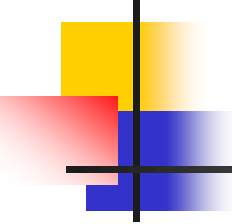


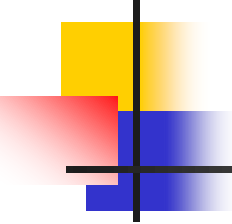
Conception

The developing baby



Objective

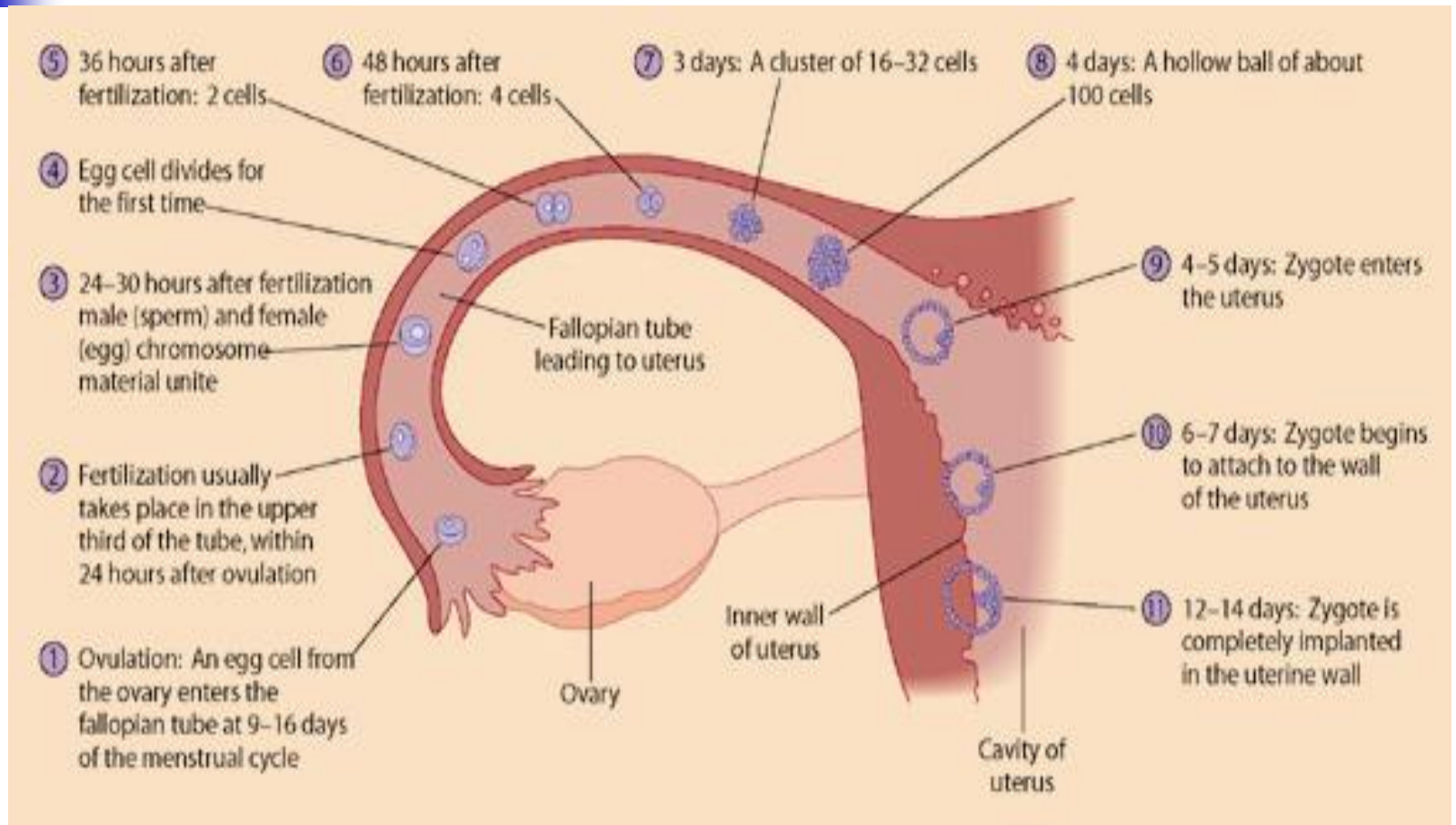
- To understand the three stages of pregnancy and the main milestones of prenatal development.



