



# Development of face

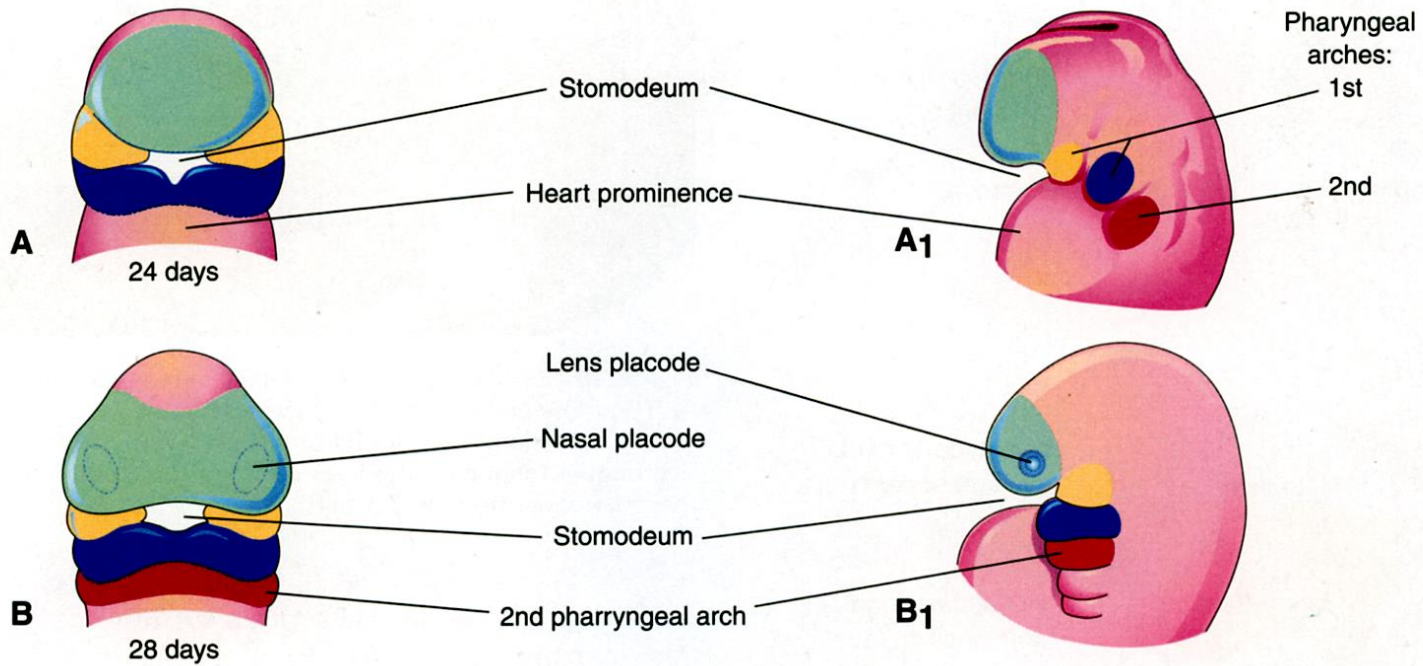
**MOORE PERSAUD**

*Multimedial Unit of Dept. of Anatomy JU*

**The facial primordia appear early in the fourth week around the large primordial stomodeum.**

**They are:**

- The single frontonasal prominence
- The paired maxillary prominences
- The paired mandibular prominences



