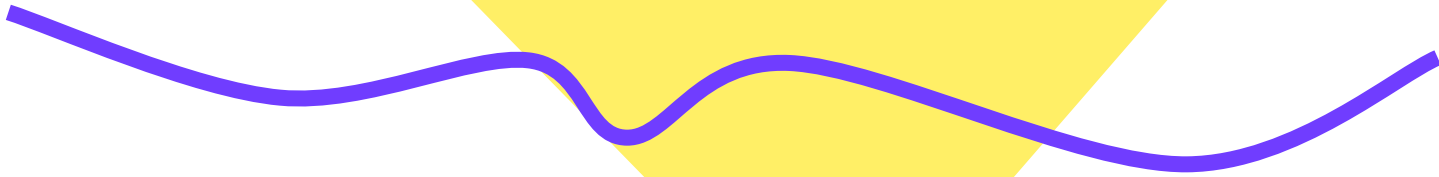




Congenital malformations



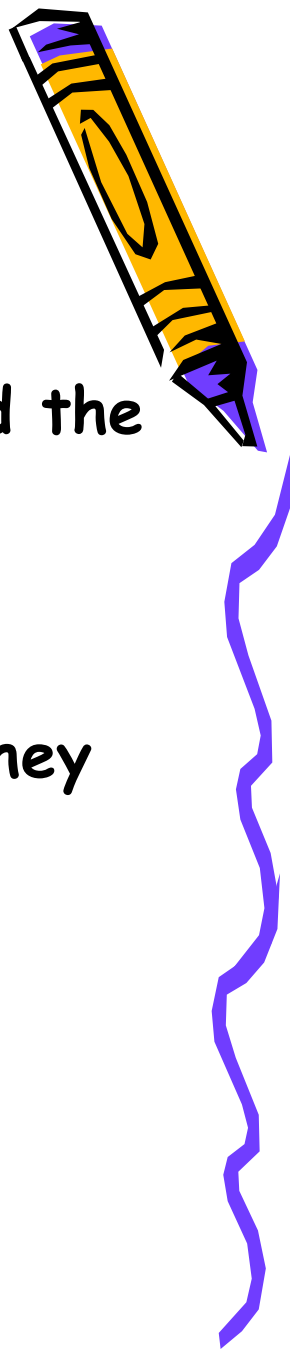
Definitions

- Teratology

The study of developmental abnormalities and the causes of congenital malformations

