

FIGURE 9.25 **AP|R** Muscles of the head and face. (a) Muscles of facial expression and mastication; isolated views of (b) the temporalis and buccinator muscles and (c) the lateral and medial pterygoid muscles.

TABLE 9.3 | Muscles of Facial Expression **AP|R**

Muscle	Origin	Insertion	Action	Nerve Supply
Epicranius	Occipital bone	Skin and muscles around eye	Raises eyebrow as when surprised	Facial nerve
Orbicularis oculi	Maxillary and frontal bones	Skin around eye	Closes eye as in blinking	Facial nerve
Orbicularis oris	Muscles near the mouth	Skin of central lip	Closes lips, protrudes lips as for kissing	Facial nerve
Buccinator	Outer surfaces of maxilla and mandible	Orbicularis oris	Compresses cheeks inward as when blowing air	Facial nerve
Zygomaticus major	Zygomatic bone	Corner of mouth	Raises corner of mouth as when smiling	Facial nerve
Zygomaticus minor	Zygomatic bone	Corner of mouth	Raises corner of mouth as when smiling	Facial nerve
Platysma	Fascia in upper chest	Lower border of mandible	Draws angle of mouth downward as when pouting	Facial nerve

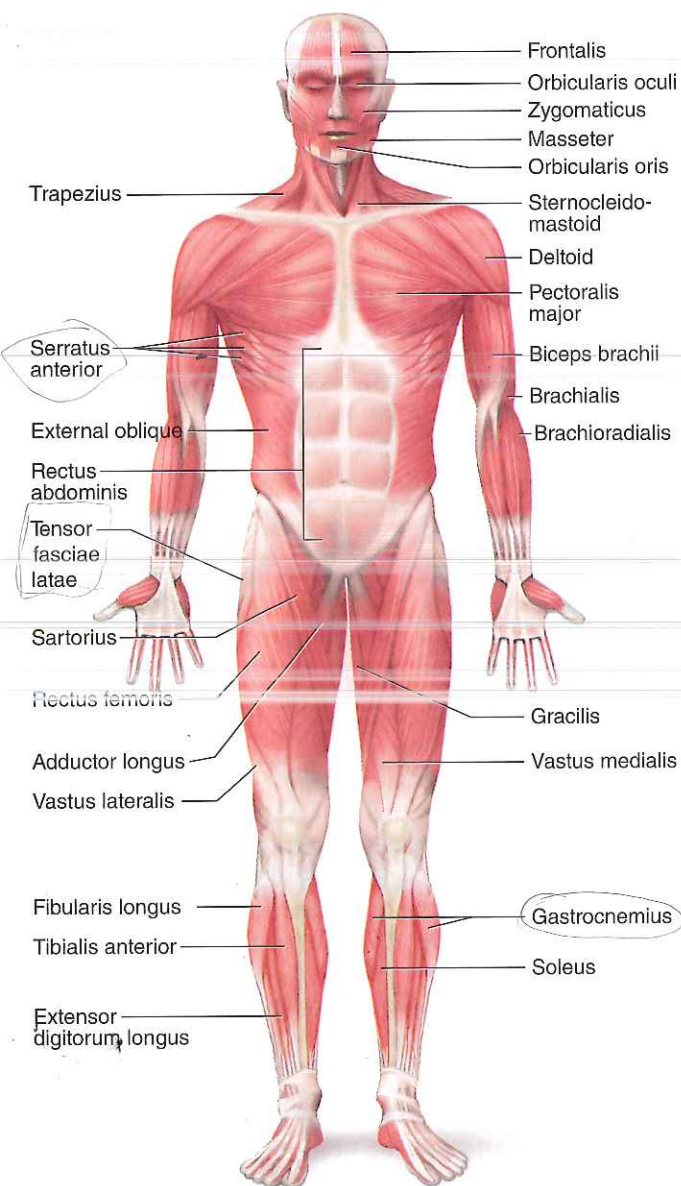


FIGURE 9.23 Anterior view of superficial skeletal muscles.

cranium like a cap. Contraction of the epicranii raises the eyebrows and horizontally wrinkles the skin of the forehead, as when a person expresses surprise. Headaches often result from sustained contraction of this muscle.

The **orbicularis oculi** (or-bik'u-la-rus ok'u-li) is a ring-like band of muscle, called a *sphincter muscle*, that surrounds the eye. It lies in the subcutaneous tissue of the eyelid and closes or blinks the eye. At the same time, it compresses the nearby tear gland, or *lacrimal gland*, aiding the flow of tears over the surface of the eye. Contraction of the orbicularis oculi also causes the folds, or *crow's feet*, that radiate laterally from the corner of the eye. Chapter 12 (pp. 469–470) describes the muscles that move the eye.