Frontonasal prominence

Maxillary prominence

Mandibular prominence

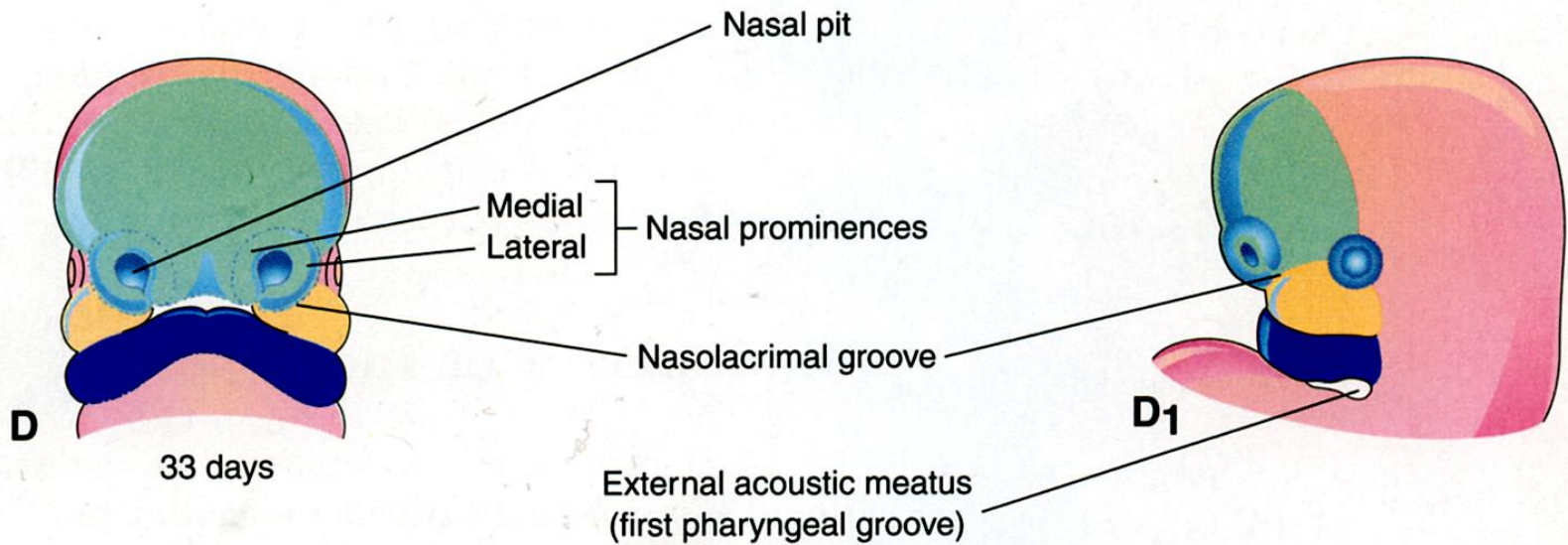
Diagrams illustrating progressive stages in the development of the human face.

By the end of the fourth week, bilateral oval thickenings of the surface ectoderm – **nasal placodes** – the primordia of the nose and nasal cavities, develop on the inferolateral parts of the FNP.

Mesenchyme in the margins of the placodes proliferates, producing elevations – the **medial and lateral nasal prominences**.

