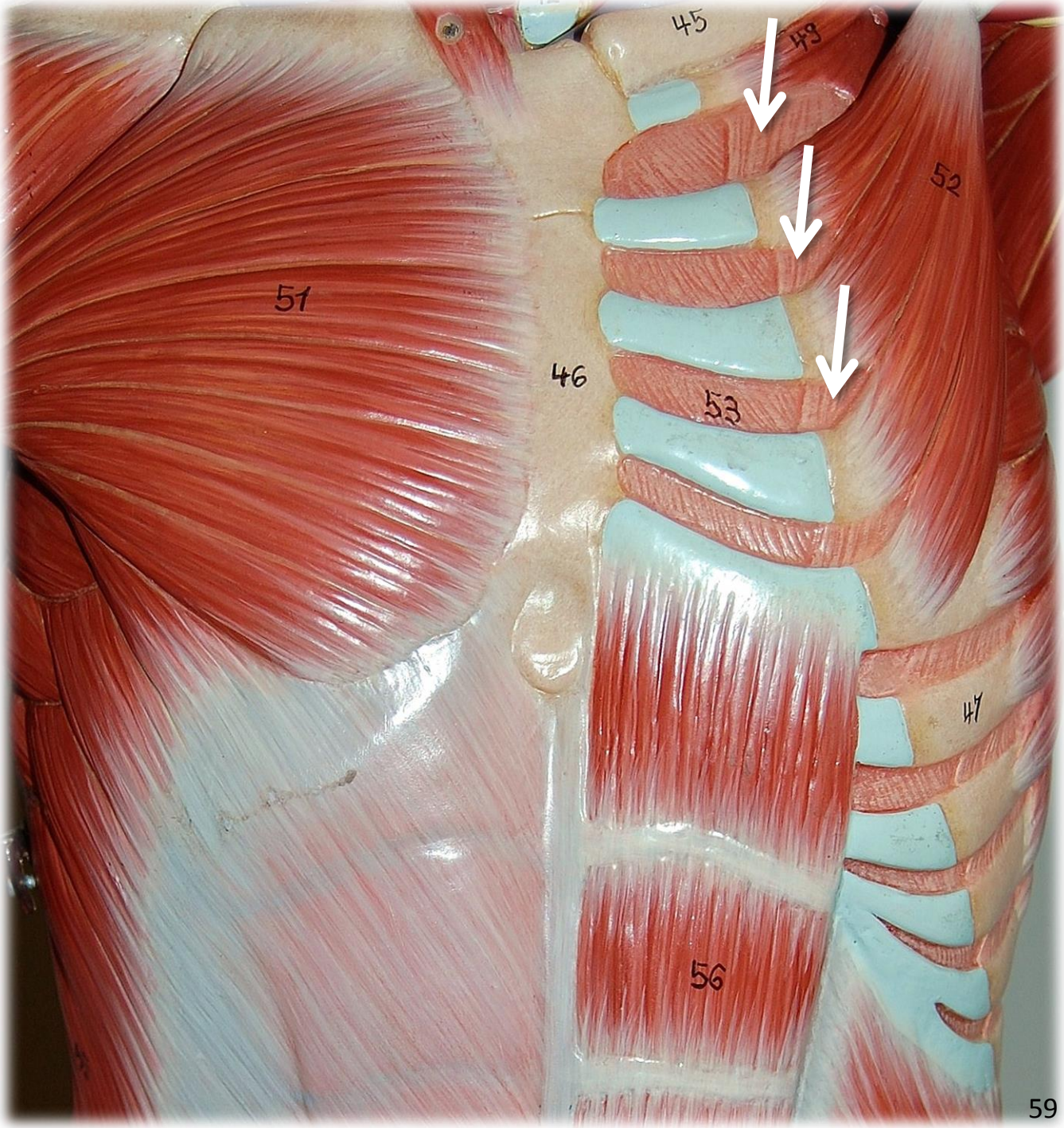


Extensor digitorum

Extends fingers and hand at wrist

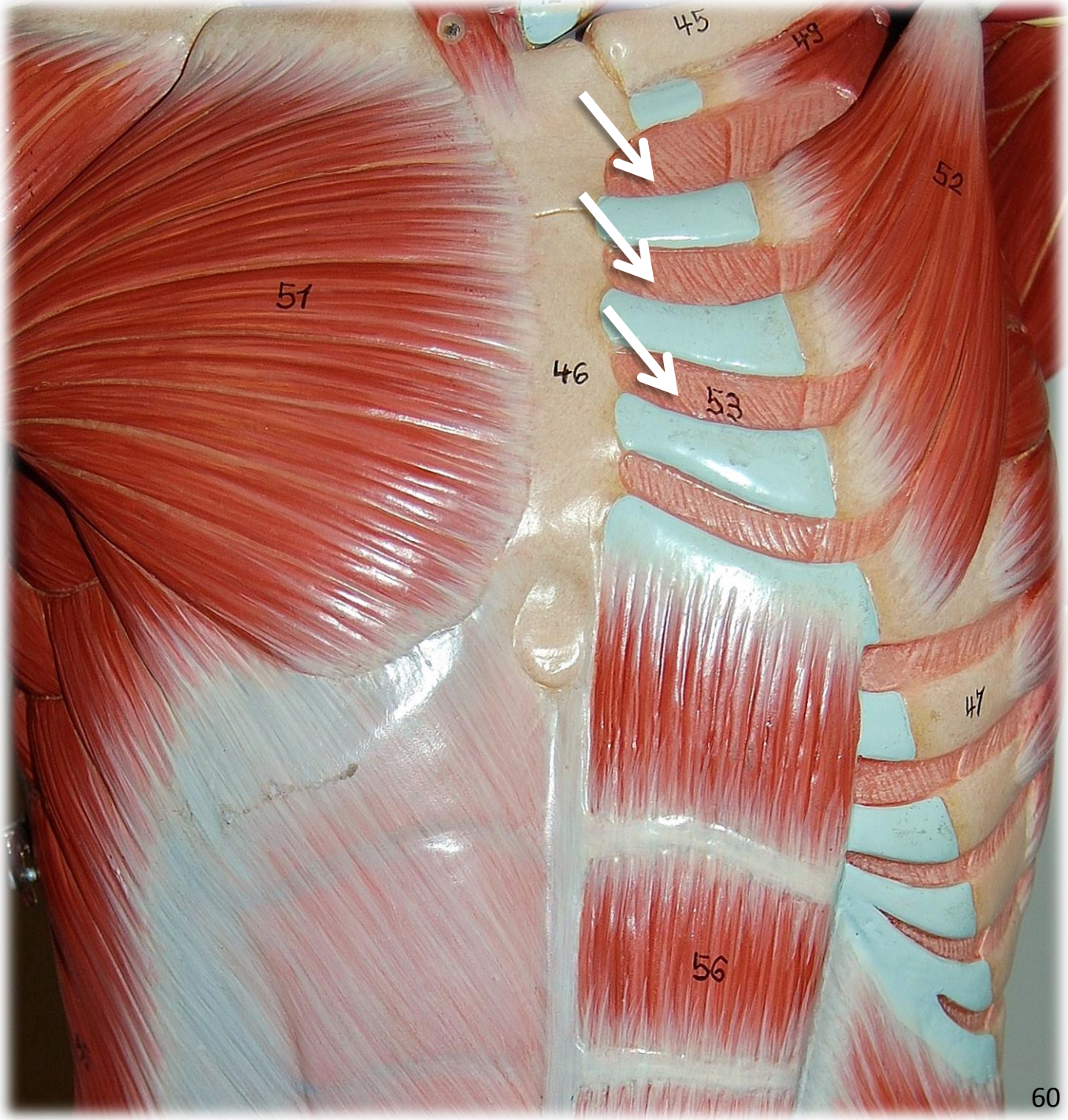


External intercostals



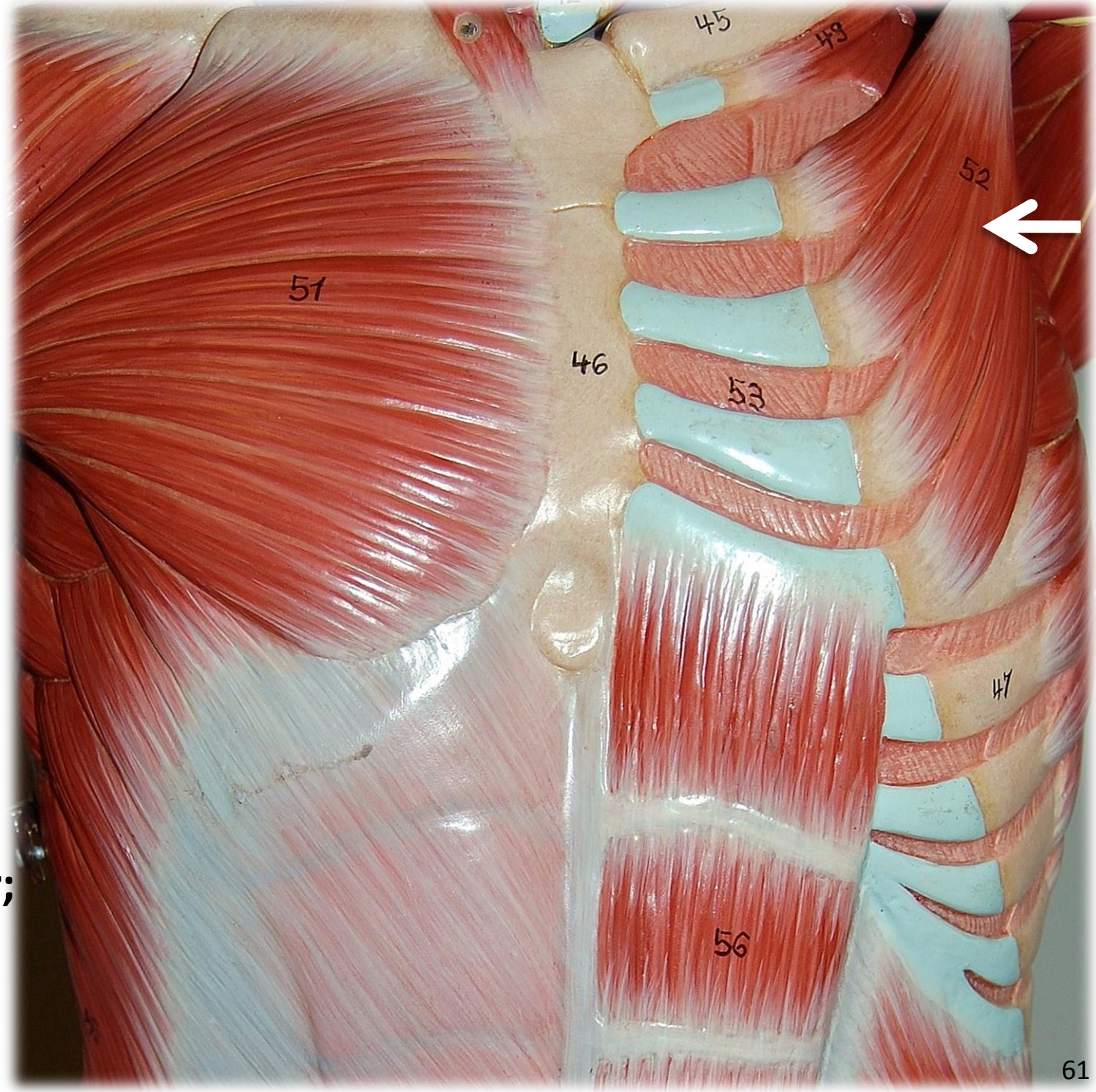
***Contraction*:**
Elevates ribs and