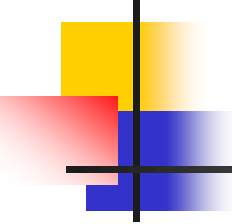


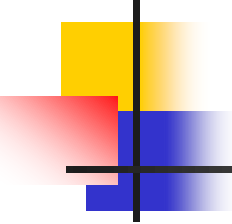
Factors affecting embryonic and foetal growth



Objectives of this lesson are:

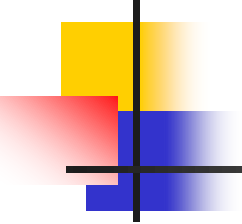
To have an understanding of

- Factors that affect an unborn child
- Diagnostic techniques
- Prenatal treatments
- Postnatal factors



Student Task

- In pairs or small groups of 3 or 4 discuss positive and negative factors which affect the developing child:
 - Before conception
 - During Pregnancy
 - Post-natal
- Note your ideas on flip chart paper
- Feedback to class and discuss



Factors that affect an unborn child

Hereditary Factors

Congenital Factors

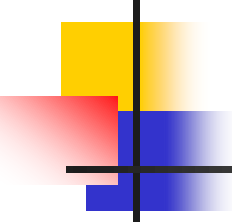
Environmental Factors:

Health of mother

Lifestyle

Diet

Infection/illness

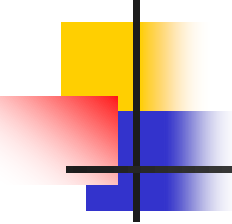


Genetics

- DNA determines structure and function of cells.
Influences appearance, personality, characteristics,
body chemistry, and behaviour
- Some hereditary conditions:
 - Downs syndrome
 - Haemophilia
 - Epilepsy
 - Colour blindness
 - Cystic Fibrosis

Downs Syndrome/Fragile X

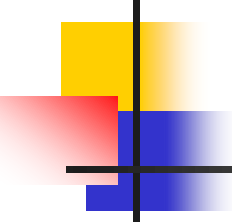




Reproductive Hazards

Substances which can affect

- Sexual function and fertility in Males and females.
- The development of the embryo or foetus.
- Effects on foetus include termination, still birth or malformation.



Reproductive Hazards

- Mutagens
 - Substances producing heritable birth defects (genetic).
- Teratogens
 - Substances producing non-heritable birth defects.

Teratogens -Drugs

- Thalidomide
8,000- 12000 affected
- Prescription medications.
- Over the counter medication.

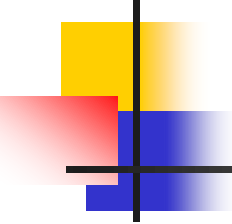


Teratogens -Drugs

- Alcohol

May cause Foetal
Alcohol Syndrome





Teratogens -Drugs

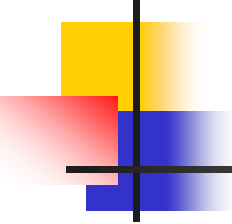
- Caffeine

- Nicotine

Premature birth, heart defects, SIDS

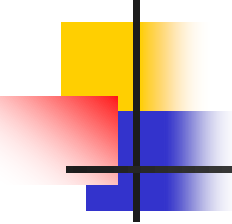
- Cocaine

Premature separation of placenta



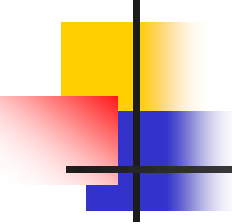
Teratogens -Environmental

- Solvents
- Paints
- Herbicides
- Pesticides
- Lead
- Mercury
- Radiation



Maternal Diseases and Disorders

- Rubella
- Herpes
- Sexually Transmitted Infections
- Aids and HIV



Maternal Characteristics

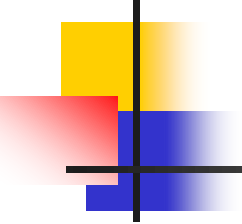
- Emotional state

Produces cortisol the “stress hormone”