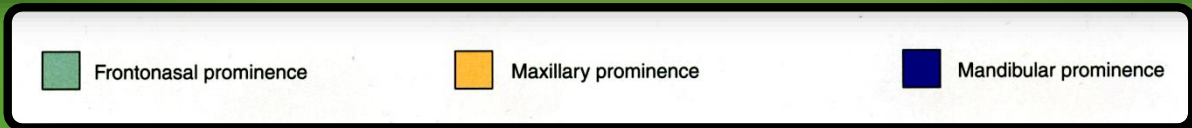
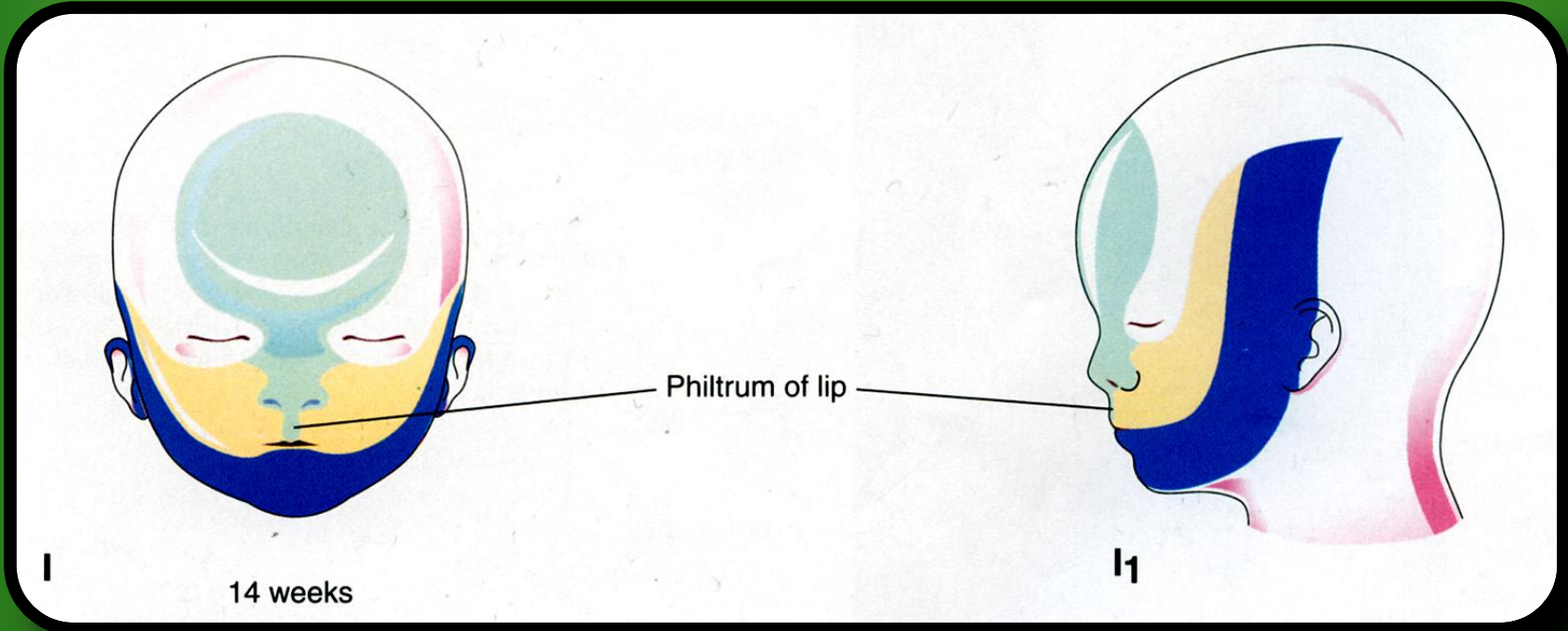
Merging of the medial nasal and maxillary prominences results in continuity of the upper jaw and lip and separation of the nasal pits from the stomodeum.

**As the medial nasal prominences merge,  
they form an intermaxillary segment.**



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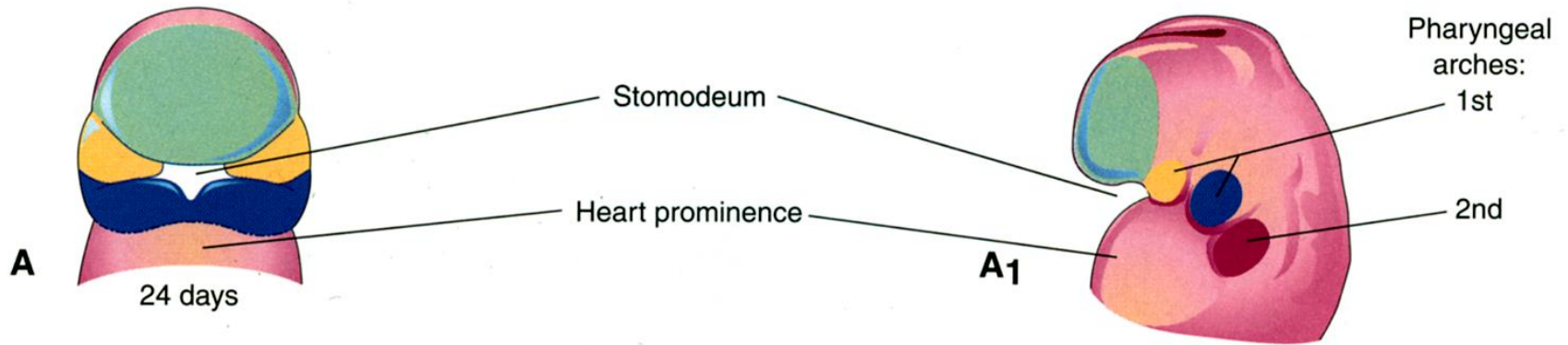




Diagrams illustrating progressive stages in the development of the human face.