enlarges thoracic cavity (inhalation);
***Relaxation*:**
Depresses ribs and reduces thoracic cavity (exhalation)

Internal intercostals



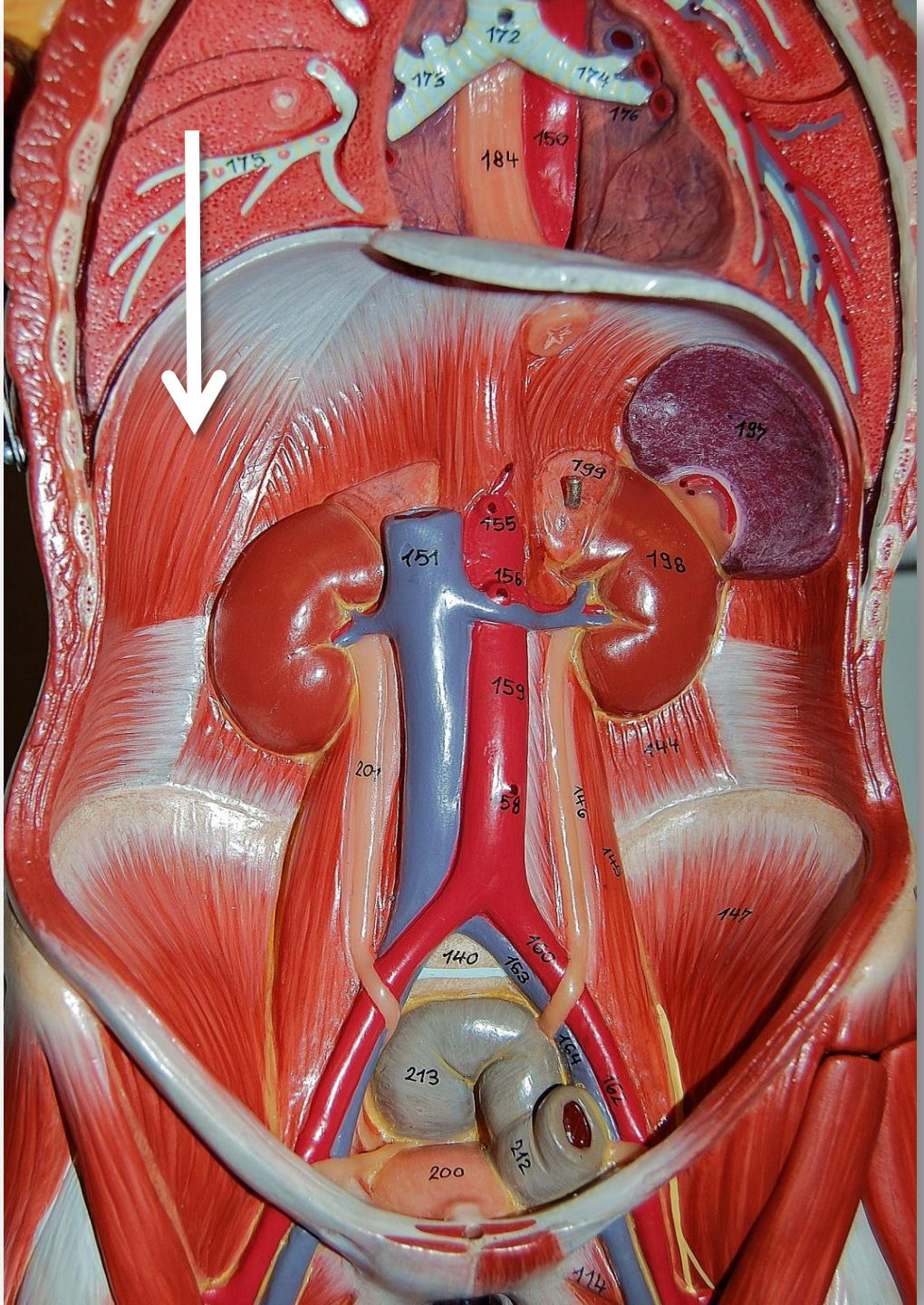
***Contraction*:**
Reduces thoracic cavity (forced exhalation)