Prenatal Development

- 23 chromosomes from Mum and 23 from Dad
- Gestation is 280 days or 40 weeks.
- Three distinct periods:
 - Germinal Period – 1st 14 days
 - Embryonic period – 3rd – 8th week
 - Foetal period - 9 weeks to birth

Germinal Period



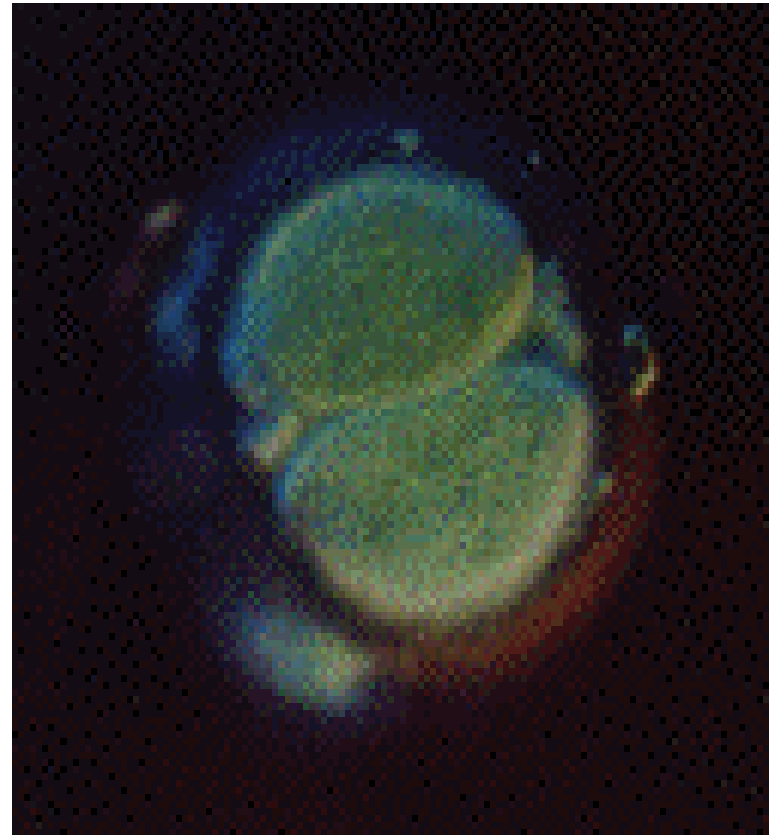
Conception

- Fertilisation: the sperm and egg join in the fallopian tube to form a unique human being.



Conception

- The fertilised egg that is no larger than a pin head begins to divide.



Embryonic Period

The large
neural tube
and the
formation of
the brain.



Embryonic development

7 weeks

Eyes, fingers,
toes and most internal
organs have formed,
but are not yet
fully functional.



Embryonic development

7 weeks

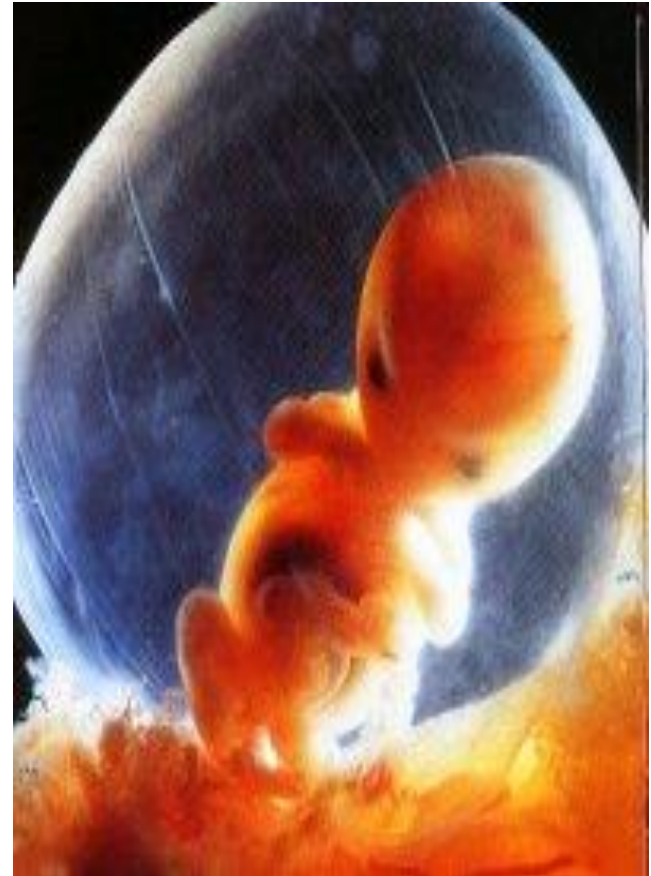
- Facial features are visible, including a mouth and tongue.
- The eyes have a retina and lens.
- The major muscle system is developed and the unborn child moves as if practicing.
- The child has its own blood type, distinct from the mother's.