## **The intermaxillary segment gives rise to:**

- **the middle part or philtrum of the upper lip**
- **the premaxillary part of the maxilla and its associated gingiva (gum)**
- **the primordia of four upper incisors**
- **the primary palate**



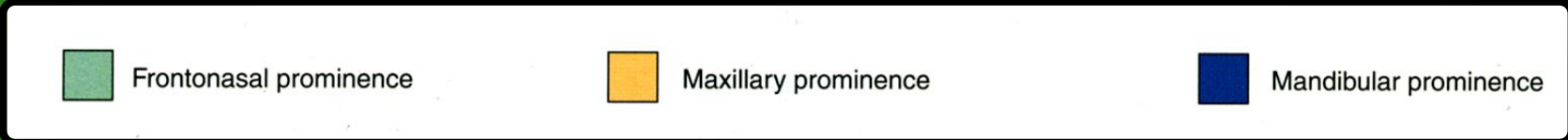
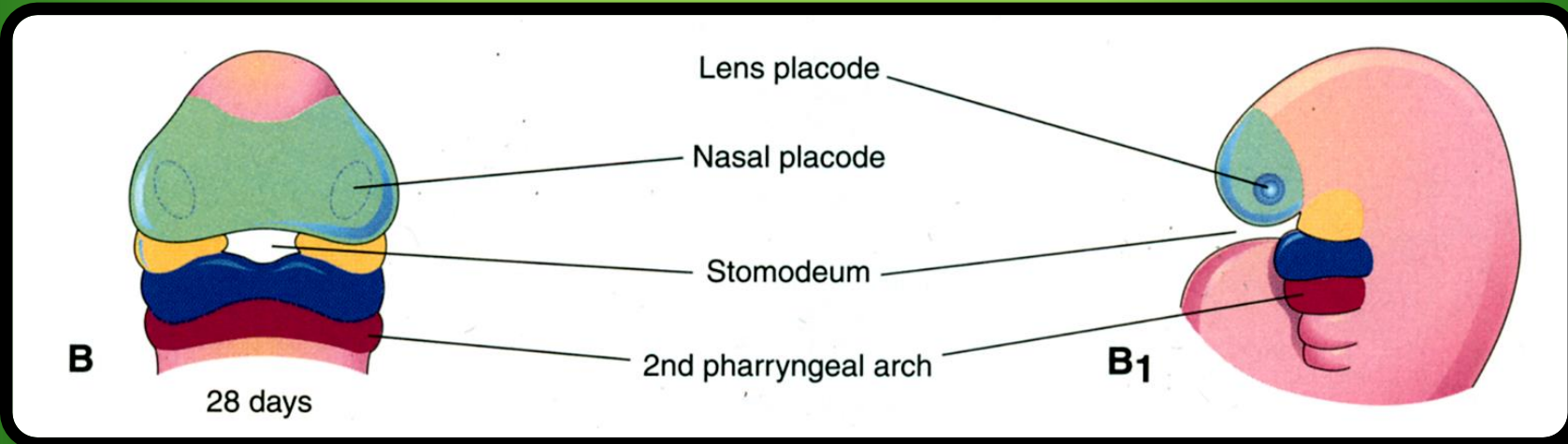
Frontonasal prominence

