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# EMBRYOLOGY

## RECURRING LIFE

- more specific
  - today's creator ( अद्यज )
    - EMBRYOLOGY GENITORS
      - zygote ( युग्मज )
        - Blast -
          - Amnioblast ( उल्वज )
          - Blastocoel ( जननगुहा ) , Blastocyst ( जननपूट ) , Blastomeres ( जननखंड ) , Blastopore ( जननछिद्र )
          - Embryoblast ( भ्रूणज )
          - Epiblast ( अधिज , आद्यबहिर्जनस्तर ) , Hypoblast ( अधःज , आद्यअंतःजनस्तर )
          - Trophoblast ( पोषज )
        - heart and vessels creator
          - Angiogenesis ( वाहिकाजनन )
          - Cardiogenic area ( हृदजनक क्षेत्र ) , Cardiac progenitor cell ( हृद प्रजनक कोशिका )
        - creator of kidney
          - Nephrogenic cord
        - nervous system creator
- युग्मज ( zygote )
  - द्वि कोशिकीय युग्मज ( क्स 2 celled )
  - 4 celled ( 4 क्स )
  - 8 celled ( 8 क्स )
  - 16 celled ( 16 क्स )
    - जननपूट ( blastocyst - क्सः )
    - जननगुहा ( blastocoel - ह,अः )
    - outer cell mass ( क )
      - पोषज ( trophoblast )
        - कोशिकापोषज ( cytotrophoblast - क्र )
        - बीजपोषक संकोशिका ( syncytiotrophoblast - कू )
    - भ्रूणीय ध्रुव ( Embryonic pole - किं )
      - अवभ्रूणीय ध्रुव ( Abembryonic pole - कुं )
      - Mural trophoblast ( कौं )
    - भ्रूणज ( inner cell mass / embryoblast - स )
      - अधिःज ( epiblast - श )
        - उल्वीय गुहा ( amniotic cavity - शः )
        - उल्वज ( amnioblast )
          - ectoderm
            - आद्य रेखा ( Primitive streak )
              - आद्य मंडली , आद्य गांठ ( Primitive knot / node / hensen's node )



- Nephrogenic cord
    - development of urogenital system
    - development of reproductive system
  - Lateral ( पार्श्व )
    - continuous with pericardial bar cephalic to buccopharyngeal membrane
    - pericardial bar
      - pericardial sac
    - series of clefts appear inside
      - join to form
        - intraembryonic coelom
        - u shaped tubular passage
        - divides mesoderm
          - somatic layer with overlying ectoderm
            - somatopleure
              - body wall
              - parietal layer
              - skeletal elements
                - pectoral girdle
                - pelvic girdle
          - splanchnic layer with underlying endoderm
          - Splanchnic layer
          - gut
      - splanchnic mesoderm
        - development of circulatory system
  - बाह्य भ्रूणगुहा ( extraembryonic coelom )
  - बाह्य मध्यत्वक ( extramebryonic mesoderm )
    - आद्यकायिक मध्यजनस्तर ( Somatopleuric mesoderm )
    - आद्यआशय मध्यजनस्तर ( Splanchnopleuric mesoderm )
    - ग्रसनी चाप
  - PRIMITIVE POSTURE OF EMBRYO
    - the first folding of embryo to reorganize the organ locations
      - cardiogenic area , pericardial sac , septum transversum
- आद्य गर्त ( Primitive pit )
- आद्य खात ( Primitive groove )
- आद्य स्तंभ / पृष्ठरज्जु ( notochord )
- decidua ( माँ )
  - decidua basalis पाती आधार
  - decidua parietalis पाती पार्श्व
  - decidua capsularis पाती संपुट

## Introduction

## Basic process in development

# Germ Cells and their maturation


## Fertilization


- [fertilization](#)