Embryonic development

8 weeks

- The embryo is about 1cm long.
- The tiny baby is protected by the amniotic sac, filled with fluid.
- Inside, the child swims and moves gracefully.
- The arms and legs have lengthened, and fingers can be seen.
- Brain waves can now be measured.



Foetal development

10 weeks

- The heart is almost completely developed
- Twenty tiny baby teeth are forming in the gums
- All major organs are developed
- Fingers and toes are fully formed



Foetal development

12 weeks

- Approximately 9cm long and weighs about the same as 2 AA batteries
- Vocal chords are complete.
- The brain is fully formed, and the foetus can feel pain.
- The foetus may even suck his thumb.
- The eyelids now cover the eyes, but will remain shut until the seventh month to protect the delicate optical nerve fibers.



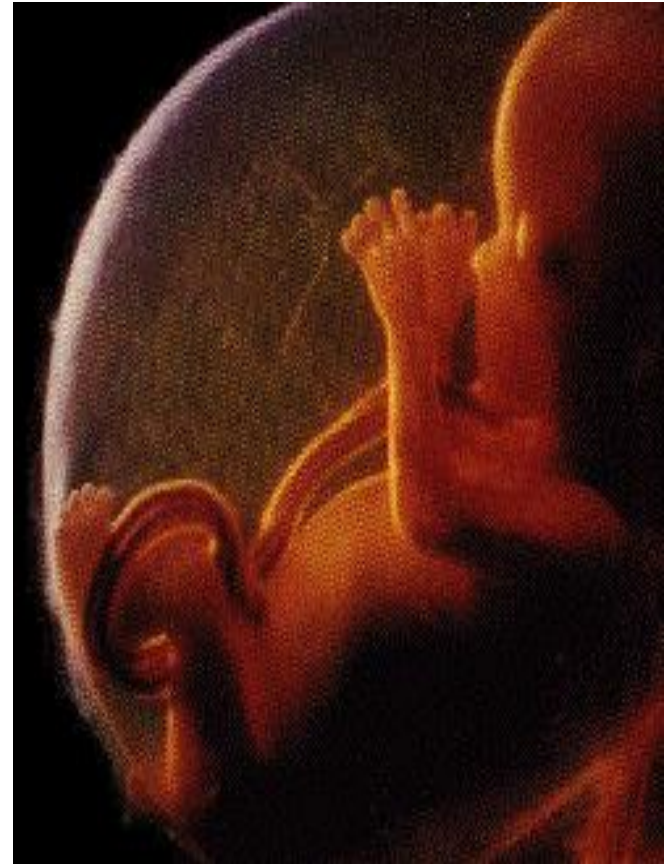
Foetal development

14 weeks

- Muscles lengthen and become organised.
- The mother will soon start feeling the first flutters of the unborn child kicking and moving within.

15 weeks

- The foetus has an adult's taste buds and may be able to savour the mother's meals.
- Foods the mother eats can affect movement of the baby.