Pectoralis minor



Abducts shoulder; elevates ribs 3-5 during forced inhalation

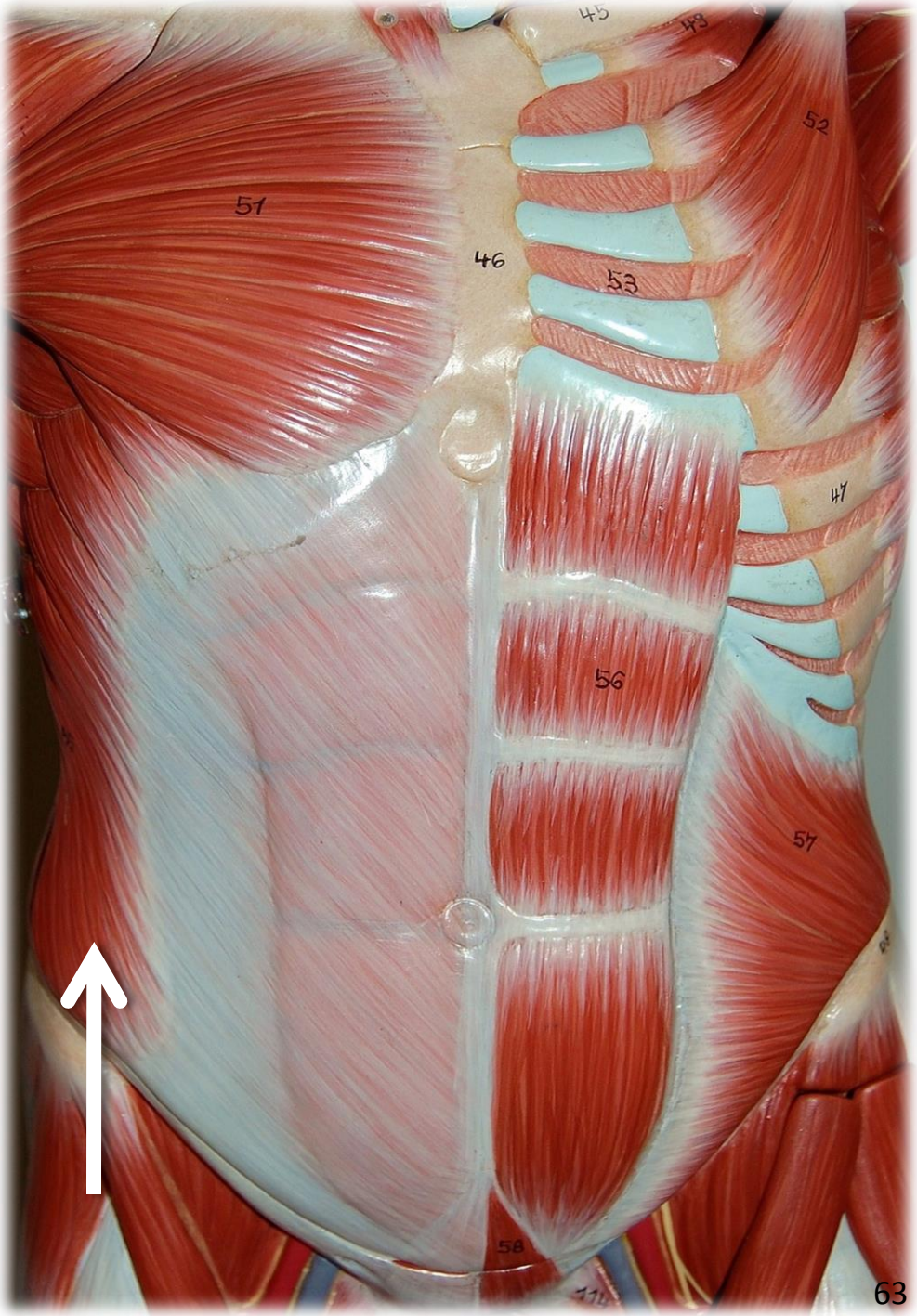
Diaphragm



***Contraction*: Flattens and enlarges thoracic cavity (inhalation); *Relaxation*: Raises superiorly to reduce thoracic cavity (exhalation)**

