

Good example of fetal development, nutrition and milk essay

[Technology](#), [Development](#)



- Describe the normal events of fetal development. How does malnutrition impair fetal development?

Normal events of fetal development: Normal events of development of a fetus take place in the inner uterine wall of the mother throughout a gestation. A fertilized egg or zygote moves through fallopian tube and reaches to the uterus.

During 0 to 3-weeks of gestation, the zygote develops into an embryo within a biological pocket or amniotic sac. As the embryo develops, the amniotic sac, filled with fluid gets enlarged, where the fetus floats. This fluid protects the fetus from injury throughout gestation period. Tentacles from the placenta approach to the uterine wall, to form an area of contact between placenta and uterine wall and fetus exchange nutrition and waste materials through these contact with the mother's body.

During 5 to 7-weeks of gestation, the embryo gets elongated to form the upper and lower part of the body and some major organs like brain, spinal cord, blood vessels begins to develop and formation of arms and legs start. Brain and spinal cord development continue throughout the gestation.

During 9 to 10-weeks of gestation, almost all the organs like fingers, toes, skeleton, muscles, face, neck are formed, and kidneys in baby's body begin their function.

Hearing organs develop and sex organ can be noticed in the 14-th week of gestation.

Hairs on head, eyelids, and eyelashes are developed in the 16-th week of gestation.

During 24 to 25-th week of gestational maturity, it is the final stage of fetal

growth. The fetus grows in size and weight and the respiratory system of the fetus is functional, it can breathe outside the womb of the mother.

Malnutrition and fetal development:

Nutrition is a most important factor that regulates entire fetal development, including the development of the brain. During pregnancy, energy requirement is much high in a mother`s body to support the increasing need of nutrition for faster growing baby. So, a balanced diet is very essential throughout pregnancy to support the health of mother as well as the health of growing fetus. Deficiency of some Amino acids (protein), Vitamins, Minerals, during rapid growth of fetus, can result underweight new born, with the body parts not fully developed and a premature delivery. Deficiency of some nutrients like iron and vitamins can cause harm on the development of fetal brain, can result their auditory, visual, memory dysfunction or impairment.

- Compare and contrast major differences in nutrient content of breast milk and cow`s milk.

Major differences in nutrient content in breast milk and cow`s milk:

Cow milk and breast milk contain similar percentage of water but, content of protein, minerals, carbohydrate, vitamins, fat in these two types of milks are different.

Protein content in cow`s milk is much higher than breast milk. Due to more casein content in cow milk, human babies cannot easily digest the milk, and human babies can suffer from allergies due to large amount of casein

content of cow milk.

Breast milk contains more monounsaturated and polyunsaturated fat than cow milk, these types of fats promote the brain development in human babies.

Calcium content in cow milk is more than breast milk. Calves of cow require more calcium to meet the requirement of their growing bigger skeleton structure and human baby`s body cannot easily absorb the calcium of cow milk.

Cow milk contains less iron and the milk has lower level of vitamins than breast milk. Human baby need more iron and vitamins for the growth of their developing brain.

Reference:

The Merck Manual Home Health Handbook. Stages of development of fetus.

http://www.merckmanuals.com/home/womens_health_issues/normal_pregnancy/stages_of_development_of_the_fetus.html.

9 June 2014.

Mednet. Impact of Maternal Nutrition on Fetal Development. <http://www.mednet.ca/en/report/impact-of-maternal-nutrition-on-fetal-developmen.html>.

9 June 2014.

9 June 2014.

Viva Health. White lies: A comparison between human milk and cow`s milk.

<http://www.vegetarian.org.uk/campaigns/whitelies/wlreport05.shtml>.

11 June 2014.