Maxillary prominence

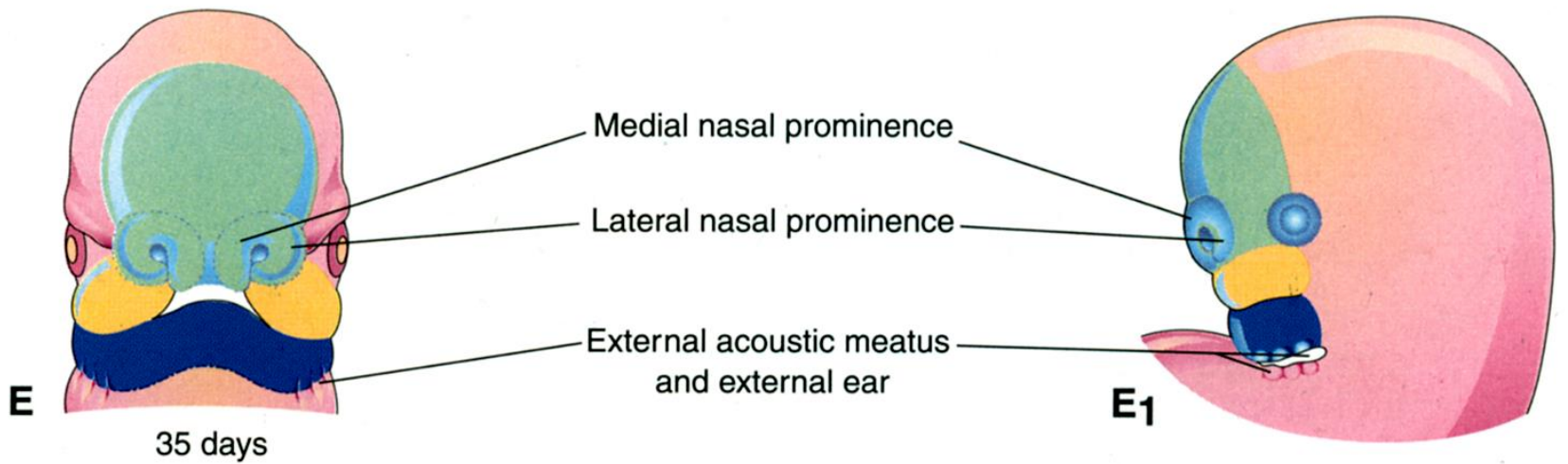
Mandibular prominence

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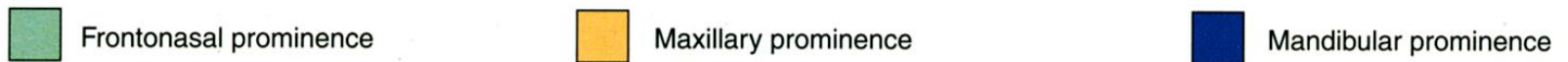
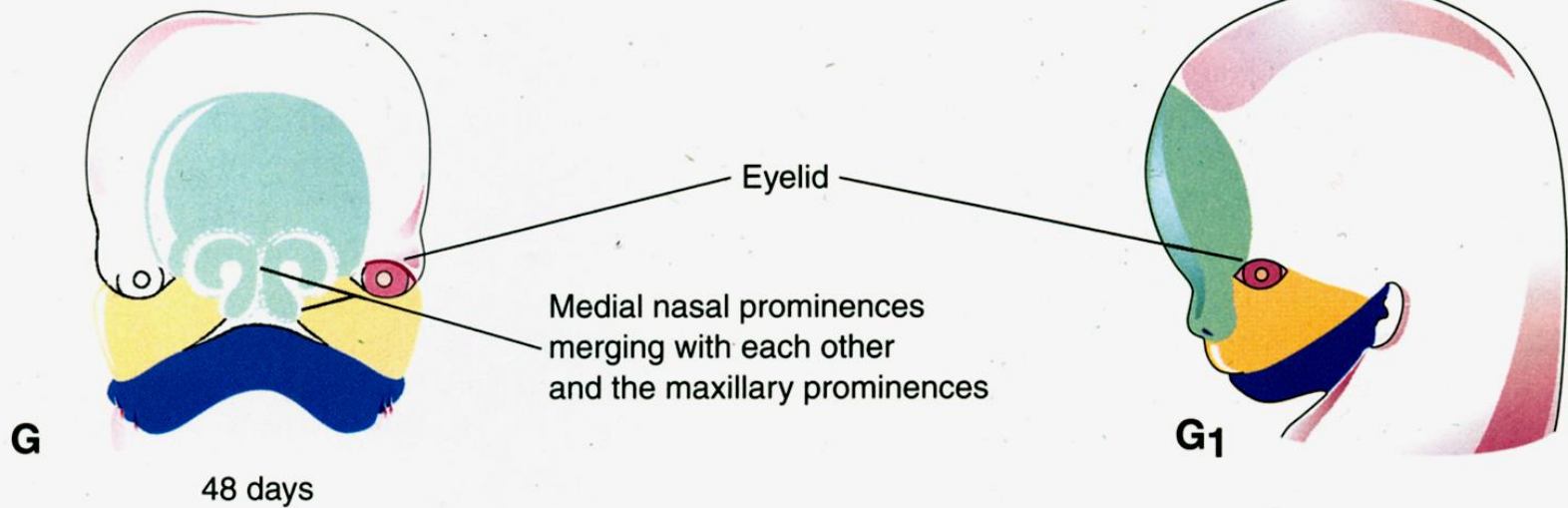
Diagrams illustrating progressive stages in the development of the human face.



