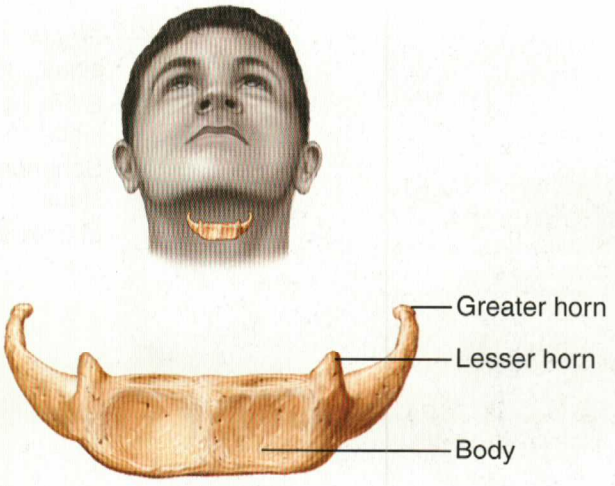

Figure 5.14 Anatomical location and structure of the hyoid bone. Anterior view.

wall of each orbit. Each lacrimal bone has a groove that serves as a passageway for tears (*lacrima* = tear).

Nasal Bones The small rectangular bones forming the bridge of the nose are the nasal bones. (The lower part of the skeleton of the nose is made up of hyaline cartilage.)

Vomer Bone The single bone in the median line of the nasal cavity is the vomer. (*Vomer* means "plow," which refers to the bone's shape.) The vomer forms the inferior part of the bony nasal septum, which separates the two nostrils.

Inferior Nasal Conchae The inferior nasal conchae (kon'ke) are thin, curved bones projecting medially from the lateral walls of the nasal cavity. (As mentioned earlier, the superior and middle conchae are similar but are parts of the ethmoid bone.)

Mandible The mandible, or lower jaw, is the largest and strongest bone of the face. It joins the temporal bones on each side of the face, forming the only freely movable joints in the skull. You can find these joints on yourself by placing your fingers just anterior to your ears and opening and closing your mouth. The horizontal part of the mandible (the *body*) forms the chin. Two upright bars of bone (the *rami*) extend from the body to connect the mandible with the temporal bone. The lower teeth lie in *alveoli* (sockets) in the **alveolar process** at the superior edge of the mandibular body.

The Hyoid Bone

Though not really part of the skull, the **hyoid** (hi'oid) **bone (Figure 5.14)** is closely related to the mandible and temporal bones. The hyoid bone is unique in that it is the only bone of the body that does not articulate (form a joint) with any other bone. Instead, it is suspended in the midneck region about 2 cm (1 inch) above the larynx (voicebox), where it is anchored by ligaments to the styloid processes of the temporal bones. Horseshoe-shaped, with a *body* and two pairs of *horns*, the hyoid bone serves as a movable base for the tongue and as an attachment point for neck muscles that raise and lower the larynx when we swallow and speak.

Did You Get It?

11. What are the three main parts of the axial skeleton?
12. Johnny was vigorously exercising the only joints in the skull that are freely movable. What would you guess he was doing?
13. Which skull bone(s) form the "keystone of the face"?
14. Which bone has the cribriform plate and crista galli?
15. Which bones are connected by the coronal suture? By the sagittal suture?

For answers, see Appendix A.

Vertebral Column (Spine)

→ Learning Objectives

- ☐ **Name the parts of a typical vertebra, and explain in general how the cervical, thoracic, and lumbar vertebrae differ from one another.**
- ☐ **Discuss the importance of the intervertebral discs and spinal curvatures.**
- ☐ **Explain how the abnormal spinal curvatures (scoliosis, lordosis, and kyphosis) differ from one another.**

Serving as the axial support of the body, the **vertebral column**, or **spine**, extends from the skull, which it supports, to the pelvis, where it transmits the weight of the body to the lower limbs. Some people think of the vertebral column as a rigid supporting rod, but that picture is inaccurate. Instead, the spine is formed from 26 irregular bones connected and reinforced by ligaments in such a way that a flexible, curved structure results **(Figure 5.15)**. Running through the central cavity of the vertebral column is the delicate spinal cord, which the vertebral column surrounds and protects.

Before birth, the spine consists of 33 separate bones called **vertebrae**, but 9 of these eventually fuse to form the two composite bones, the *sacrum* and the *coccyx*, that construct the inferior portion of