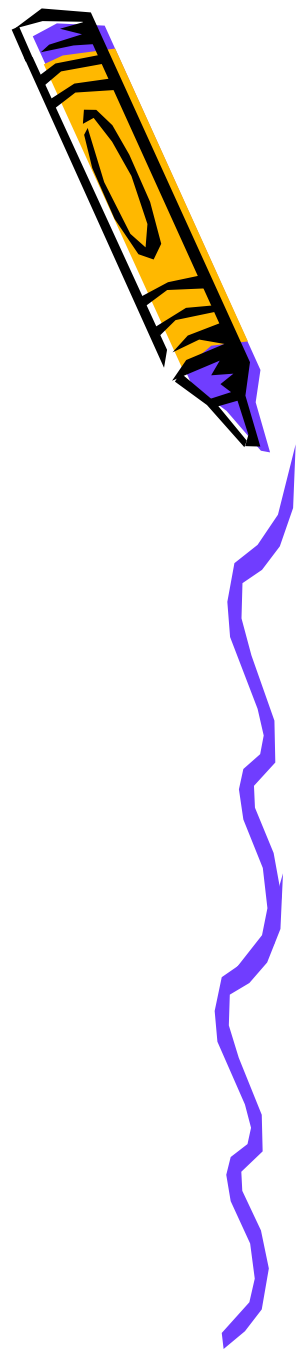
- Congenital malformations

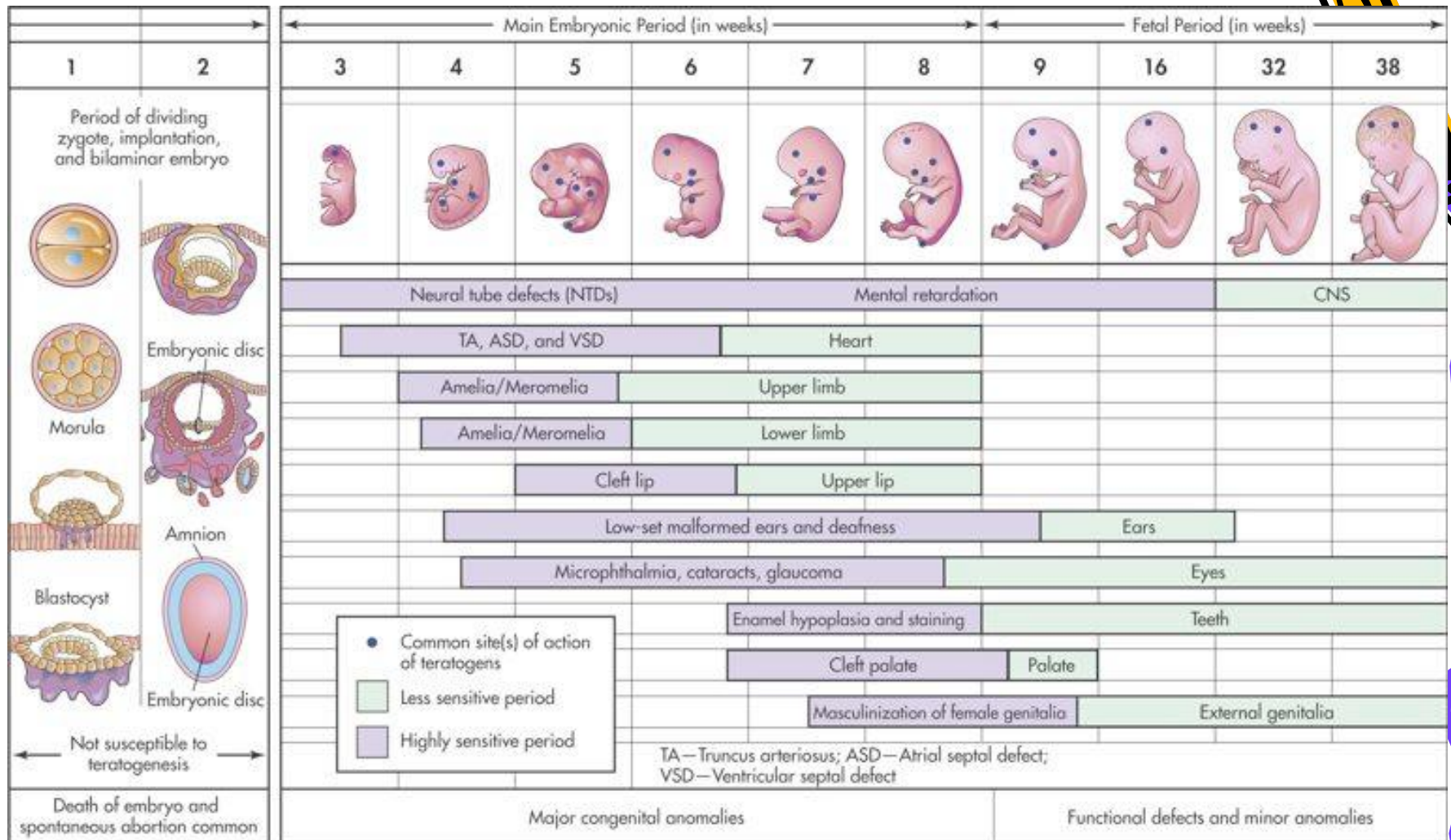
Anatomical abnormalities present at birth. They may be macroscopic or microscopic, on the surface or within the body.

