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# Skeletal Development

National Cancer Institute

## Source

National Cancer Institute. *Skeletal Development*. NCI Thesaurus. Code C20138.

Human Skeletal Development involves growth and differentiation of axial, limb, and cranial elements of the skeletal system. Axial vertebrae and ribs derive from cartilage precursors of the paired segmented paraxial mesodermal somite sclerotomes. Interdependent positional signaling by the apical ectodermal ridge, the posterior mesenchyme zone of polarizing activity, and the non ridge ectoderm coordinate limb bud outgrowth and patterning by migrated lateral plate mesoderm and somite cells. Proximal-distal differentiating mesenchymal cells condense to form the limb skeletal primordia. The skull forms by direct ossification of, or cartilage condensation from neural crest-derived, ectomesenchyme.