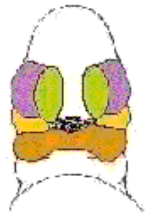


# BGD Lecture - Face and Ear Development



## [Face Development Movie](#)

The face is the anatomical feature which is truly unique to each human, though the basis of its general development is identical for all humans and similar to that seen for other species. The face has a complex origin arising from a

To introduce the developmental embryology of both the face and ear, and their associated abnormalities.

1. To understand the formation and contribution of the pharyngeal arches to face and neck development.
2. To know the main

number of head structures and sensitive to a number of teratogens during critical periods of its development. The related structures of upper lip and palate significantly contribute to the majority of face abnormalities.

### **Head**

The head and neck structures are more than just the face, and are derived from pharyngeal arches 1 - 6 with the face forming from arch 1 and 2 and the frontonasal

structures derived from components of the pharyngeal arches (groove, pouch and arch connective tissue).

3. To know the 3 major parts (external, middle and inner) of hearing development and their embryonic origins.
4. To briefly understand some abnormalities associated with face and hearing development.

prominence.  
Each arch  
contains  
similar Arch  
components  
derived from  
endoderm,  
mesoderm,  
neural crest  
and  
ectoderm.

Because the  
head contains  
many different  
structures  
also review  
notes on  
[sensory](#),  
[respiratory](#),  
Integumentary  
([tooth](#)),  
[endocrine](#)  
([thyroid](#),  
[parathyroid](#),  
[pituitary](#),  
[thymus](#)) and  
[cleft lip/cleft](#)  
[palate](#).

## **Hearing**

We use the  
sense of  
balance and

hearing to  
position  
ourselves in  
space, sense  
our  
surrounding  
environment,  
and to  
communicate.  
Importantly  
[hearing](#) is  
linked into  
postnatal  
neurological  
development  
(milestones)  
involved with  
language and  
learning.

Hearing  
development  
is generally  
divided into  
the 3  
anatomical  
regions ([inner  
ear](#), [middle  
ear](#), [outer ear](#))  
each having  
separate  
origins. The  
first structure  
observed is  
the otic

placode, on  
the embryo  
head surface,  
that sinks into  
the  
mesenchyme  
to eventually  
form the inner  
ear.