## Stages of embryology


## Placenta


## Fertilization

 = amnioblast

 = epiblast

 = hypoblast

 = cytotrophoblast

 = syncytiotrophoblast

## ZYGOTE



## STAGES OF EMBRYOLOGY

### CHANGES IN FIRST WEEK

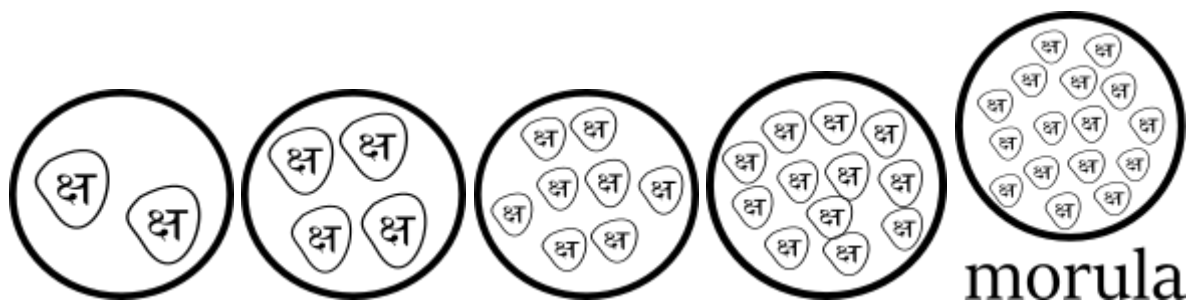
- [morula](#)
- [blastocyst](#)

**CLEAVAGE** The two cells formed as described above undergo a series of divisions. One [cell](#) divides first so that we have a 3 [cell](#) stage of embryo followed by 4 [cell](#) stage , a 5 [cell](#) stage etc. This process is called cleavage.

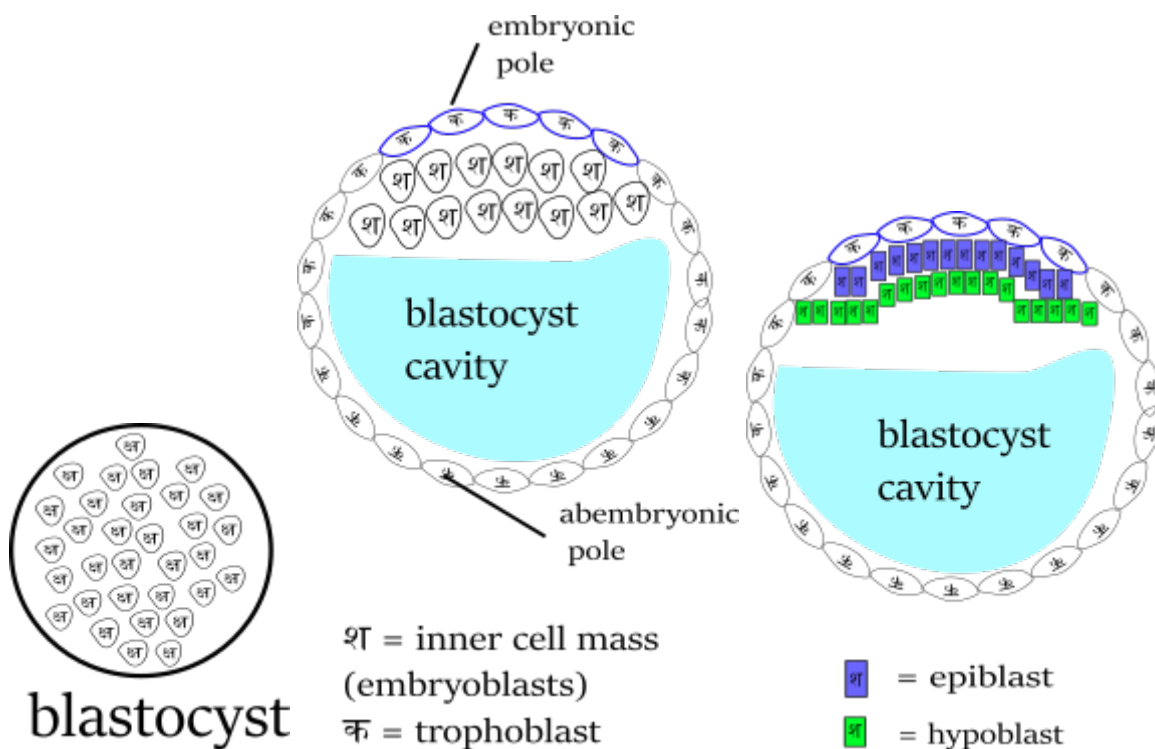
Subdivisions of cleavage

- Stage of compaction : at 8 celled stage
- Morula
- Blastocyst : between 4th and 5th day