The **orbicularis oris** (or-bik'u-la-rus o'ris) is a sphincter muscle that encircles the mouth. It lies between the skin and the mucous membranes of the lips, extending upward to the

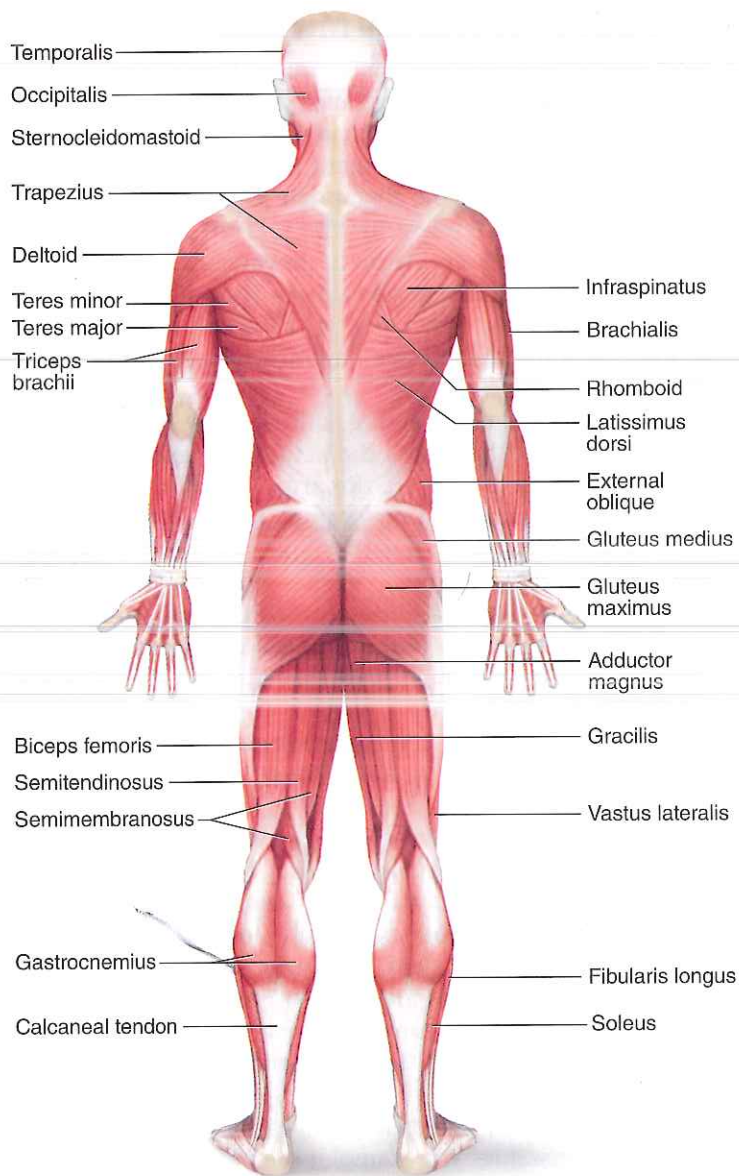


FIGURE 9.24 Posterior view of superficial skeletal muscles.

nose and downward to the region between the lower lip and chin. The orbicularis oris is also called the kissing muscle because it closes and puckers the lips.

The **buccinator** (buk'si-na'tor) is located in the wall of the cheek. Its fibers are directed forward from the bones of the jaws to the angle of the mouth, and when they contract, the cheek is compressed inward. This action helps hold food in contact with the teeth when a person is chewing. The buccinator also aids in blowing air out of the mouth, and for this reason, it is also called the trumpeter muscle.

The **zygomaticus** (zi'go-mat'ik-us) **major** and **minor** extend from the zygomatic arch downward to the corner of the mouth. When they contract, the corner of the mouth is drawn upward, such as in smiling or laughing.

The **platysma** (plah-tiz'mah) is a thin, sheetlike muscle whose fibers extend from the chest upward over the neck to

