

Difference Between Male and Female Fetus

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Key Difference - Male vs Female Fetus

Viviparous organisms are the organisms that have the ability to give birth to the live young. The live offspring is developed inside the mothers' womb, where it receives all the nutrition and protection from the mother. Once the fertilization process takes place, and the zygote forms and then the zygote develops into a fetus. The fetus is a specific stage in the prenatal development of viviparous organisms such as humans. The fetus is formed after the ninth week from fertilization and is in between the embryonic and birth states of a viviparous organism. In humans, the fetus can be monitored through ultrasound scanning through which the sex differentiation could be predicted. Male fetus refers to the early developmental stage of a male. The confirmation of the male fetus can be done using ultrasound scanning, where a protrusion is observed in between the legs of males. Female fetus refers to the early developmental stage of a female. Confirmation of the female fetus via ultrasound scanning shows that there are parallel lines in between the legs signifying the development of the clitoris and labia. The key difference between the male and the female fetus is based on the observations of the ultrasound scanning of the fetus. In a male fetus, a protrusion is observed in between legs suggesting the development of the penis, whereas, in the female fetus, parallel lines in between legs are observed suggesting the development of the clitoris and labia.

What is a Male Fetus?

A male fetus is the early developmental stage of the male and is observed during the <u>gestational period</u> of a male. The hormonal differences and the genetic factors determine the sex differentiation of a male, where an <u>XY sex chromosome</u> pair is present in the <u>male karyotype</u>. The development of the male fetus is determined via ultrasound scanning and thus can be predicted via different observations.

Initially, a protrusion in between the legs is observed in the ultrasound scanning of a male fetus. This may often be confused with the development of the umbilical cord. During the 2nd trimester, if an angle larger than 30 degrees is observed between the protrusion and the baby, and if the fetus is positioned towards the left it can be confirmed that the fetus is a male fetus.



Figure 01: Male Fetus

Recently, fetal sex-specific biomarkers have been identified to determine the sex of a fetus. It was shown that the male fetus shows slower growth rate in the development of the head circumference, however from the second trimester they showed increased head circumference growth. In relation to <a href="https://hornance.ncb/horn

What is a Female Fetus?

The female fetus refers to the early developmental stage of a female, after the 9th week from fertilization. The fetal characteristics of a female are dependent on the parallel lines observed between the legs. These parallel lines correspond to the clitoris and the labia of a female. In addition, the absence of the significant protrusion that depicts the male penis is also regarded as a characteristic identification factor of a female fetus. These characteristics are determined via ultrasound scanning during the 1st and 2nd trimesters. The amniotic fluid samples are rich in estrogen, during female fetal development, in comparison with the male fetal development period.

The fetal sex differentiation is also characterized by different biomarkers such as the development of head circumference, crown-rump length and femur length. It was observed that the female fetus shows a higher crown lump length in comparison to the male fetus,

whereas the characteristics - head circumference and femur length were lower in a female fetus.

What are the Similarities Between Male and Female Fetus?

- In both male and female fetal types, the sex differentiation is observed via ultrasound scanning.
- In both Male and Female Fetus, the observations for sex differentiation are done with 16-20 weeks after fertilization.
- Both male and female fetal developments begin after 9 weeks of fertilization.
- Biomarkers are now used to study the characteristics of male and female fetal developments further
- Both male and female fetal sex developments can be confirmed via a karyotyping that will identify the XX and XY chromosome patterns in females and males respectively.

What is the Difference Between Male and Female Fetus?

Male Fetus vs Female Fetus	
Male fetus refers to the early developmental stage of a male.	Female fetus refers to the early developmental stage of a female.
Sex Differentiation Confirmation	
The confirmation of the male fetus can be done using ultrasound scanning, where a protrusion is observed in between the legs of males.	Confirmation of the female fetus via ultrasound scanning shows that there are parallel lines in between the legs signifying the development of the clitoris and labia.
Hormonal Levels in the Amniotic Fluid	
Higher levels of testosterone and lower levels of estrogen are there in the male fetus.	Higher levels of estrogen and lower levels of testosterone are there in the female fetus.

Summary - Male vs Female Fetus

Fetal development is an important phase during the gestational period where the embryo develops into a complete organism within the womb of the mother. The male and female fetal developments are distinguished via ultrasound scanning. The male fetus is identified by the small protrusion observed in the early fetal development stage. During the 2nd trimester, a 30-degree angle between the protrusion and the fetus suggests the

development of the penis in males. A female fetus is distinguished by the presence of parallel lines between legs suggesting the development of the clitoris and the labia. This is the difference between male and female fetus.

Reference:

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- 2.Monique Robinson Associate Principal Investigator, Telethon Institute for Child Health Research, University of Western Australia. "Are maternal hormones different when carrying a boy or a girl?" The Conversation, 12 Dec. 2017. Available here

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