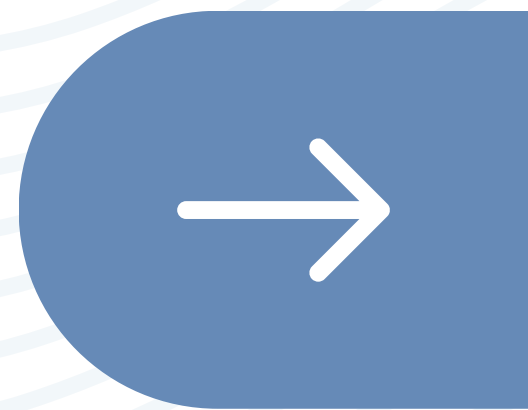


# #DIBS BY NEXTILLO

DAILY INFORMATION BULLETIN SERVICE

**NEURAL CREST DERIVATIVES**





# #DIBSBYNEXTILLO

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## NEURAL CREST DERIVATIVES

*The neural crest, a unique transient embryonic cell population, as a group of cells localized in between the neural tube and the epidermis in the vertebrate embryo. Neural crest cells originate in the ectoderm at the margins of the neural tube.*



# EMBRYOLOGY OF NEURAL CREST CELLS

- ***These cell types include :***
- ***The neurons and glial cells of the sensory, sympathetic, and parasympathetic nervous systems,***
- ***The epinephrine-producing (medulla) cells of the adrenal gland,***
- ***The pigment-containing cells of the epidermis, and***
- ***Many of the skeletal and connective tissue components of the head. The fate of the neural crest cells depends, to a large degree, on where they migrate to and settle.***



# MIGRATION PATHWAYS

- ***Cells migrate dorsolaterally to produce the craniofacial mesenchyme that differentiates into the cartilage, bone, cranial neurons, glia, and connective tissues of the face.***
- ***These cells enter the pharyngeal arches and pouches to give rise to thymic cells, odontoblasts of the tooth primordia, and the bones of middle ear and jaw.***
- ***Neural crest cells that become the pigment-synthesizing melanocytes.***
- ***Sclerotomes are blocks of mesodermal cells.***



# MAJOR NEURAL CREST DERIVATIVES

- ***The vagal and sacral neural crest, whose cells generate the parasympathetic(enteric) ganglia of the gut.***
- ***The vagal (neck) neural crest lies opposite somites 1–7, while the sacral neural crest lies posterior to somite 28.***
- ***The cardiac neural crest is located between the cranial and trunk neural crests.***





# MCQ

## **QUESTION**

**Q. All are derivatives of ectoderm except**

**A. Epidermis**

**B. Parotid gland**

**C. Neurohypophysis**

**D. Arrector pilorum**

**• Ans-D**