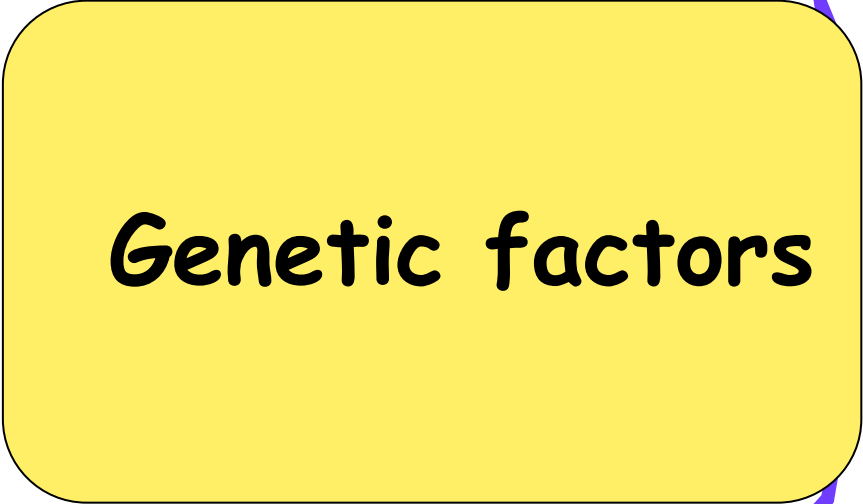
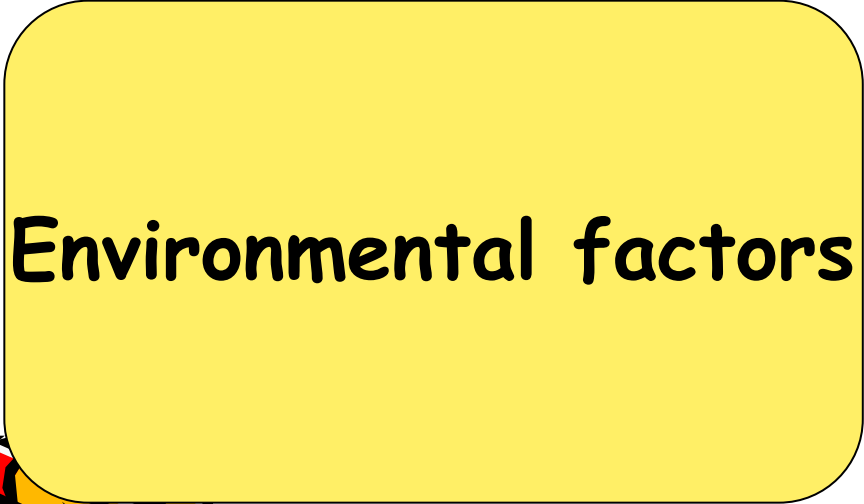
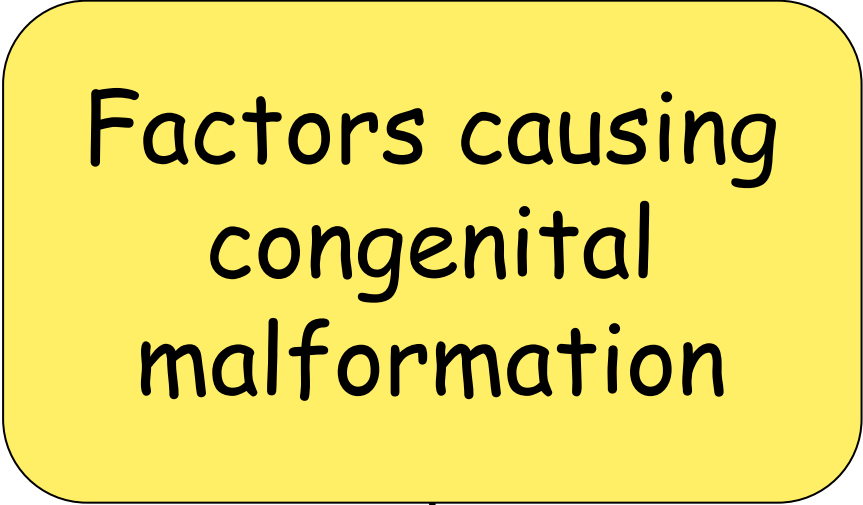


Critical embryonic period

- Pre-differentiation period
- Critical or sensitive period
- Growth period







Factors causing
congenital
malformation

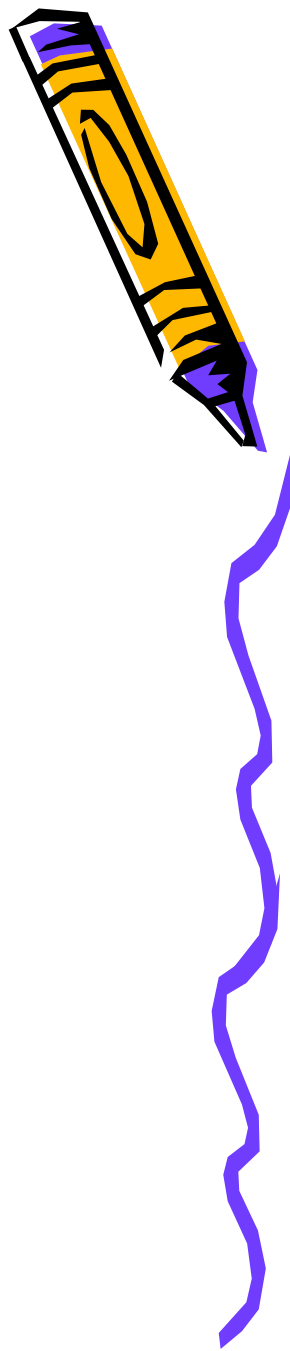
```
graph TD; A[Factors causing congenital malformation] --> B[Environmental factors]; A --> C[Genetic factors];
```

Environmental factors

Genetic factors

Genetic factors

- Trisomy
- Trisomy 21
- Trisomy 18
- Trisomy 13





صورة تبين وضع الكروموزومات في ترزومي 21

<http://embryology.med.unsw.edu.au/Defect/images/trisomy21female.jpg>



العوامل الخارجية البيئية

Environmental factors



- Radiation
 - X-ray
- Viruses
 - Rubella
- Drugs
 - Thalidomide
 - Aminopterin
 - Cortisone
 - Insulin
 - Thyroid drugs

- Chemical substances
 - Quinone
 - Thallium salts
 - Colchicin
 - Nicotin & Alcohol
 - Chloride salts
- Antibiotics
 - Tetracycline
- Hormones
 - Testosterone
- Diseases
 - Syphilis
 - Herpes simplex