 Frontonasal prominence

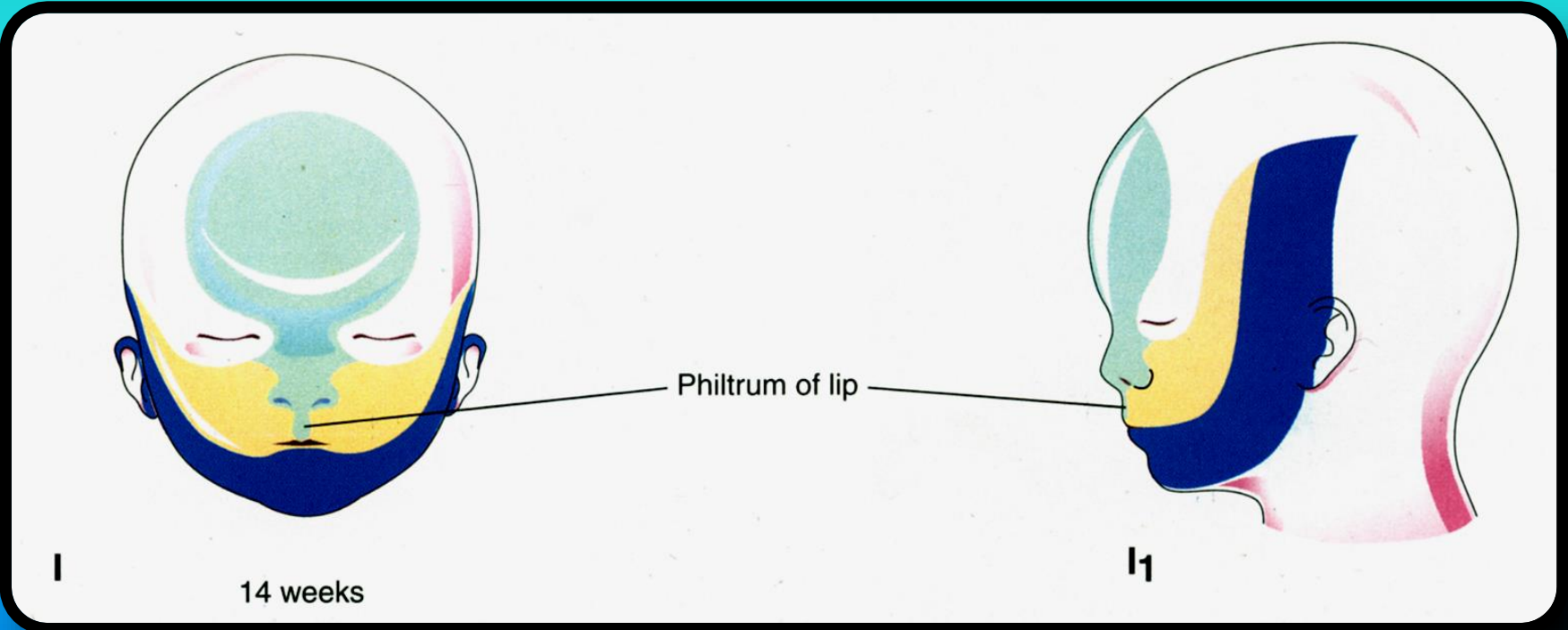
 Maxillary prominence




 Mandibular prominence



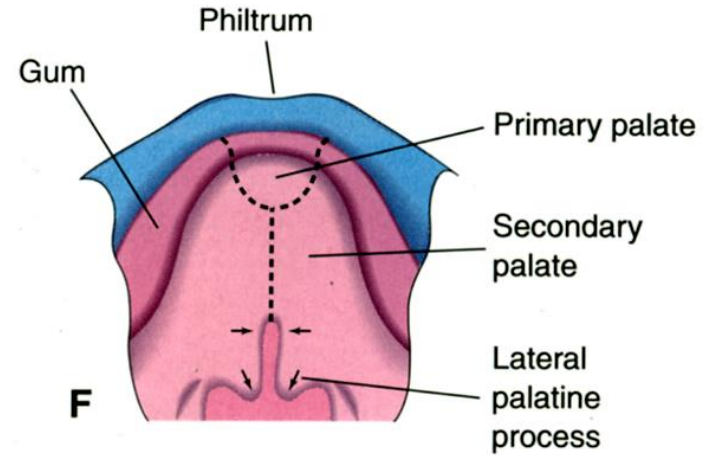
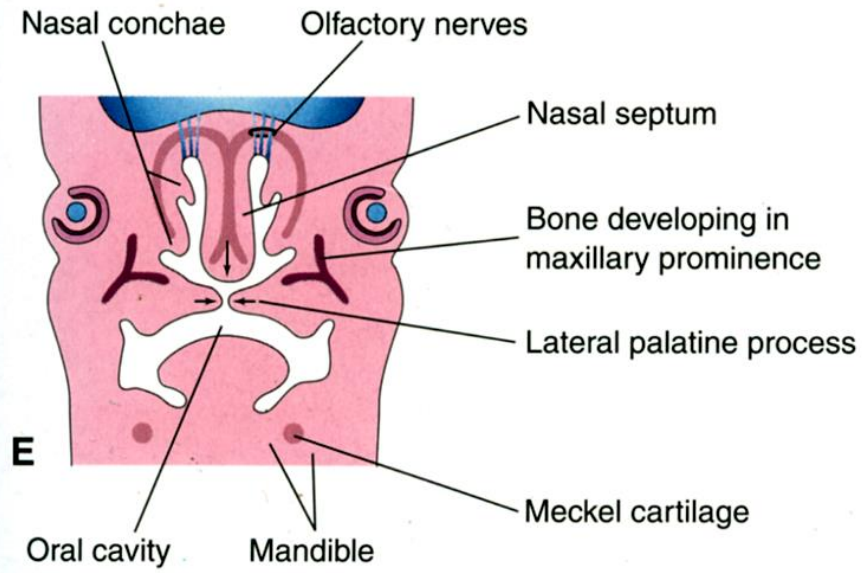
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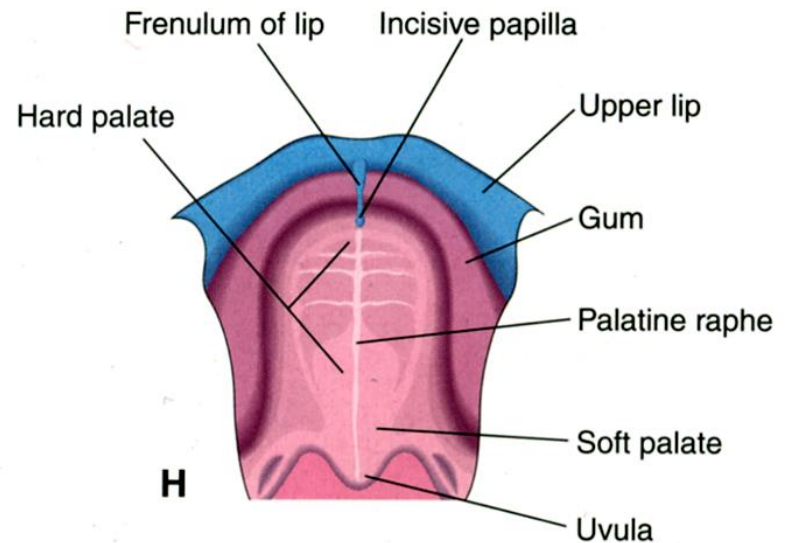