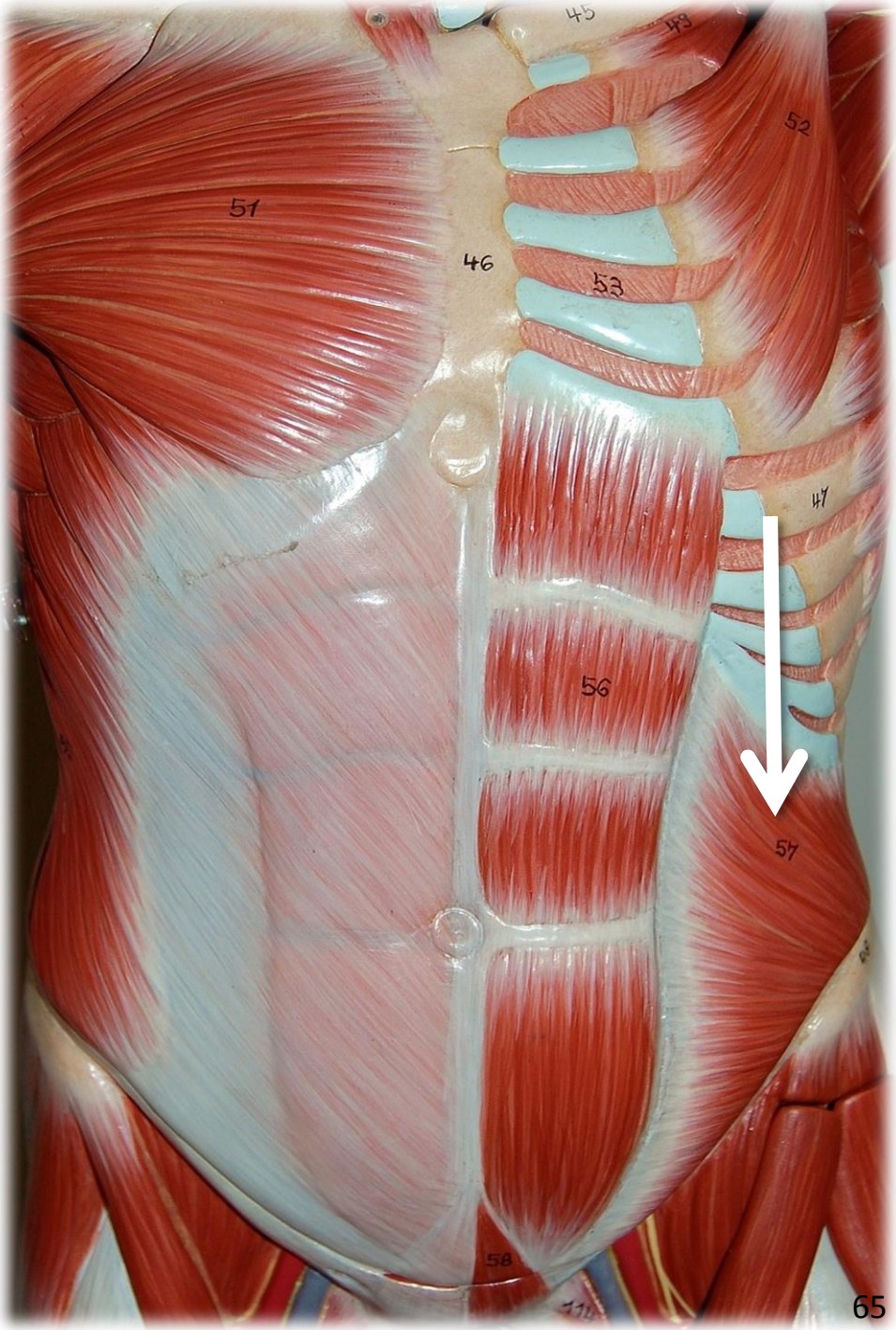
External oblique

***Both sides contract*: Compresses abdomen and flexes vertebral column;**
***One side contracts*: Laterally flexes and rotates vertebral column**



