

Twins



Twins are two siblings born at the same time to the same parents.

What are twins?

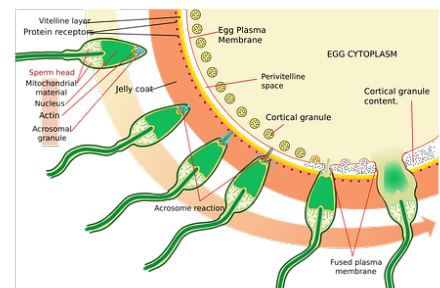
Twins are two siblings that are born at the same time to the same parents. These twins can be **identical**, meaning they have the same genetic material and look almost exactly the same, or **fraternal**, meaning they don't have the exact same genetic material and won't look any more alike than any other sets of siblings. Identical twins are of the same **sex** (gender), while fraternal twins can be of the same or different sexes. Twins are one type of **multiple pregnancy**, meaning that a woman is carrying more than one baby at the same time. Although more than two babies can occur, 90% of multiple births are twins. How does this happen? First, it's necessary to understand how babies are formed.

Human reproduction

Reproduction is the process of making **offspring** (new individuals of a species), and can be sexual or asexual, depending on the species. In sexual reproduction, two parents combine their genetic material into a unique offspring. In asexual reproduction, one parent creates an offspring that is a copy of itself. Humans can only reproduce sexually.

To reproduce, a sperm cell from the male **fuses** with an egg cell from the female to form a **zygote**. This process of fusion is called **fertilization**. During fertilization, one sperm cell fuses with one egg cell.

The zygote (fertilized egg) then grows into an **embryo** (developing organism). This embryo divides into many cells, which become the different parts of a body, developing into a **fetus**, which is an unborn offspring. After a gestational period (usually approximately 40 weeks in humans), this fetus is born as an infant.



In sexual reproduction, a sperm cell from the male fertilizes and egg cell from the female.



Humans have 46 chromosomes in their body cells.

The sperm cell and egg cell (the **sex cells**) are called haploid cells, because each cell has only 23 chromosomes. This is half of the number of chromosomes found in all other cells in the human body (the body

cells, or somatic cells). The zygote that is formed contains the

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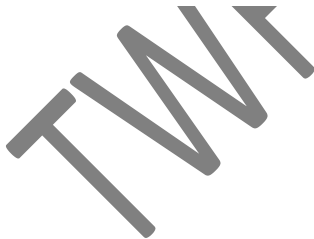
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What increases the likelihood of having twins?



Identical twins seem to occur by chance.

Identical twins seem to be a chance occurrence. Doctors have found no correlation between identical twins and age, race, or family history. The likelihood of having fraternal twins, on the other hand, is affected by several factors. One common misconception, however, is that twins are born to every other generation. While family history increases the likelihood of fraternal twins, they do not skip a generation.

If anyone on a woman's mother's side of the family has had fraternal twins, she is more likely to have fraternal twins as well.

Multiple pregnancies are more likely to occur when women take fertility drugs or undergo in vitro fertilization. This is because fertility drugs increase the body's egg production to increase the chances of fertilization. In some cases of in vitro fertilization, doctors may place multiple fertilized eggs into a woman's uterus. This again increases the chance that one of them will be carried to term (birth).

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Are there risks to carrying twins?

Carrying more than one fetus at a time increases the risks already associated with pregnancy. A multiple pregnancy increases the risk of high blood pressure, gestational diabetes, giving birth

prematurely (which can be dangerous for the babies), miscarriage, and birth defects. Premature labor for twins occurs because carrying two fetuses puts a larger strain on the mother than carrying only one and the fetuses have trouble getting enough nutrients. Normal gestation time for twins is 38 weeks. In addition, a woman carrying more than one baby has a higher likelihood of requiring a caesarean section, in which an incision is made in the abdomen and the babies delivered through this incision. A woman who discovers she is pregnant with twins (or more) will need to make more doctor visits and have more ultrasounds than a woman carrying only one fetus.

Reading Comprehension Questions

- 1) What are twins?
- 2) What
- 3) What are the two haploid sex cells?
- 4) What
- 5) Define
- 6) How do fraternal twins happen?
- 7) How do
- 8) List three
- 9) List three

Extension Question

- 10) Draw a diagram of the process of sexual reproduction at the cellular level for one baby, fraternal twins, and identical twins. In the diagram, include:
 - a. Fertilization
 - b. Development of zygote, embryo, and fetus
 - c. Which cells are haploid and which cells diploid

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References

- Bonner, J.T. (2000 Sept 8). "Reproduction." *Science*. Retrieved from <https://www.britannica.com/science/reproduction-biology>.
- "Cesarean section or C-section." (n.d.) *Glossary*. Retrieved from <https://www.womenshealth.gov/glossary/#cesarean>.
- "Embryo." (n.d.) *Merriam-Webster*. Retrieved from <https://www.merriam-webster.com/dictionary/embryo>.
- "Facts About the Twins." (2017). *Conjoined Twins*. Retrieved from <http://www.umm.edu/programs/conjoined-twins/facts-about-the-twins>.
- "Genetics Overview." (2017). *Genographic Project*. Retrieved from <https://genographic.nationalgeographic.com/genetics-overview/>.
- "Multiple Pregnancy: Twins or More." (n.d.) *WebMD*. Retrieved from <http://www.webmd.com/baby/tc/multiple-pregnancy-twins-or-more-topic-overview#1>.
- O'Neil, D. (2014). "Cell Reproduction and Conception." *Biological Basis of Heredity*. Retrieved from http://anthro.palomar.edu/biobasis/bio_2.htm.
- "Sexual vs. Asexual Reproduction." (n.d.) *Learn.Genetics*. Retrieved from <http://learn.genetics.utah.edu/content/basics/reproduction/>.
- The Editors of Encyclopædia Britannica. (2009 Jul 13). "Zygote." *Science*. Retrieved from <https://www.britannica.com/science/zygote>.
- "Twins – identical and fraternal." (2017). *Reproductive system – female*. Retrieved from <https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/twins-identical-and-fraternal>.
- "Twins, triples, and other multiples." (2010). *Office on Women's Health, U.S. Department of Health and Human Services*. Retrieved from <https://www.womenshealth.gov/pregnancy/youre-pregnant-now-what/twins-triplets-and-other-multiples>.