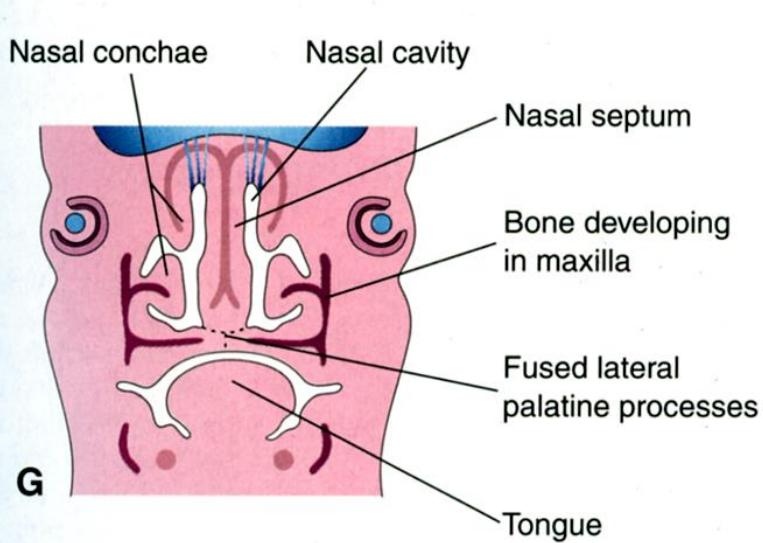
 Frontonasal prominence	 Maxillary prominence	 Mandibular prominence
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Sagittal section of the embryonic head at the end of the sixth week showing the median palatine process.





