



MG23005 | FERTILIZATION AND EMBRYONIC DEVELOPMENT









This anatomical model represents the stages of human fertilization and embryonic development, including 16 models that schematically illustrate the process of fertilization, embryonic development, the fetus at three months, and the placenta and its structures. The model is mounted on a polymer base and includes an information card with related structures.

Applications:

Ideal for schools, universities, training, and medical and scientific information, this model allows for the detailed study of the anatomy of human fertilization and embryonic development. It is a valuable tool for teaching the physiology of fertilization and early embryogenesis.

Technical Advantages:

- * Detailed representation of each stage of embryonic development.
- * Allows the study of the structures that make up the placenta.
- * High-precision natural molding.
- * Made of stable and resistant synthetic material.
- * Original, numbered, and hand-painted replicas.
- * Resin approved in toxicological tests.



* Includes an information card.

3D Technology and Augmented Reality:

Our anatomical models offer a visual complement through information cards that activate 3D models viewable in augmented reality (AR). This interactive platform aids learning, allowing for the comparative analysis of anatomical structures and offering resources for continuing education in anatomy, physiology, and pathophysiology.

Technical Specifications:

- * Material: Synthetic resin.
- * Scale: Unspecified.
- * Manual numbering and painting.
- * Information card included.

Main Structures:

Mitosis: Cell division process resulting in two daughter cells genetically identical to the parent cell. Fundamental for tissue growth and repair, this process is crucial in the early stages of embryonic development.

Female pronucleus near the male pronucleus: Stage of fertilization where the pronuclei, each containing half of the genetic material (from the ovum and sperm, respectively), approach before fusion.

Female pronucleus and male pronucleus: The pronuclei, structures containing the haploid (n) genetic material of the ovum and sperm, before their fusion to form the zygote.

Amphicyte or zygote: The cell resulting from the union of the ovum and sperm, containing the complete (2n) genetic material of the new individual.

Ovum: Female reproductive cell, containing half of the genetic material necessary for the formation of a new individual. Characterized by its large size and cytoplasm rich in nutrients.

Ovary: Female reproductive organ where ova are produced and mature. Also responsible for the production of female sex hormones.

Sperm: Male reproductive cell, containing half of the genetic material necessary for the formation of a new individual. Characterized by its mobility and specialized structure for fertilization.



Blastoderm: Outer cell layer that forms after zygote cleavage, giving rise to extraembryonic tissues.

Embryo in the second to third week: Developmental period characterized by the formation of the primitive streak, gastrulation, and the beginning of neurulation, essential processes in the formation of germ layers.

Embryo in the fifth week: Stage in which the main organ systems begin to develop, with the appearance of rudimentary limbs.

Other structures can be verified directly on the physical piece or on the interactive 3D model.

About the Anatomical Models:

They are developed with resin replication technology, supplying the scarcity of natural anatomical pieces for teaching and research. They present the essential morphological characteristics with excellent cost-benefit, good resistance, manual painting, and numbering for precise identification of structures.

List of all visible structures:

- Mitosis
- Female pronucleus close to male pronucleus
- Female pronucleus and male pronucleus
- Amphimixis or zygote
- Ovum
- Ovary
- Spermatozoon
- Blastoderm
- Embryo at week 2-3
- Embryo at week 5
- Embryo at week 2
- Embryo at week 3
- Placenta section
- Placenta
- Embryo at month 3
- Embryo at week 9