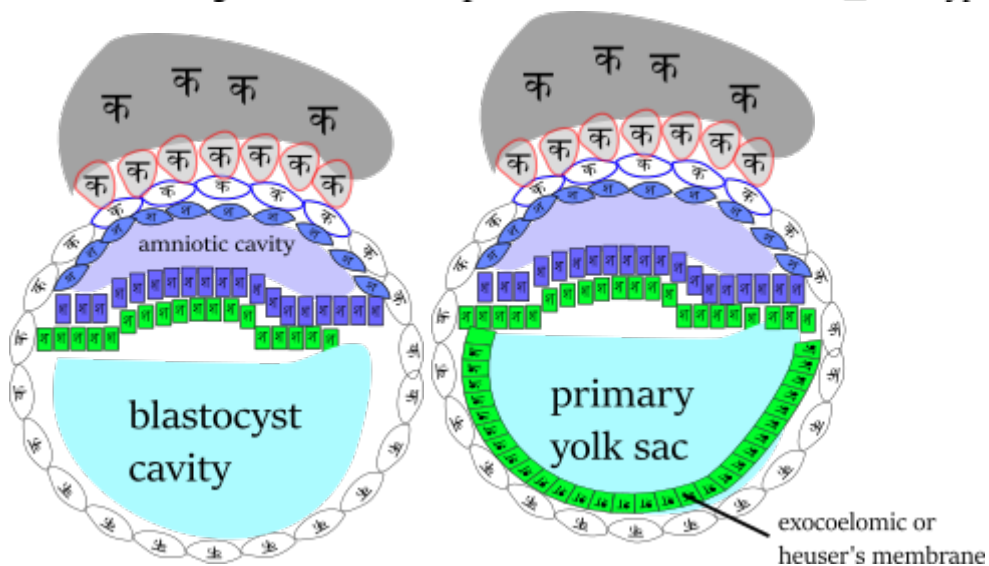
### GERMINAL PERIOD

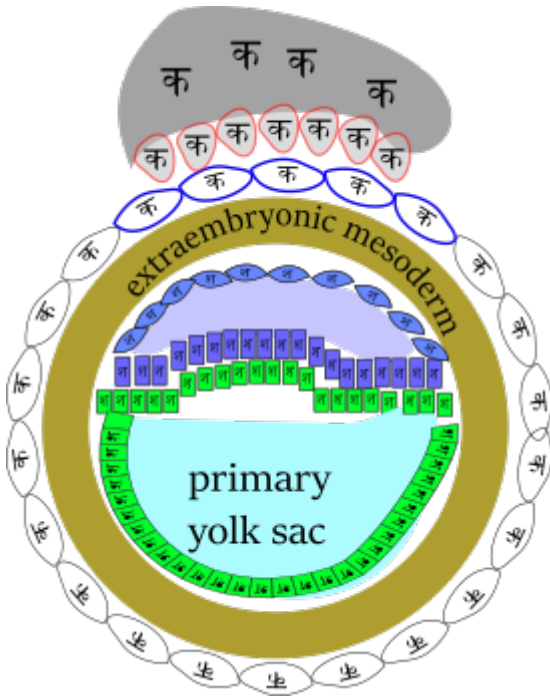


### CHANGES IN SECOND WEEK



blastocyst





## CHANGES IN THIRD WEEK

## SYSTEMIC EMBRYOLOGY

- Development of cardiovascular system
- Development of respiratory system
- Development of nervous system
- Development of urogenital system
- development of gastrointestinal tract
- development of skeletal system
- Development of face

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