Sagittal section of the embryonic head at the end of the sixth week showing the median palatine process.

## **Summary of facial development:**

- the FNP forms the forehead and the dorsum and the apex of the nose
- the lateral nasal prominences form the sides (alae) of the nose
- the medial nasal prominences form the nasal septum and philtrum of the upper lip
- the maxillary prominences form the upper cheek regions and most of the upper lip
- the mandibular prominences give rise to the chin, lower lip, and lower cheek regions



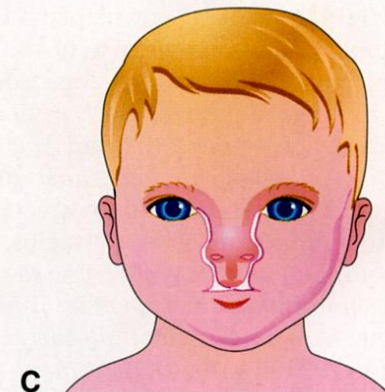
Infant with unilateral cleft lip and palate. Clefts of the lip, with or without cleft palate, occur about once in 1000 births; 60 to 80% of affected infants are males.



A



B



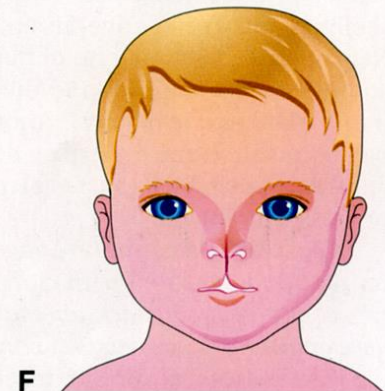
C



D



E



F

Drawings of unusual congenital anomalies of the face. A, Median cleft of upper lip. B, Median cleft of lower lip.

C, Bilateral oblique facial clefts with complete bilateral cleft lip. D, Macrostomia. E, Single nostril and microstomia; these anomalies are not usually associated. F, Bifid nose and incomplete median cleft lip.



**THANK YOU FOR PAYING  
ATTENTION**



**QUESTIONS ARE NOT  
NECESSARY**