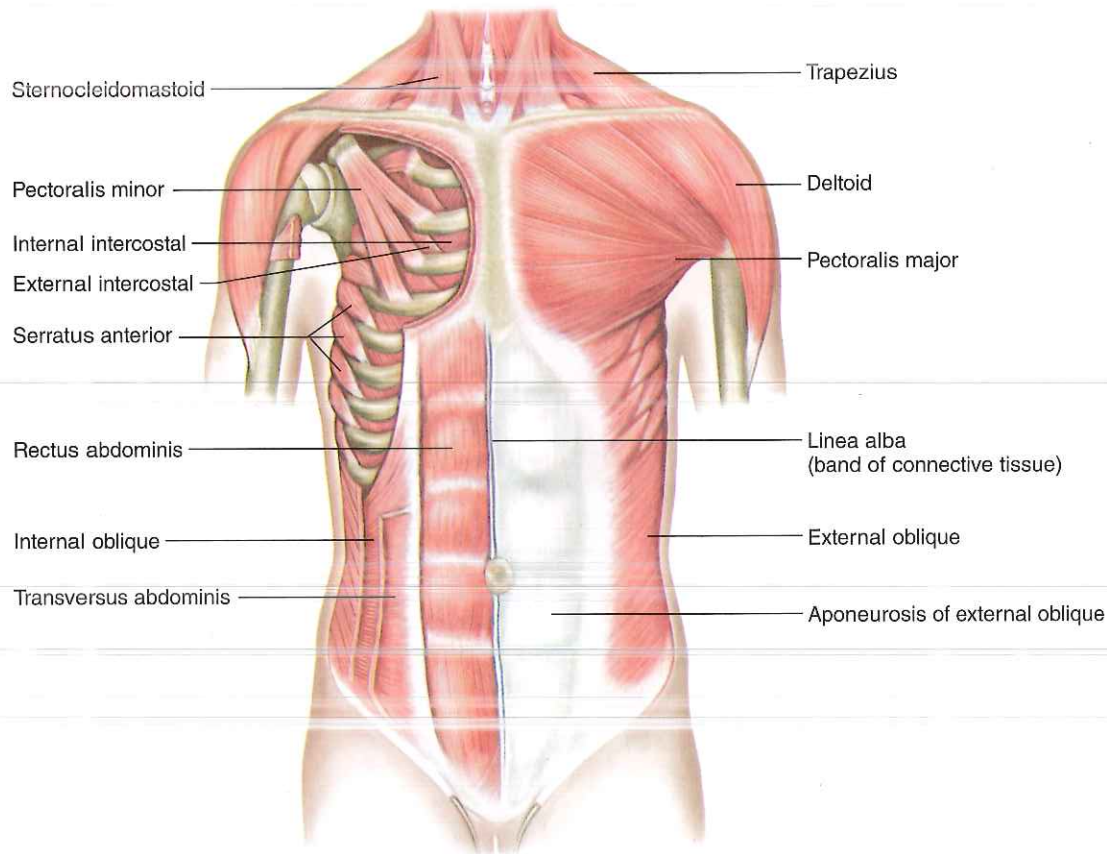


FIGURE 9.28 **AP|R** Muscles of the anterior chest and abdominal wall. The right pectoralis major and external oblique are removed to show underlying muscles.

A small, triangular region, called the *triangle of auscultation*, is located in the back where the trapezius overlaps the superior border of the latissimus dorsi and the underlying rhomboid major. This area, near the medial border of the scapula, enlarges when a person bends forward with the arms folded across the chest. By placing the bell of a stethoscope in the triangle of auscultation, a physician can usually clearly hear the sounds of the respiratory organs.

The **levator scapulae** (le-va'tor scap'u-le) is a straplike muscle that runs almost vertically through the neck, connecting the cervical vertebrae to the scapula. It elevates the scapula (see figs. 9.27 and 9.29).

The **serratus anterior** (ser-ra'tus an-te're-or) is a broad, curved muscle located on the side of the chest. It arises as fleshy, narrow strips on the upper ribs and extends along the medial wall of the axilla to the ventral surface of the scapula. It pulls the scapula downward and anteriorly and is used to thrust the shoulder forward, as when pushing something (see fig. 9.28).

The **pectoralis** (pek'tor-a'lis) **minor** is a thin, flat muscle that lies beneath the larger pectoralis major. It extends laterally and upward from the ribs to the scapula and pulls the scapula forward and downward. When other muscles fix the scapula in position, the pectoralis minor can raise the ribs and thus aid forceful inhalation (see fig. 9.28).

Muscles That Move the Arm

The arm is one of the more freely movable parts of the body because muscles connect the humerus to regions of the pectoral girdle, ribs, and vertebral column. These muscles can be grouped according to their primary actions—flexion, extension, abduction, and rotation (figs. 9.29, 9.30, 9.31; reference plates 67, 68, 69, pp. 354-356; table 9.7). Muscles that move the arm include the following:

Flexors

Coracobrachialis
Pectoralis major

Extensors

Teres major
Latissimus dorsi

Abductors

Supraspinatus
Deltoid

Rotators

Subscapularis
Infraspinatus
Teres minor

Flexors

The **coracobrachialis** (kor''ah-ko-bra'ke-al-is) extends from the scapula to the middle of the humerus along its medial surface. It flexes and adducts the arm (see figs. 9.30 and 9.31).

The **pectoralis major** is a thick, fan-shaped muscle in the upper chest. Its fibers extend from the center of the thorax through the armpit to the humerus. This muscle primarily pulls the arm forward and across the chest. It can also rotate the humerus medially and adduct the arm from a raised position (see fig. 9.28).