**Dr. S. Vairamani Shanmugam**

**M.Sc., M.Ed., M.Phil., Ph.D.,(Zoo)., Ph.D., (Edu).,**

**Assistant Professor of Zoology**

**Dharmapuram Gnanambigai Government Arts College for Women**

**Mayiladuthurai- 609 001**

**Nagapattinam Dt**

[**babavairamani@gmail.com**](mailto:babavairamani@gmail.com)

**09486386923**

**Morphogenetic movements**

* **The movement of cells from one place to another to bring about a new shape to the embryo is called Morphogenetic movement**
* **Ex: During Gastrulation, the blastomeres move to transform blastula into gastrula for the formation of a new shape to the embryo . These movements are called Morphogenetic movements**
* **These movements are of two types**
* **They are Epiboly and Emboly**

1. **EPIBOLYrefers to the movement of cells on the surface of the embryo**

**Ex: Ectodermal cells are involved in epiboly**

1. **Emboly refers to the movement of cells from the surface to the interior of the embryo**

**Ex: the presumptive endoderm, mesoderm and notochordal cells migrate into the interior of the embryo from the surface**

**There are many types of embolic movements**

1. **Convergence**
2. **Involution**
3. **Divergence**
4. **Invagination**
5. **Ingression**
6. **Delamination**
7. **Concrescence**
8. **Infiltration**
9. **Constriction**
10. **Extension or Elongation**
11. **Convergence: Movement of cells towards one point**

**Ex: In chicks and mammals the cells from the surfaceof the blastoderm move towards the primitive streak**

**2.Involution : “ rolling in”of cells. The cells located on the blastoporal lip move over the lip are brught to the inner side of the lip**

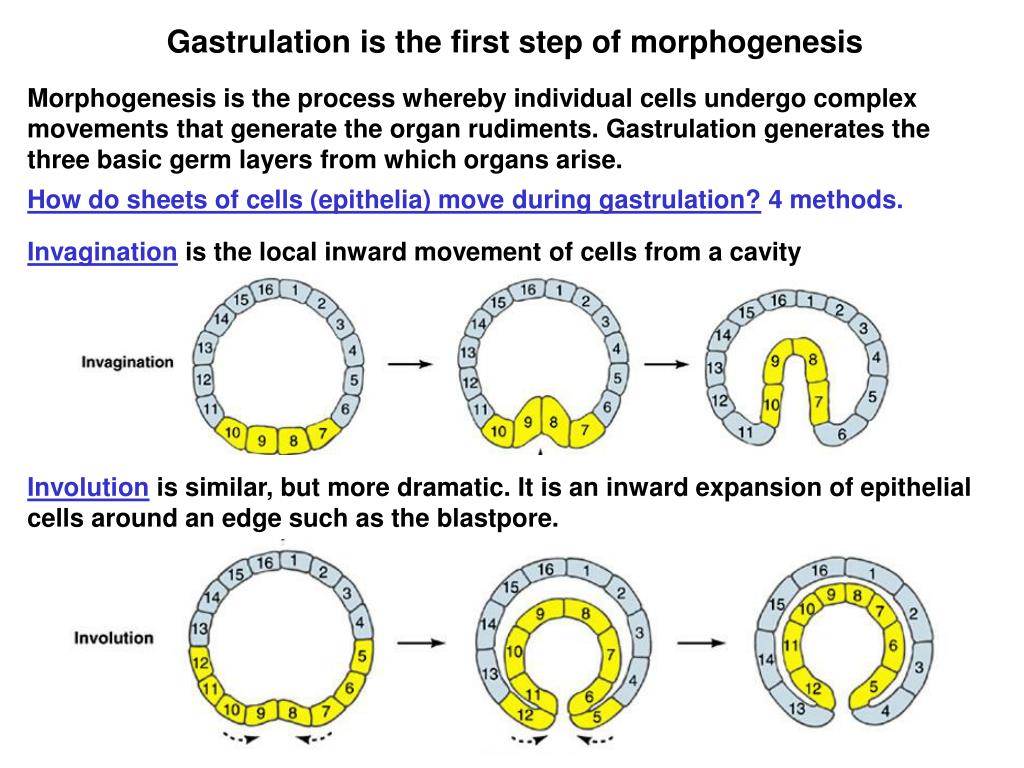
**3. Divergence: The cells move in different directions from a single point**