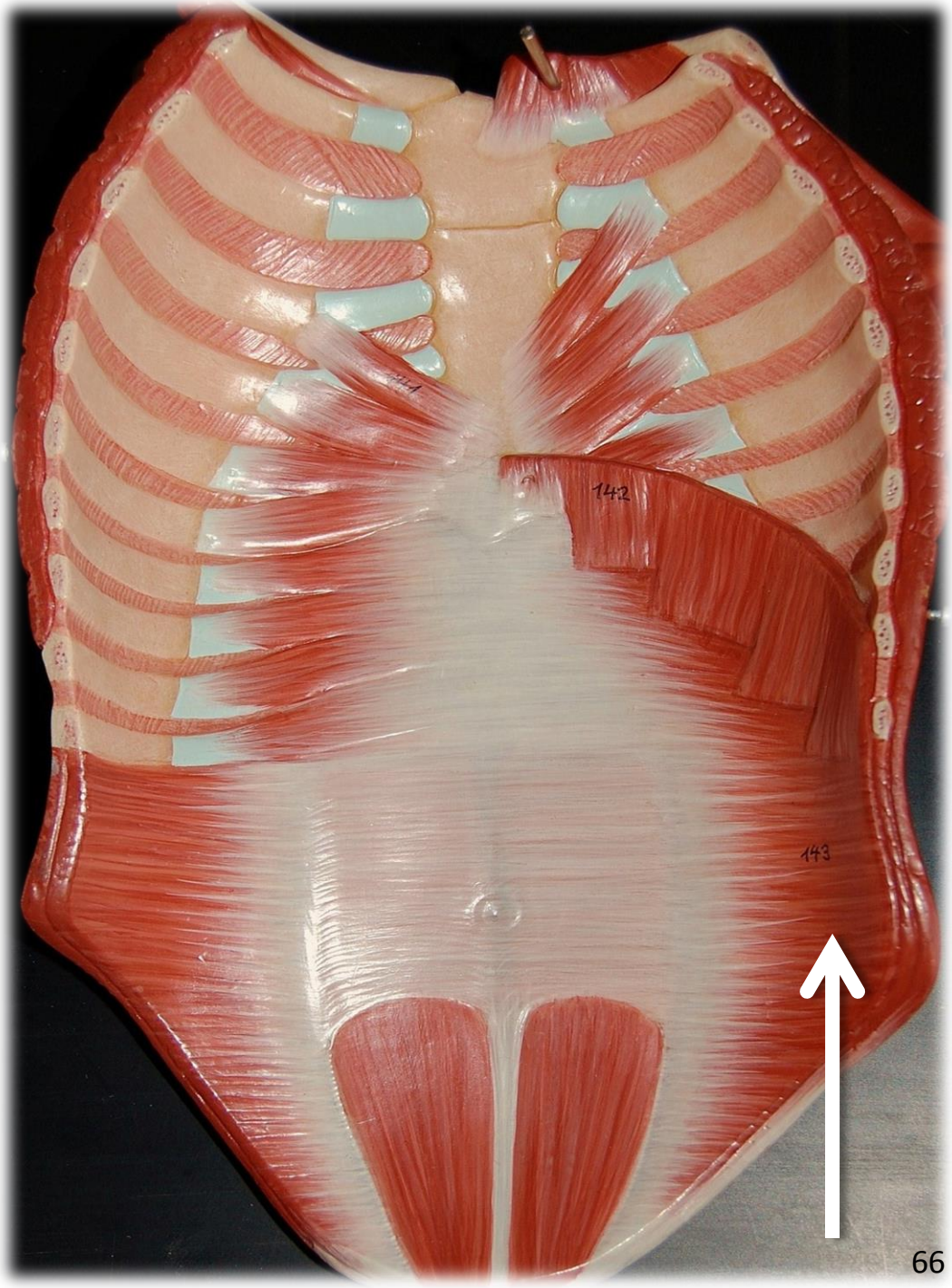
External oblique

Internal oblique



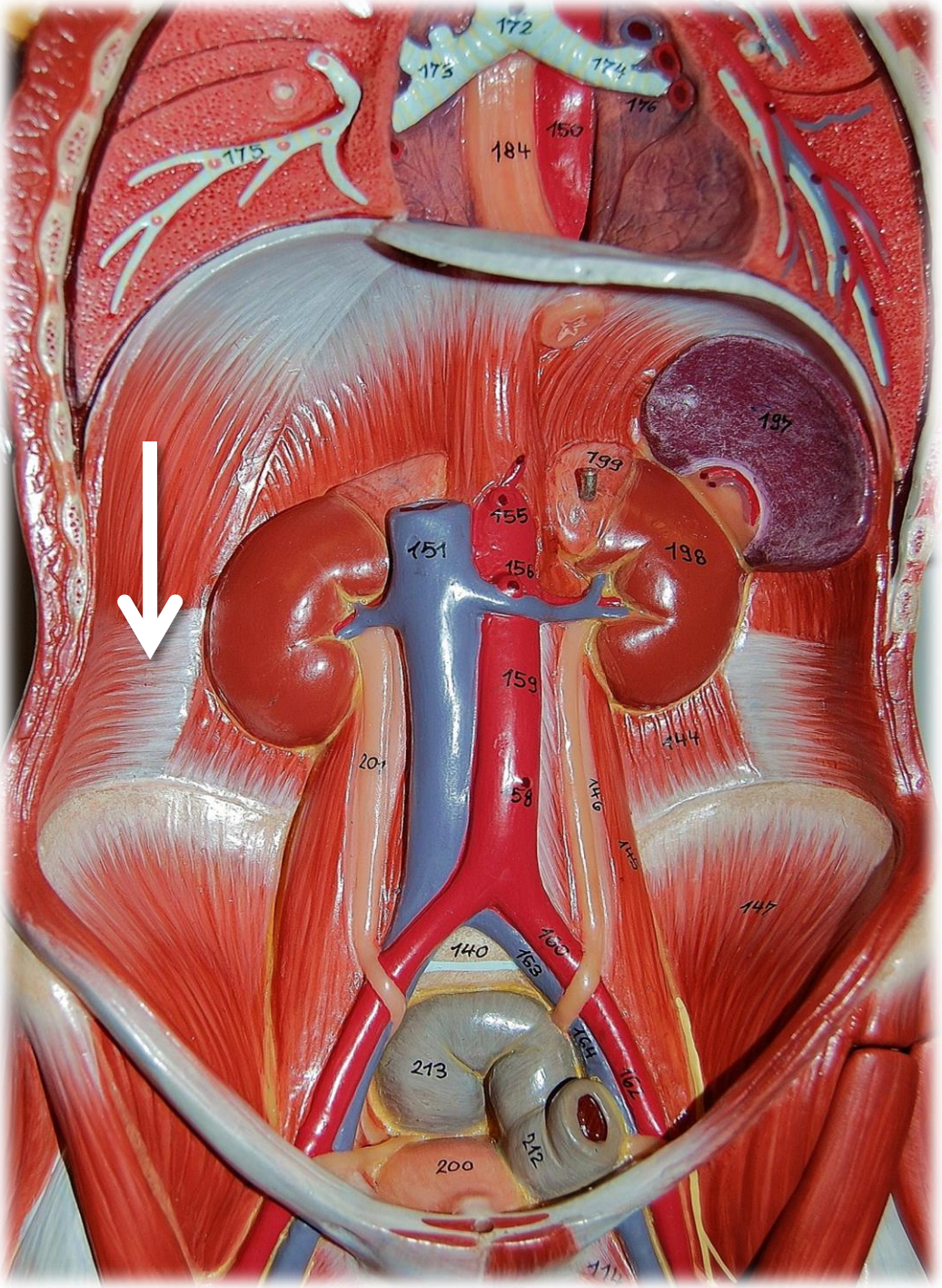
***Both sides contract*:**
Compresses abdomen and flexes vertebral column;
***One side contracts*: Laterally flexes and rotates vertebral column**

