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Stages of Child Development: Development of Children During Prenatal Stage

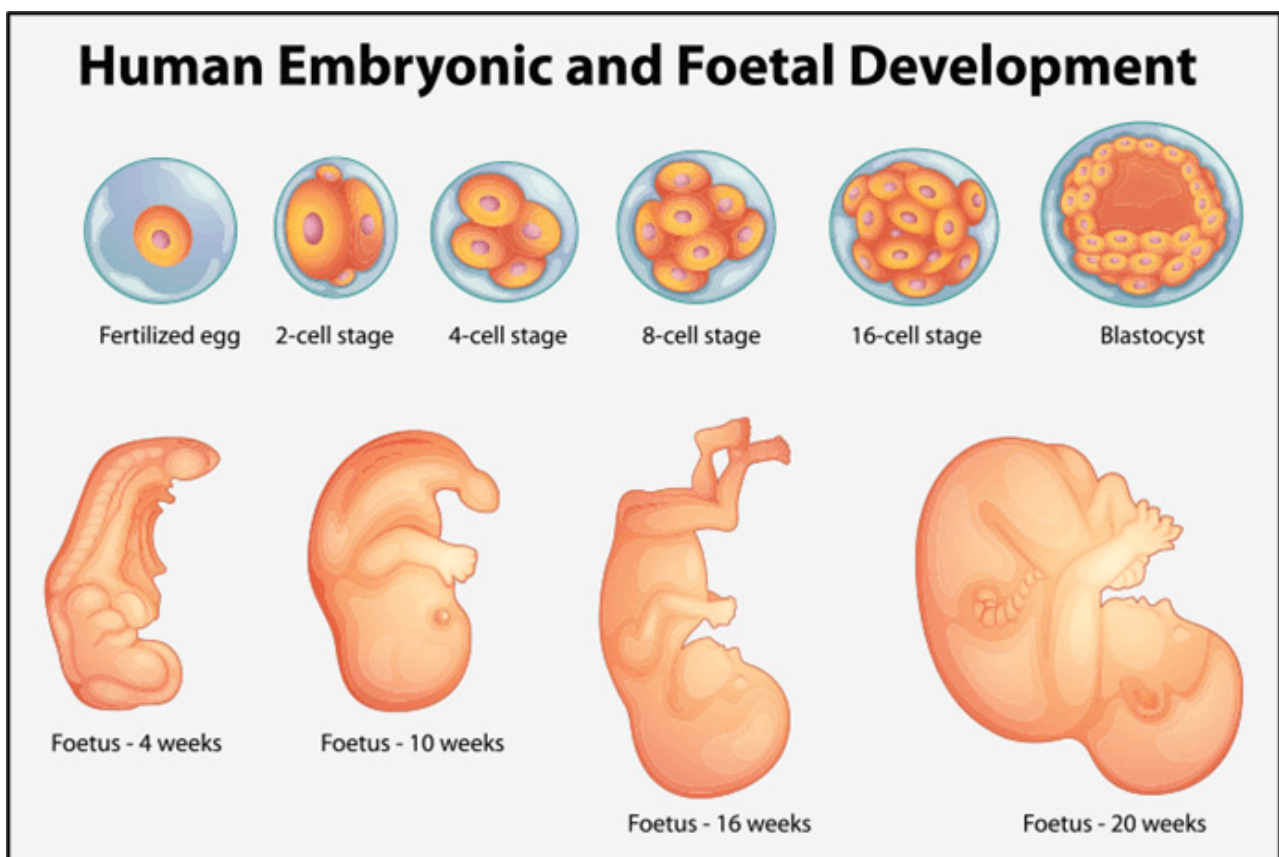
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When a family is getting ready for the addition of a new member in the family, all its members become enthusiastic to welcome the child and assume new roles including those of parents, grandparents and other relations. The expansion of the family, the addition of a new member, the anticipated entry of a child, and the responsibility of care and nurturance of another life is both exciting and daunting.

Development of Children During Prenatal Stage

The average period of human pregnancy is 37 weeks to 41 weeks. Babies born before 36 weeks of gestation are considered preterm and those born after 41 weeks are known as post term babies. Let us study about prenatal development.

Prenatal Development



- After union with the sperm, the ovum enters the germinal period, a time of very rapid cell division, which lasts for about two weeks. This is followed by the embryonic period of about six weeks, during which structural development of the embryo takes place.
- From the beginning of the third month until birth, the time period is known as the fetal period. During this, the organs, muscles and systems begin to develop and function. Many of the processes that the organism will need in order to survive at birth are being developed at this time.

Stage 1: The Germinal Stage

The two-week period after conception is called the germinal stage. Conception occurs when a sperm cell combines with an egg cell to form a zygote. About thirty-six hours after conception, the zygote begins to divide quickly. The resulting ball of cells moves along the mother's fallopian tube to the uterus. Around seven days after conception, the ball of cells starts to become embedded in the wall of the uterus. This process is called implantation and takes about a week to complete.

Stage 2: The Embryonic Stage

The embryonic stage lasts from the end of the germinal stage to two months after conception. The developing ball of cells is now called an embryo. In this stage, all the major organs form, and the embryo becomes very fragile. At the end of the embryonic period, the embryo is only about an inch long.

Stage 3: The Foetal Stage

- The last stage of prenatal development is the foetal stage, which lasts from two months after conception until birth. About one month into this stage, the sex organs of the foetus begin to form. The foetus quickly grows as bones and muscles form, and it begins to move inside the uterus.
- Organ systems develop further and start to function. During the last three months, the brain increases rapidly in size, an insulating layer of fat forms under the skin, and the respiratory and digestive systems start to work independently.

Factors Affecting Prenatal Growth and Development

A teratogen is any disease, drug or other environment agent that can harm a developing embryo or foetus by causing physical deformation, retarded growth and damage to brain.

Some of the teratogens and other factors that affect prenatal growth are discussed below:

- **Drugs:** Medical drugs such as antibiotics and non-prescribed illegal drugs such as marijuana, opiates and cocaine are potentially harmful for the foetus.
- **Alcohol and Smoking:** Intake of alcohol and smoking negatively affects the foetus. These can lead to mental retardation and slow physical growth. Excessive quantity of nicotine and caffeine may also affect the growing foetus.
- **Environmental Hazards:** Environmental hazards caused by modern day living, such as exposure to chemicals, radiations, extreme heat and humidity, can also cause prenatal mutations and deformities.