Branchial Pouches: 4th Pouch (OLD VERSION)

The branchial pouches are found on the endodermal side of the branchial (pharyngeal) apparatus. The 4th branchial (pharyngeal) pouch contains two areas: the dorsal and ventral wings. The dorsal wings develop into the superior parathyroid glands, while the ventral wings develop into the ultimobranchial body and parafollicular C cells.



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Separates into Dorsal and Ventral Wings
Separating into Dorsal-fin and Vent-troll with Wings
The 4th pouch contains two wings; the dorsal and ventral wings. Each set of wings develops into a different structure.

Dorsal Wings
Dorsal-fin with Wings
The dorsal wings of the 4th branchial pouch form the top of the parathyroid gland, known as the superior parathyroid glands.

Superior Parathyroid Glands
Super Parachuting-thigh-droid
The superior parathyroid glands are formed from the dorsal wing of the 4th branchial pouch. This gland produces parathyroid hormone, which helps regulate calcium levels in the body.

Ventral Wings
Vent-troll with Wings
The ventral wings of the 4th branchial pouch forms the ultimobranchial body, which gets integrated into the thymus. From here, it induces formation of parafollicular cells or C-cells for the production of calcitonin.

Parafollicular (C) Cells of Thyroid Gland
(C) Cat-cells of Thigh-droid
The parafollicular cells or C-cells, produce calcitonin, and are formed because of the ultimobranchial body. The ultimobranchial body first gets integrated into the thymus, after differentiation from the ventral swellings of the 4th pouch. The ultimobranchial body then releases signaling, inducing the migration and differentiation of nearby neural crest cells into parafollicular (C) cells of the thyroid gland.

Formed by Neural Crest Cells
Formed by Neuron with Crests
The ultimobranchial body releases signaling, inducing the migration and differentiation of nearby neural crest cells into parafollicular (C) cells of the thyroid gland.

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