Transversus abdominis

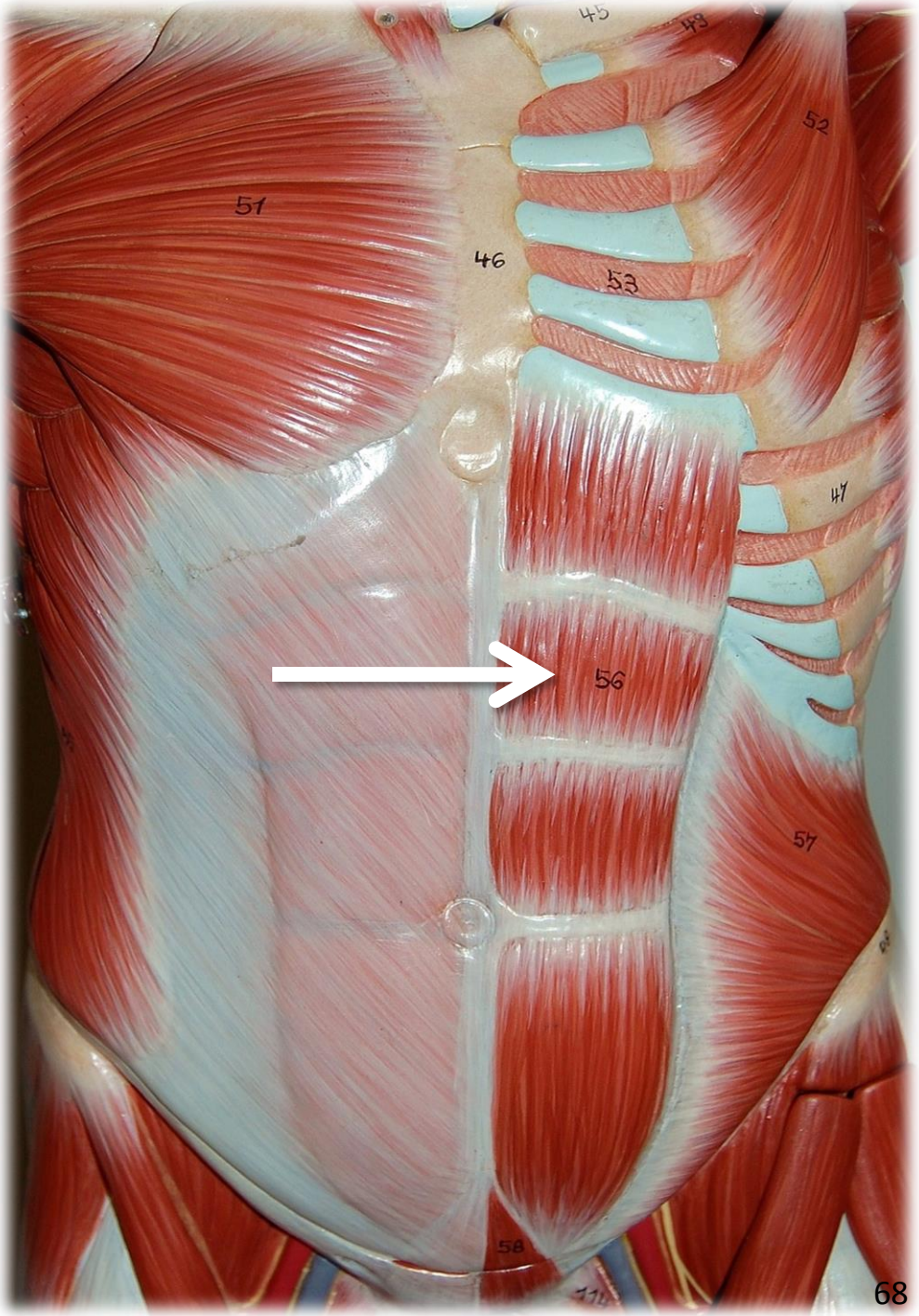


Compresses abdomen

Transversus abdominis

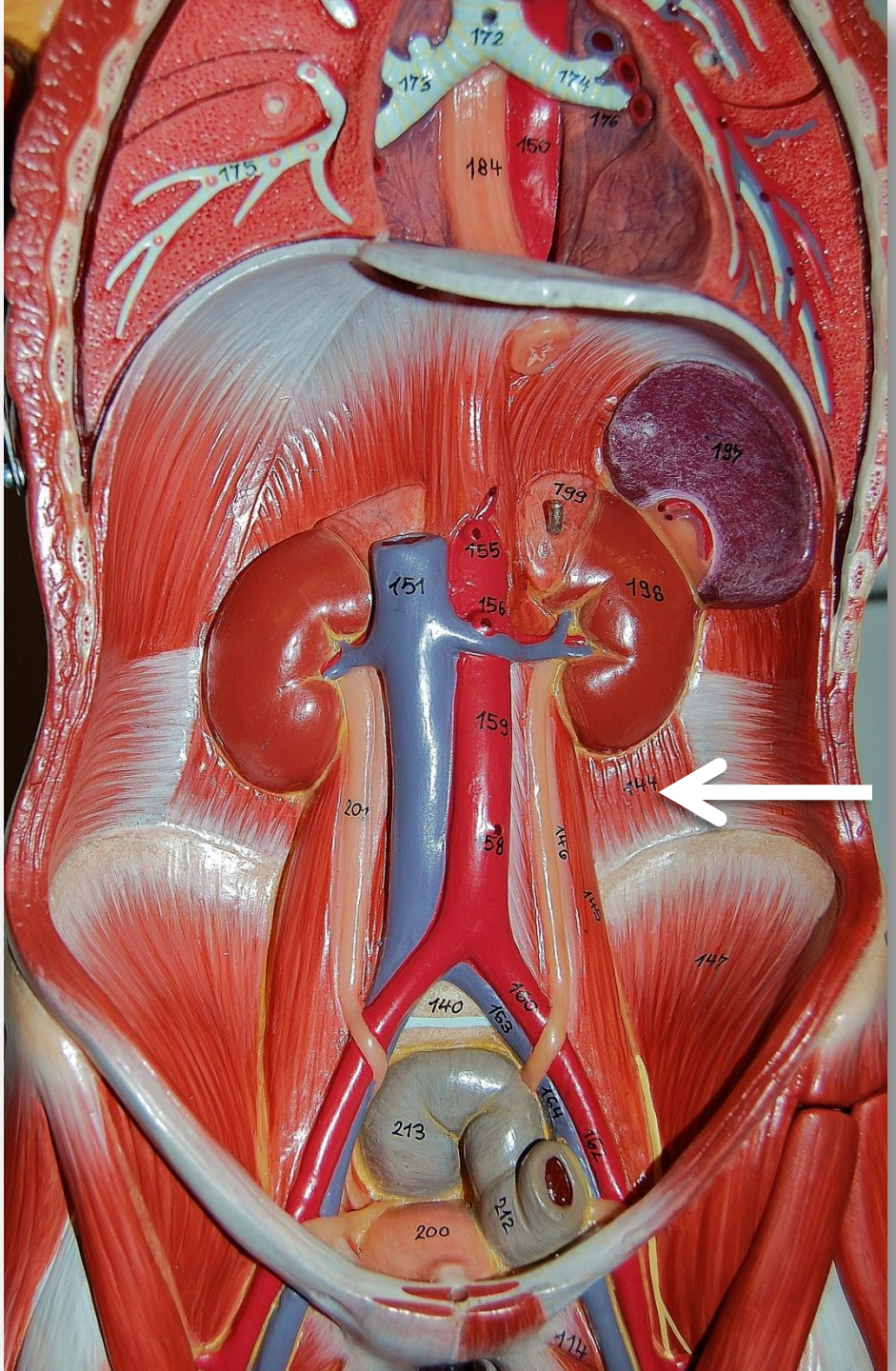


Rectus abdominis



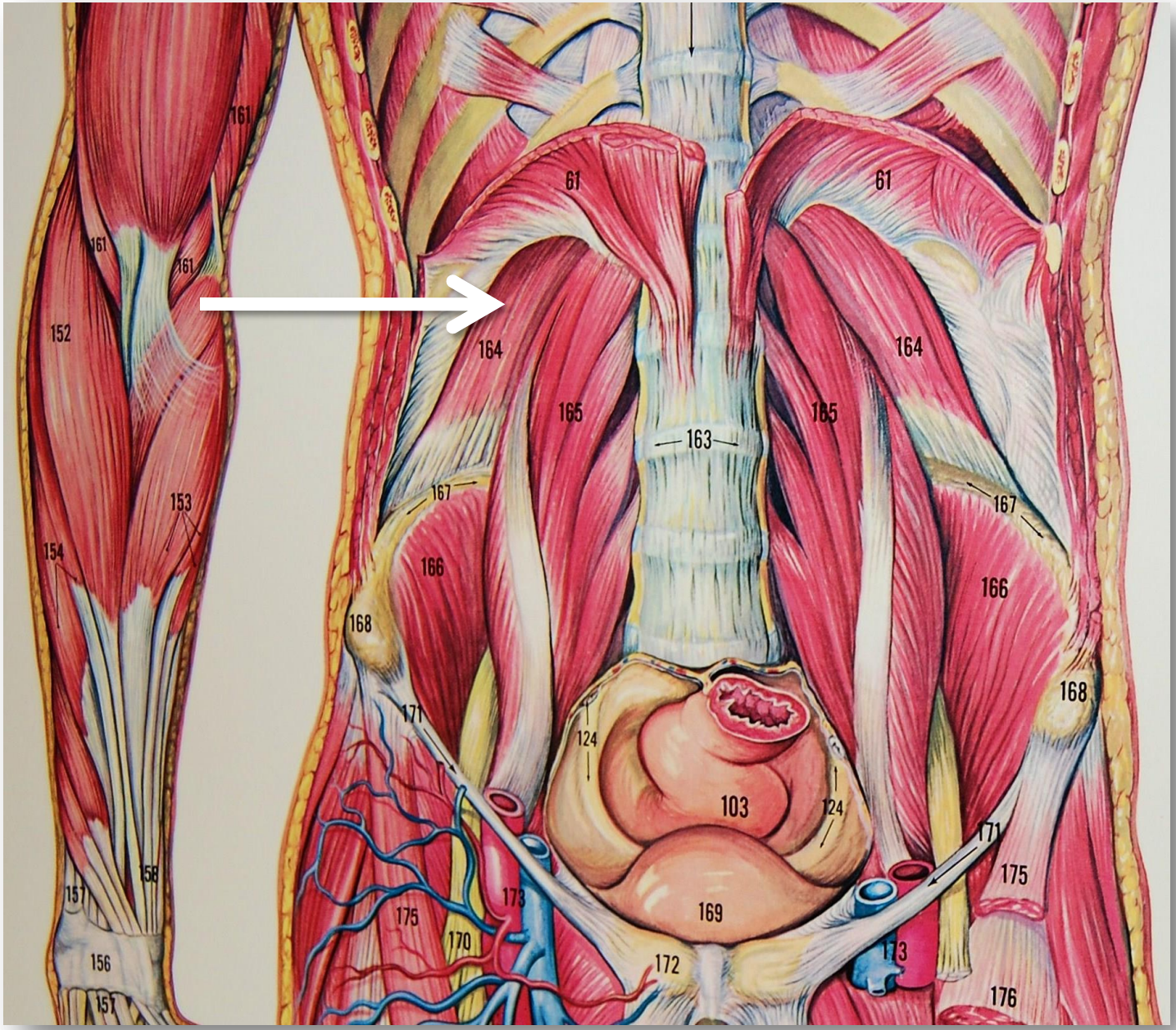
Flexes vertebral column; compresses abdomen to aid in defecation, urination, childbirth, and forced exhalation