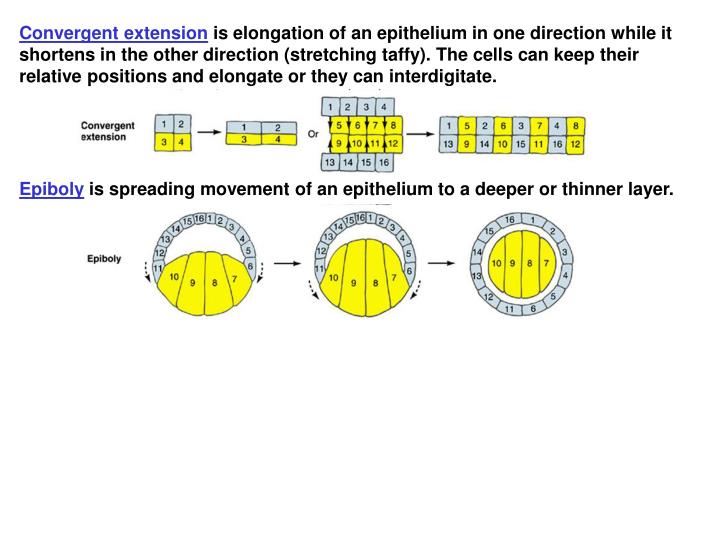
**4. Invagination: refers to the “infolding”or “inpushing” of a layer of cells into the blastocoel**

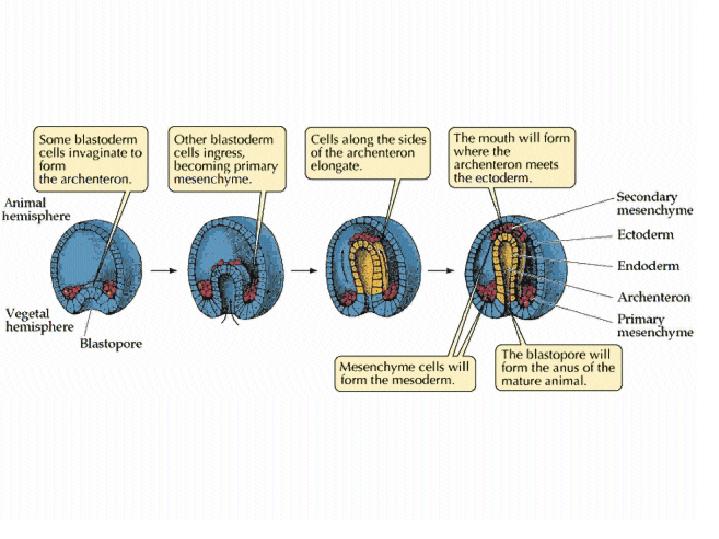
**5. Ingression: Individual cells or group of cells separate from this phenomenon**

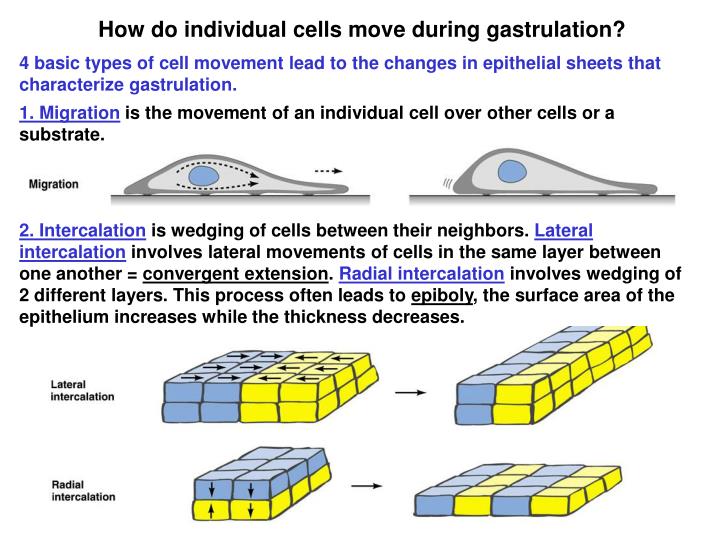
**Morphogenetic Movement
In addition to the mechanism by which
the complicated bodies of animals are formed via cleavage of
...**

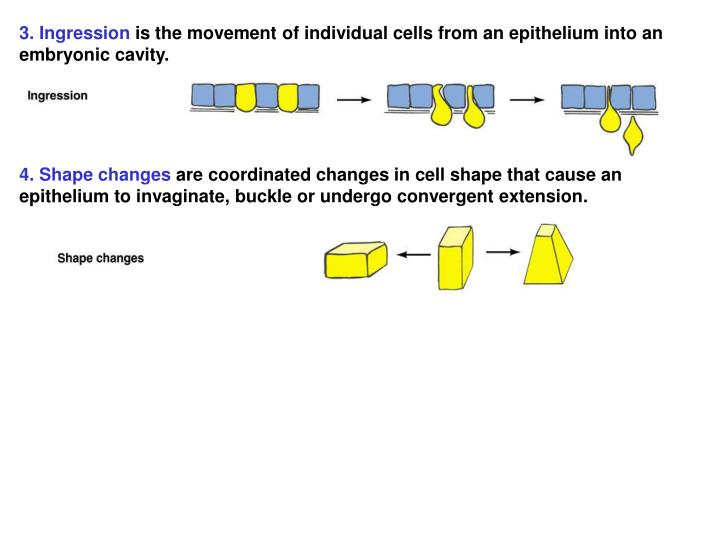
•Morphogenetic movement consists of several b
asic
cellular deformations
and movements, including the invagination
movemen...





****



****