Foetal development

16 weeks

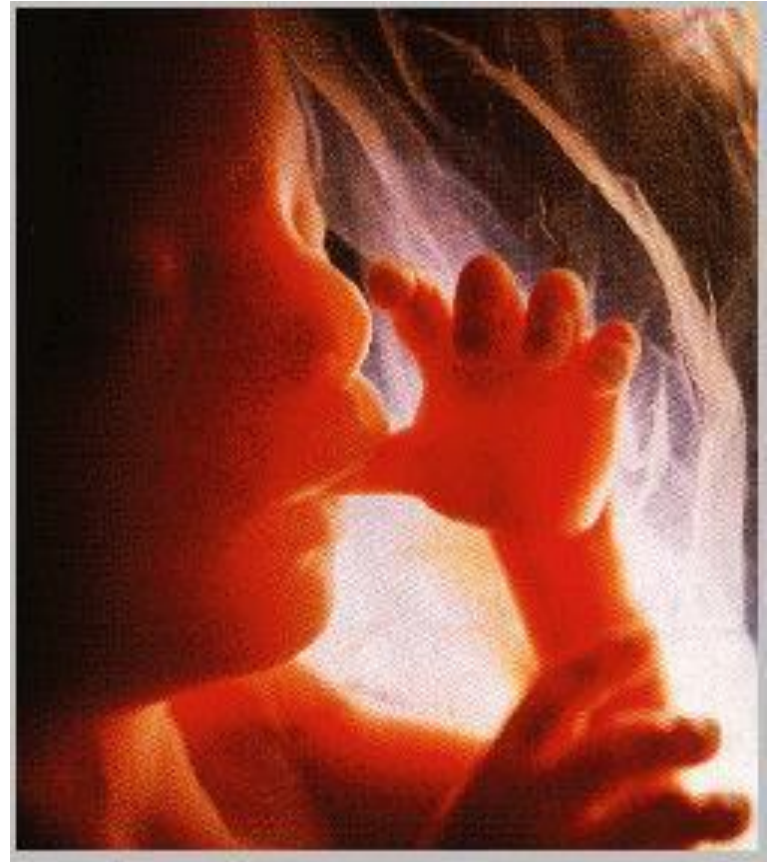
- Face is fully developed
- A downy hair covers the skin.
- Eyes are fully formed but not yet functional.



Foetal development

16 weeks

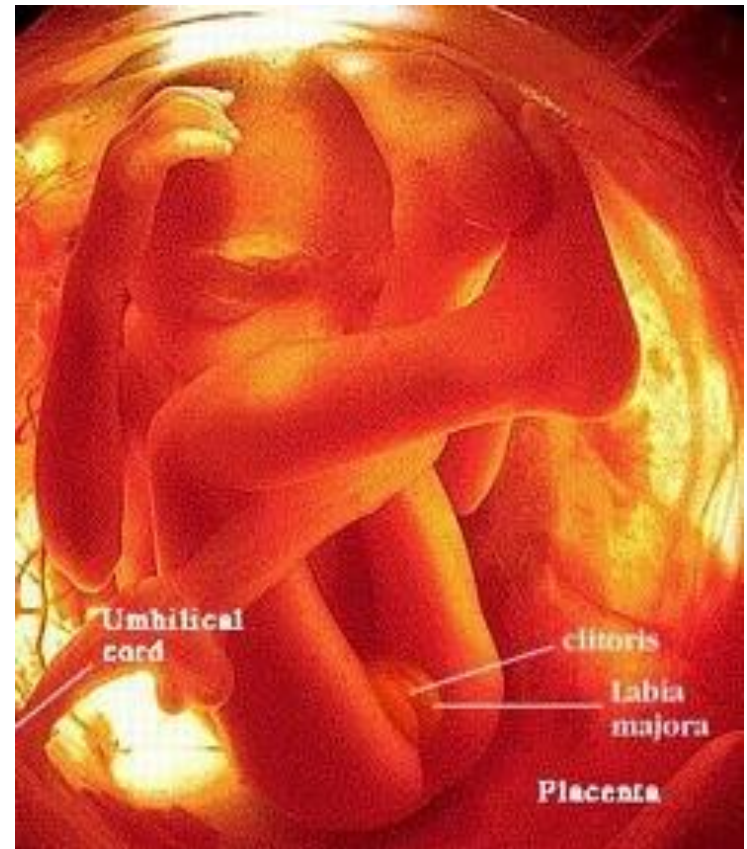
- About 13cm long and weighs about 150gms
- Eyebrows, eyelashes and fine hair appear.
- The foetus can grasp with his hands, suck her thumb, kick, or even somersault.