- Physical State and Obesity

Pre-eclampsia, Thromboembolism (clot), Still birth, gestational diabetes

- Poor nutrition



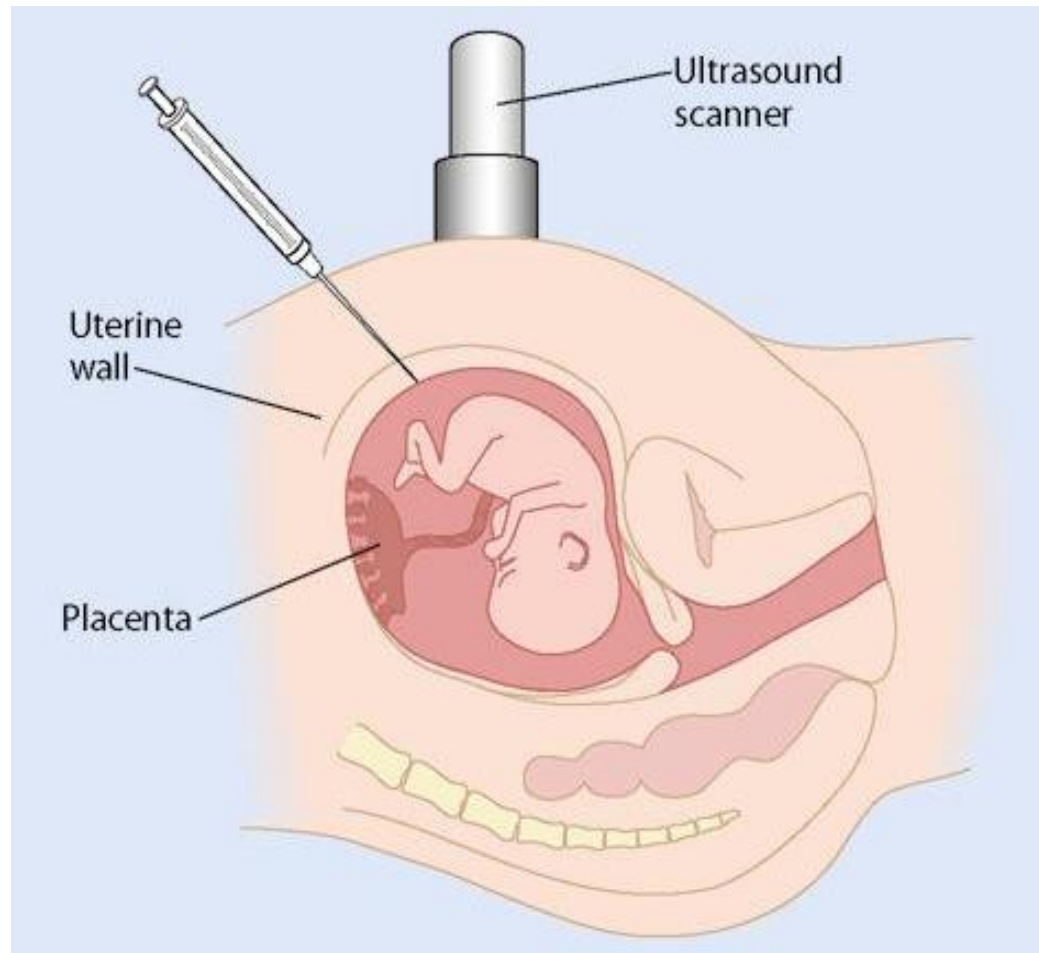
Pre-Natal Diagnostic Techniques

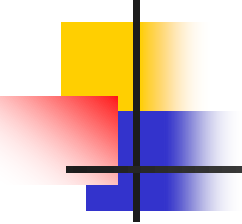
Regular ante-natal checks to monitor health of mother and foetus.

Common techniques are:

- Amniocentesis – chromosome abnormalities
- Chorionic Villus Sampling – downs syndrome
- Ultrasound Scanning – can detect major abnormalities

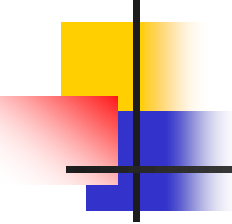
Prenatal Diagnosis





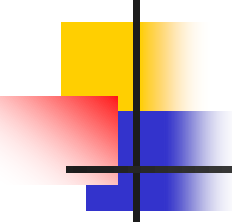
Prenatal Diagnosis and Treatment

- Genetic Counseling - Helps to assess the chances of inherited disorders.
- Genetic Engineering involves replacing defective genes with synthetic normal genes.
- Foetal Medicine - administering medicine to the foetus.
- Foetal Surgery to correct spina bifida and circulatory problems.



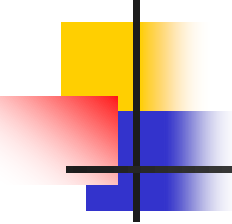
Perinatal or Birthing Factors

- Bleeding during pregnancy.
- Prolonged birth.
- Breech births.
- Anoxia (lack of oxygen) at birth is biggest risk.
- Low birth weight.
- Premature birth.



Postnatal Factors

- Quality of parent–baby bond.
- Quality of care.
- Infections.
- Diet.
- Poverty.
- Accidents.
- Abuse and neglect.



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- BBC (1973) Final deal for thalidomide victims. (online), Available at http://news.bbc.co.uk/onthisday/hi/dates/stories/july/30/newsid_4582000/4582119.stm (accessed 14th September 2010)
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