Quadratus lumborum

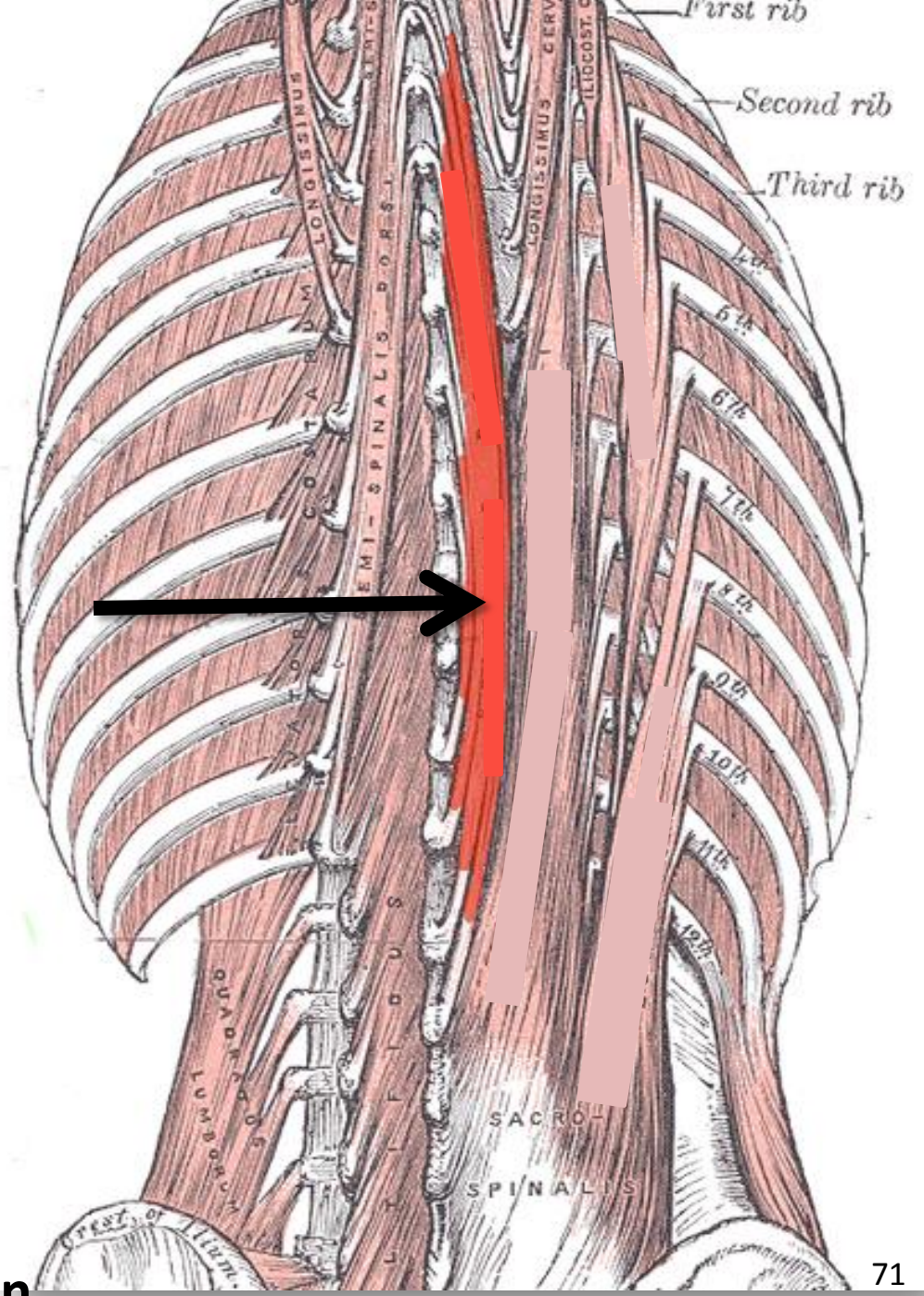


***Both sides contract*: Depresses 12th ribs during forced exhalation; *One side contracts*: Laterally flexes vertebral column**