Foetal development

20 weeks

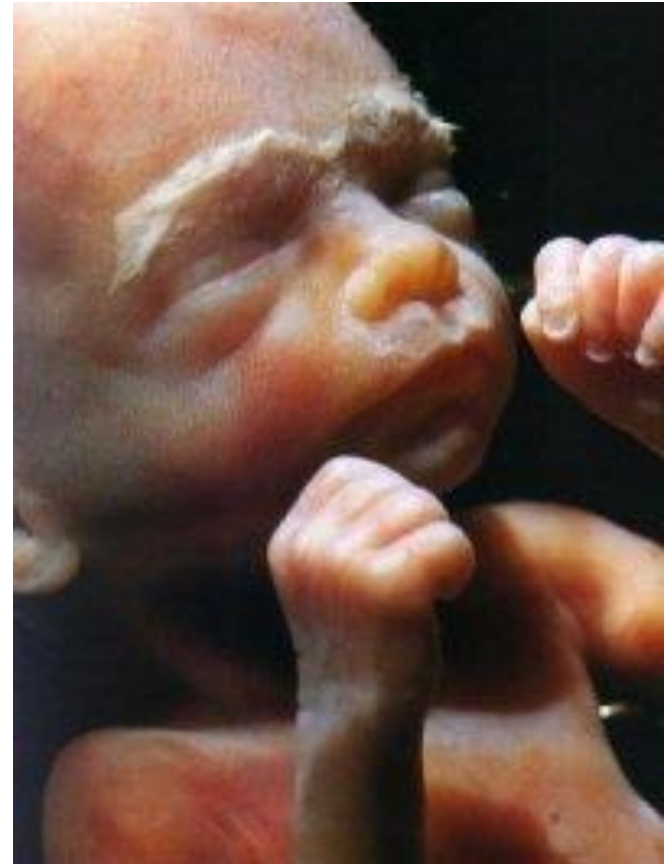
- Weighs about 450 gms and is about 28cm long
- The foetus can hear and recognise her mother's voice.
- Though still small and fragile, the foetus is growing rapidly and could possibly survive if born at this stage.
- Fingernails and fingerprints appear.
- Sex organs are visible.
- Reacts to loud noises and sudden movements



Foetal development

24 weeks

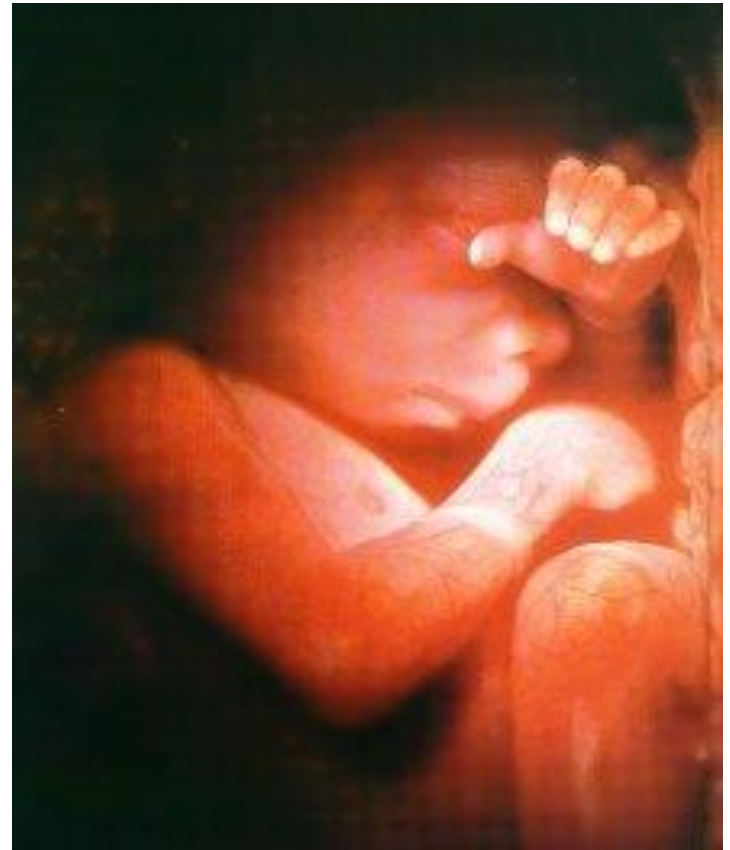
- The foetus is covered with a fine, downy hair called lanugo.
- Its tender skin is protected by a waxy substance called vernix.
- The foetus practices breathing by inhaling amniotic fluid into developing lungs.



