# Zygote Encyclopedia Article

## Zygote

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In animals, a zygote is a fertilized egg, formed by the fusion of a male **gamete** (or sperm) and a female gamete (or egg). Male and female gametes (collectively, these are referred to as sex cells) are the unicellular products of **meiosis**, a kind of reduction cellular division that occurs in specialized organs of sexually reproducing animals (the ovary of females, and the testes of males). Meiosis results in the formation of cells having only one of the two complementary (or homologous) sets of chromosomes possessed by animals (that is, gametes are **haploid** cells). However, the zygote formed from their union has two sets of chromosomes (i.e., it is **diploid**). Because one of the sets of chromosomes has been obtained each parent, the genetic information (or **genome**) of the offspring represents a unique combination of **DNA** ( **deoxyribonucleic acid**, the genetic biochemical of animals). Zygotes are capable of developing into adult animals.

In plants, the product of meiosis is not gametes. Rather, this reduction division produces multicellular, haploid organisms, which then go on to produce haploid sex cells (or true gametes). The male plant gamete is known as pollen, and the female as an ovule. Fertilized ovules are diploid, and represent a unique genome, having obtained one of its two sets of chromosomes from each of its parents. Fertilized ovules develop into seeds, which are capable of germinating and growing in to an adult plant.