two synchondroses, neurocentral synchondroses, traversing it along the planes of junction of the three centers (Fig. 102). In the thoracic region, the facets for the heads of the ribs lie behind

Fig. 101.—Ossification of a vertebra By 3 primary centers 1 for body (8th week) 1 for each vertebral arch (7th or 8th week) Fig. 102. By 3 secondary centers Neurocentralsynchondrosis 1 for each trans. process ( 16th year 1 for spinous process (16th year) Fig. 103. By 2 additional plates 1 for upper surface of body 16th year 1 for under surface of body Fig. 104.—Atlas. By 3 centers 1 for anter, arch (end of 1st year) \_1 for each \ 7th week lateral mass Fig. 105.—Axis. By 7 centers 2nd year Exceptional cases 6th month 1 for each vertebral arch (7th or 8th week)
1 for body (4th month)
1 for under surface of body Fig. 106.—Lumbar vertebra. 2 additional centers for mammillary processes

the neurocentral synchondroses and are ossified from the centers for the vertebral arch. At birth the vertebra consists of three pieces, the body and the halves of the vertebral arch. During the first year the halves of the arch unite behind, union taking place first in the lumbar region and then extending upward through the thoracic and cervical regions. About the third year the bodies of the upper cervical vertebræ are joined to the arches on either side; in the lower lumbar vertebræ the union is not completed until the sixth year. Before puberty, no other

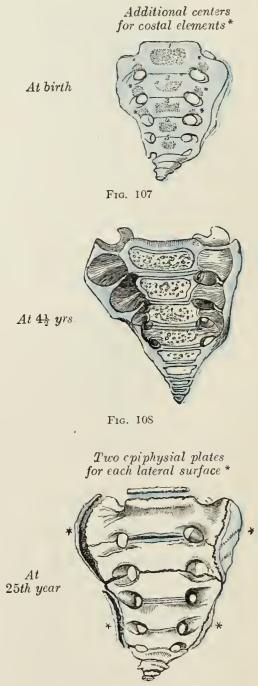


Fig. 107-109.—Ossification of the sacrum.

changes occur, excepting a gradual increase of these primary centers, the upper and under surfaces of the bodies and the ends of the transverse and spinous processes being cartilaginous.