

Stages of embryology:

1. Gamete fertilisation.
2. Fertilisation
3. Cleavage
4. Gastrulation
5. Organogenesis.
6. Growth

Gamete fertilisation:

- Cells in the reproductive organs (testes and ovaries in humans) divide to form gametes. Gametes are sex cells.
- Male gametes are sperm (produced in the testes)
- Female gametes are eggs (produced in the ovaries)
- Gametes contain one set of genetic information, while body cells contain two sets of genetic information. The type of cell division that produces gametes is called meiosis.

Fertilisation:

Fertilisation is the joining or fusion of a male gamete and a female gamete. When fertilisation happens, a single body cell with new pairs of chromosomes is formed. The new cell then divides over and over again by mitosis. This creates the many cells that eventually form a new individual.

Cleavage:

Holoblastic cleavage: occurs in lightly yolked isolecithal eggs, and moderately yolked mesolecithal eggs. The entire yolk cleaves. In the absence of a large concentration of yolk, four major cleavage types can be observed: radial, spiral, bilateral and rotational holoblastic cleavage. These holoblastic cleavage furrows extend completely through the egg. Occurs in echinoderm, tunicates, cephalochordates, marsupials and placental mammals.