Foetal development

28 weeks

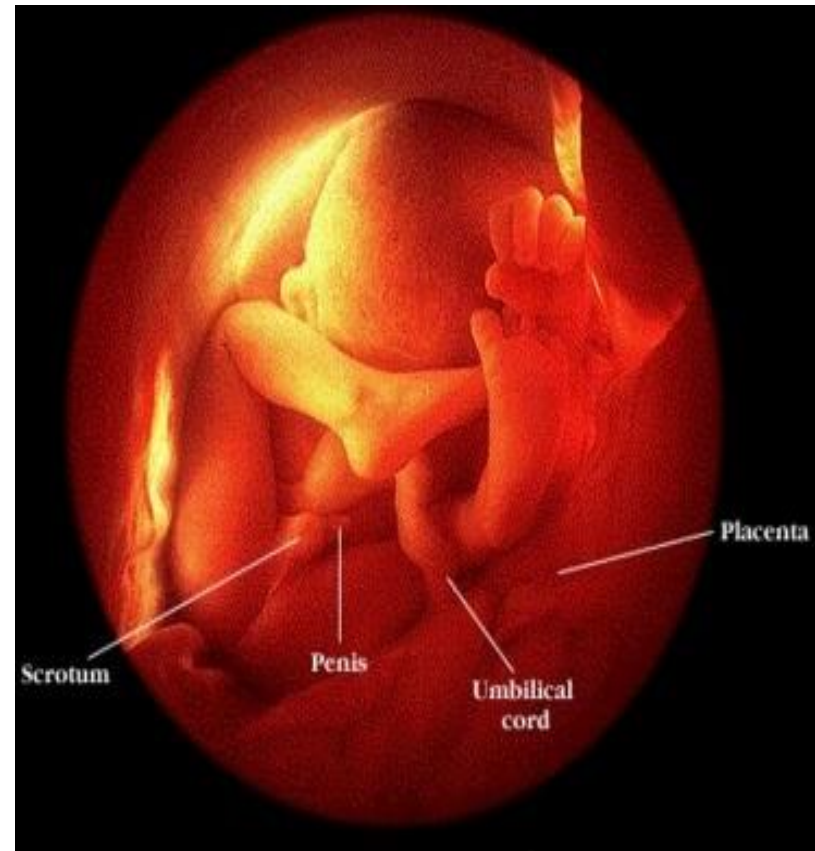
- Room is getting tight at this point.
- The foetus is less able to move, squirms and pushes more than flutters and kicks.
- Most foetuses begin to get into a head down position getting ready for birth.



Foetal development

32 weeks

- The foetus sleeps 90-95% of the day with REM sleep dominating the sleep cycle, an indication of dreaming.
- The foetus is very viable at this point, with a 75% or higher chance of survival.
- If the foetus is born, the concerns are with adequate lung development. Final lung development does not occur until about 37 weeks.



Birth

Birth at 38 - 42 weeks

- 40 weeks is normal gestation
- The baby weighs on average 7 lbs. and is 20 inches long.
- At birth the baby can see, hear, move and recognises the voices of her parents or others who have been near the mother.

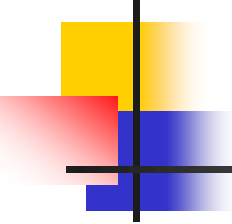


Birth

A healthy newborn arrives in the world.

- The baby is immediately checked over, given an Apgar score and then presented to her parents.
- The father or other important family member may be asked if they want to cut the umbilical cord.



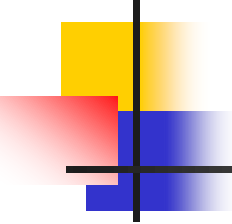


Apgar score chart

- Heart rate
- Respiration
- Muscle tone
- Response to stimulus of foot or nose
- Colour

A new child is welcomed into the world.





References

Doherty, J & Hughes, M (2009), *Child Development: Theory and Practice 0-11*, Harlow: Pearson Education

Tassoni, P. (2004) *Diploma in Pre-School Practice*, Oxford: Heinemann