Quadratus lumborum



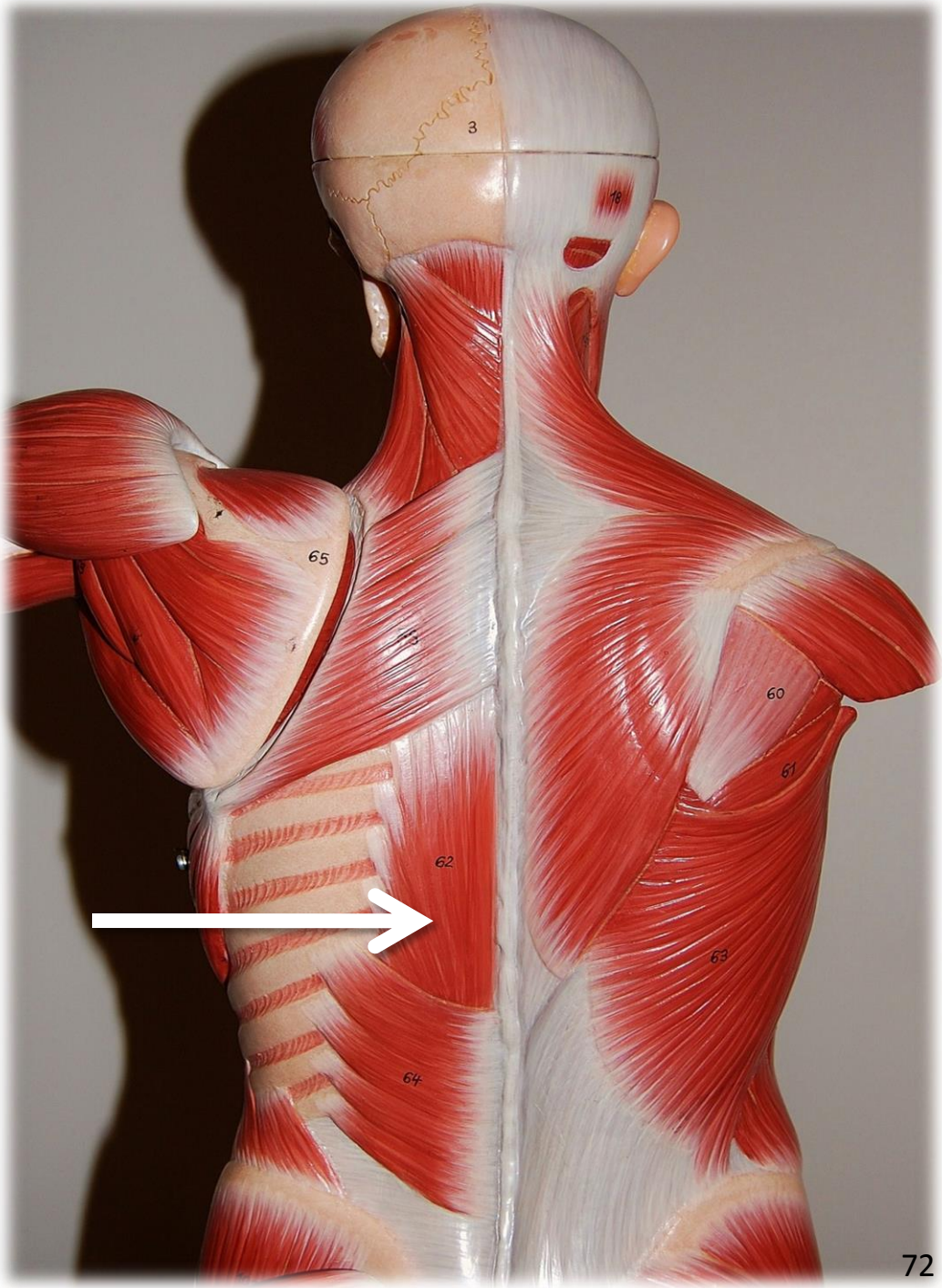
Spinalis group of erector spinae



Extends head and vertebral column

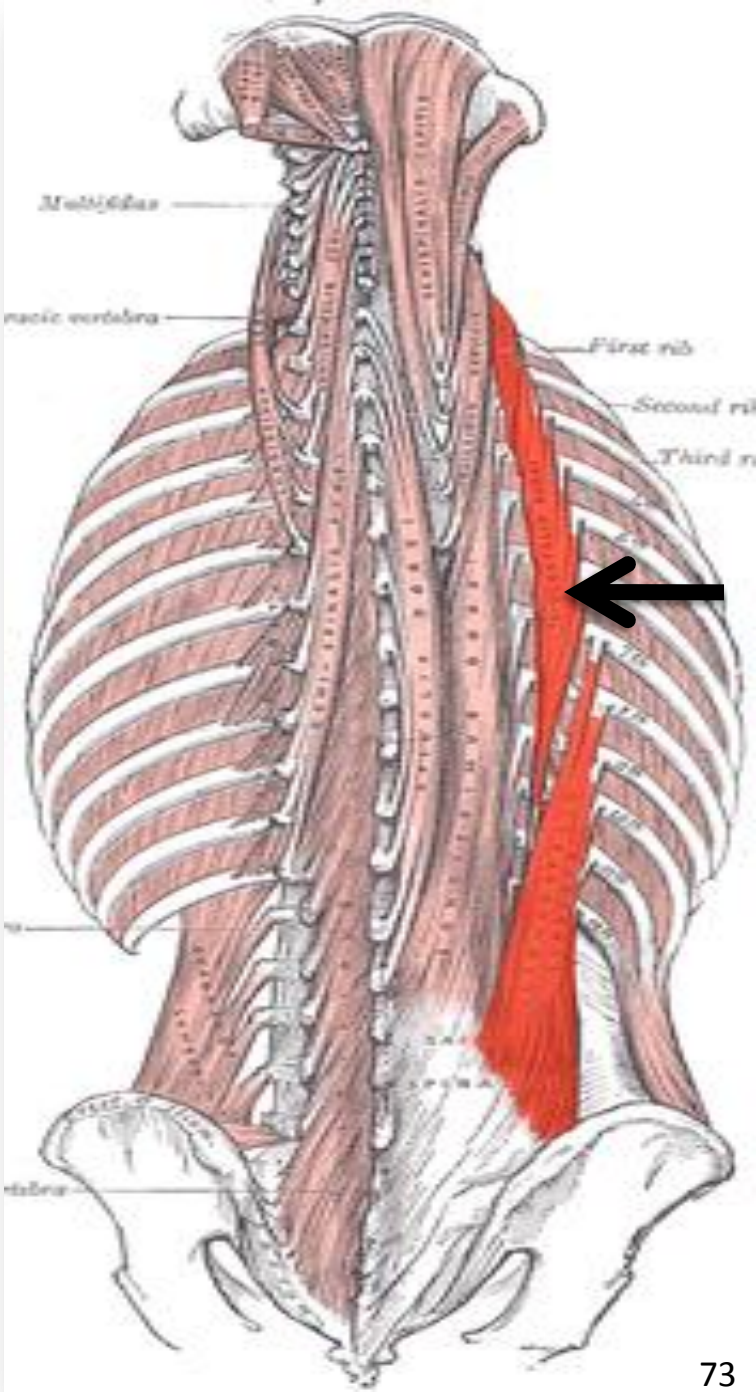
http://commons.wikimedia.org/wiki/File:Spinalis.png

Longissimus group of erector spinae



Extends head and vertebral column

Iliocostalis group of erector spinae

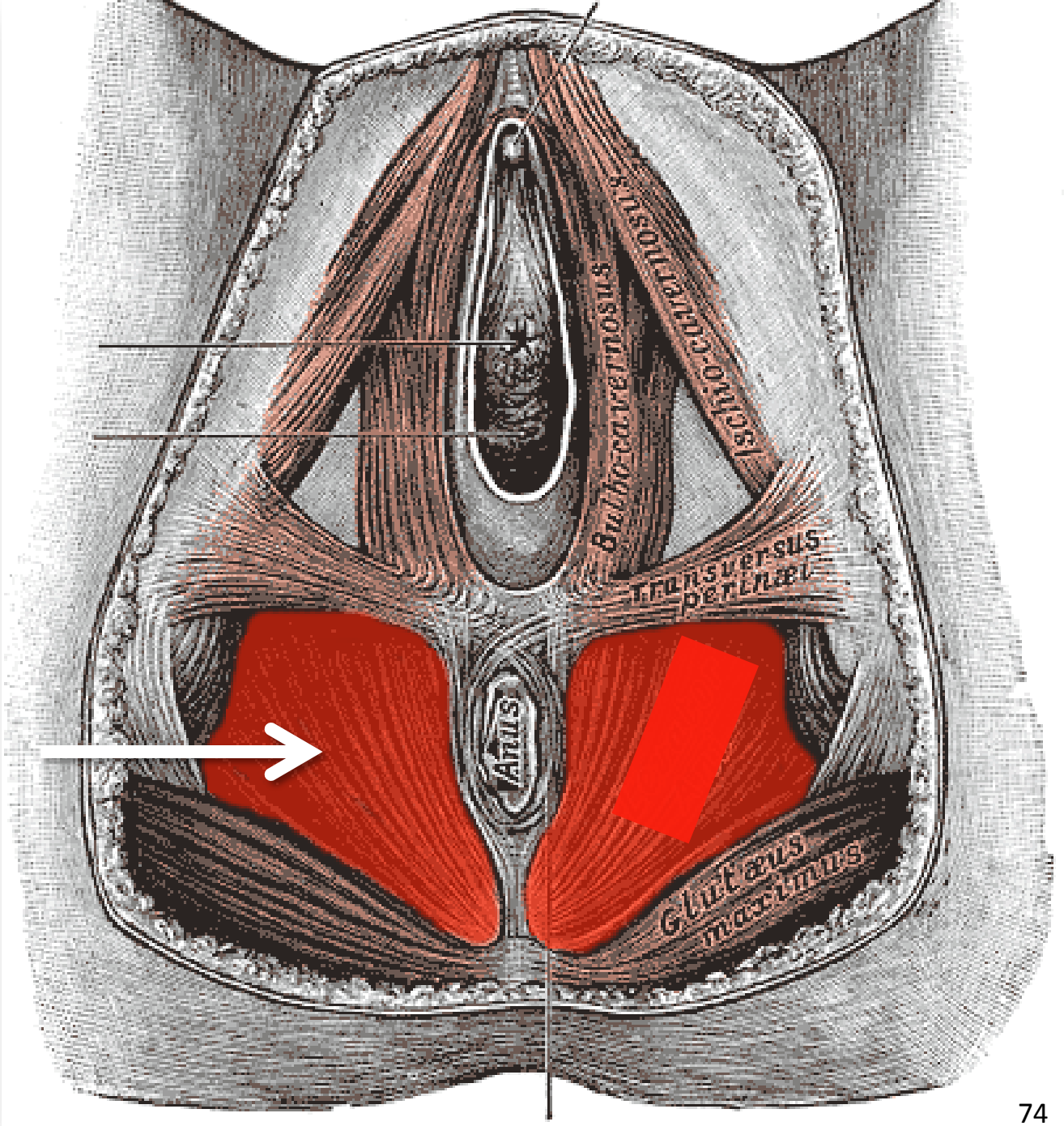


Extends head and vertebral column

http://commons.wikimedia.org/wiki/File:Longissimus.png

Levator ani

Supports pelvic viscera; stabilizes pressure during forced exhalation, coughing, vomiting, urination, and defecation; constricts anus, urethra, and vagina; assists in defecation



http://commons.wikimedia.org/wiki/File:Levator_ani.png

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