

Fetal Development: A Timeline

The physiological development of the embryo and fetus during gestation does not alone determine the morality of abortion, but it is relevant to the argument over the moral status of the fetus. Gestation in humans has duration of about 266 days.

0–22 hours

The first stage is **conception** or **fertilization**, a process that lasts about 22 hours and ends with **syngamy**, the merging of the parental chromosomes. Syngamy results in a single-celled **zygote**, which begins rapidly dividing. As many as 50% of conceptions end in early miscarriage.

6–13 days

The process of **implantation** begins on approximately the sixth day following fertilization and takes about a week. Once the embryo is implanted in the uterus, the pregnancy can be detected and is considered clinical. The embryo develops a **primitive streak**, which is the precursor of the spinal cord and the nervous system. At the same time, the cells differentiate and become different kinds of tissue. This is known as **gastrulation**. Once implantation is completed, twinning—the division of the embryo into two or more genetically identical embryos—cannot occur.

12–16 weeks

Between 12 and 16 weeks, the fetus begins to look recognizably human. (Before then, it would be difficult to distinguish a human fetus from any other mammalian fetus.) Fetal movements, known as **quickening**, are felt by the mother early in the second trimester. By the end of the second trimester, the fetus may suck its thumb.

24–28 weeks

For decades, a fetus was considered viable, or capable of surviving outside the womb, in the third trimester, between 24 and 28 weeks. Today, with neonatal intensive care and mechanical ventilation, the standard age of viability in the United States is set at 24 weeks. Moreover, a fetus of 22 weeks has about a 25% chance of survival and some pediatricians regard 22 weeks to be the new standard of viability. Few, if any, infants born before 22 weeks have survived. An infant born at 24 weeks has a 40-70% chance of survival, with active treatment in a hospital. Even if a premature infant survives, it is at risk for serious medical problems and lasting disability.