

body of the vertebra, and forms the antero-lateral boundary of the foramen. The distal portions of the primitive costal arches remain undeveloped; occasionally the arch of the seventh cervical vertebra undergoes greater development, and by the formation of costovertebral joints is separated off as a rib. In the *lumbar region* the distal portions of the primitive costal arches fail; the proximal portions fuse with the transverse processes to form the transverse processes of descriptive anatomy. Occasionally a movable rib is developed in connection with the first lumbar vertebra. In the *sacral region* costal processes are developed only in connection with the upper three, or it may be four, vertebræ; the processes of adjacent segments fuse with one another to form the lateral parts of the sacrum. The *coccygeal vertebræ* are devoid of costal processes.

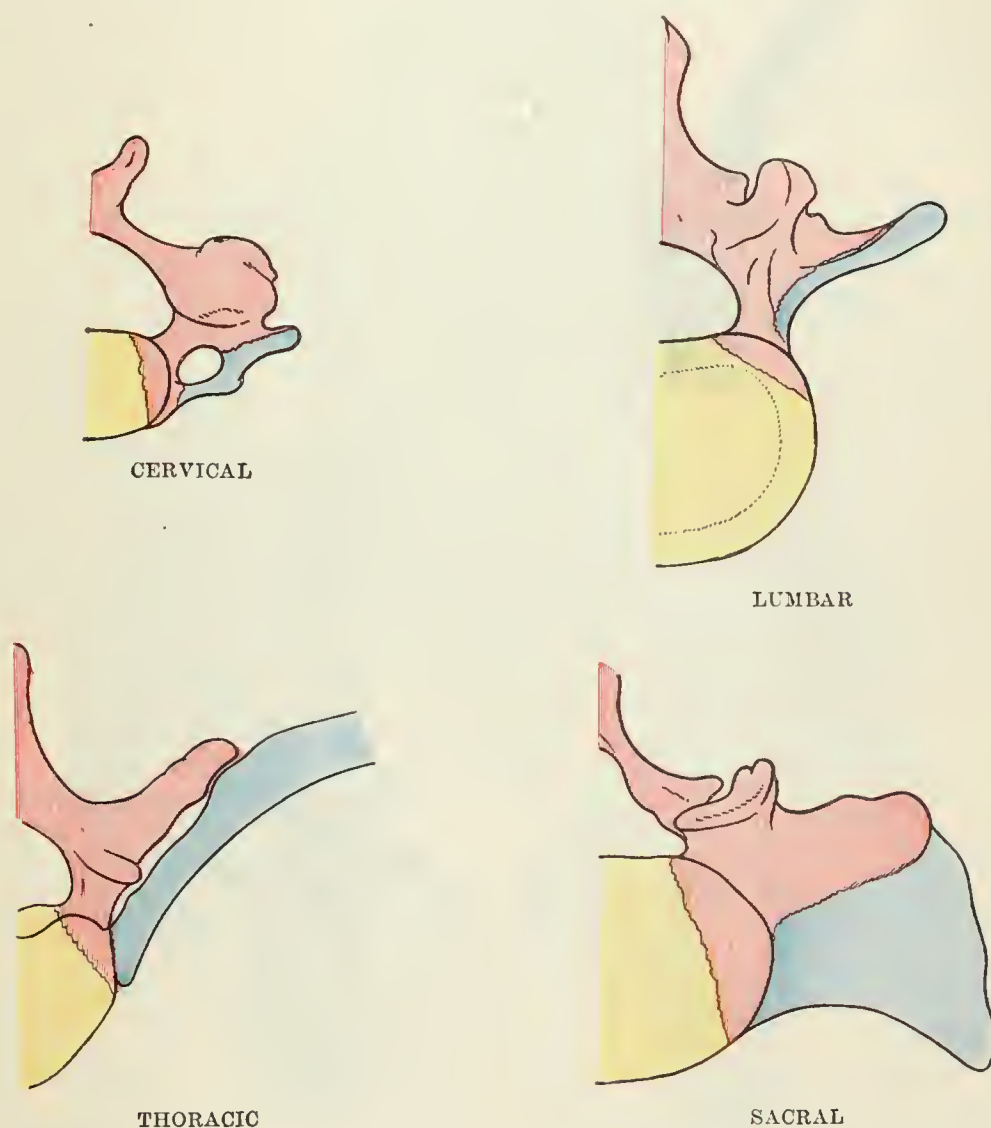


FIG. 67.—Diagrams showing the portions of the adult vertebræ derived respectively from the bodies, vertebral arches, and costal processes of the embryonic vertebræ. The bodies are represented in yellow, the vertebral arches in red, and the costal processes in blue.

**The Sternum.**—The ventral ends of the ribs become united to one another by a longitudinal bar termed the **sternal plate**, and opposite the first seven pairs of ribs these sternal plates fuse in the middle line to form the manubrium and body of the sternum. The xiphoid process is formed by a backward extension of the sternal plates.

**The Skull.**—Up to a certain stage the development of the skull corresponds with that of the vertebral column; but it is modified later in association with the expansion of the brain-vesicles, the formation of the organs of smell, sight, and hearing, and the development of the mouth and pharynx.