Gap Junctions

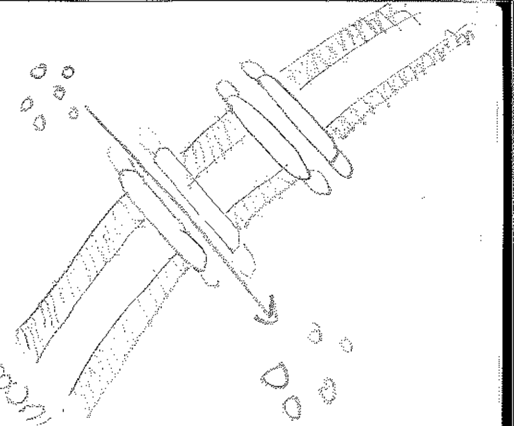
Collagen

Anchoring Junctions

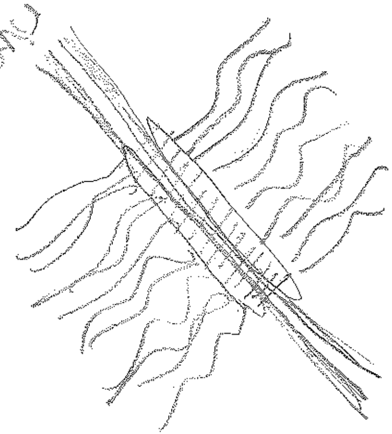
Desmosomes

Tight Junctions

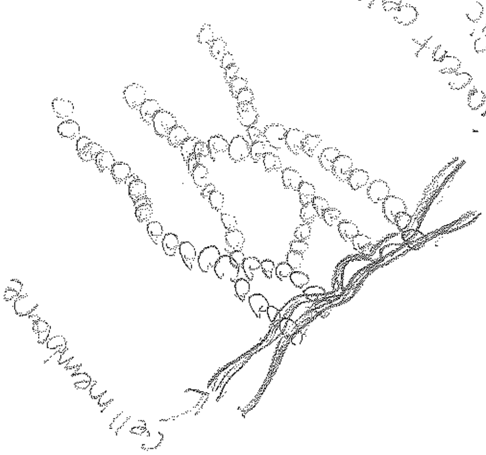
the connections between cells, cells will adhere, interact and communicate with eachother at these sites of contact



• also called communicating junctions
- provide cytoplasmic channels from one cell to other cells
• consist of membrane proteins
- allows ions, sugars, amino acids and other small molecules to pass
• necessary for communication between heart muscle cells and embryos



• function like rivets, keeping cells together like strong sheets
• use intermediate filaments
• example: attach muscle cells together
• also called anchoring junctions



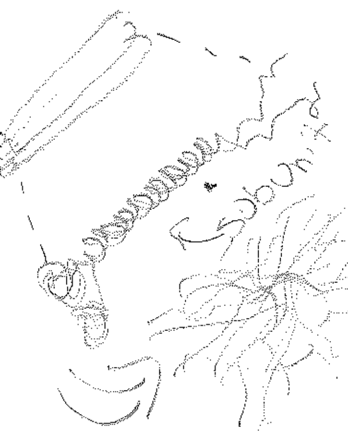
• membranes of ajacent cells are tightly pressed together bound by specific proteins
• making a complete seal around cells creating a barrier that prevents leakage of fluid
• example: skin cells

Cytoskeleton

Microfilaments

Intermediate filaments

Microtubules

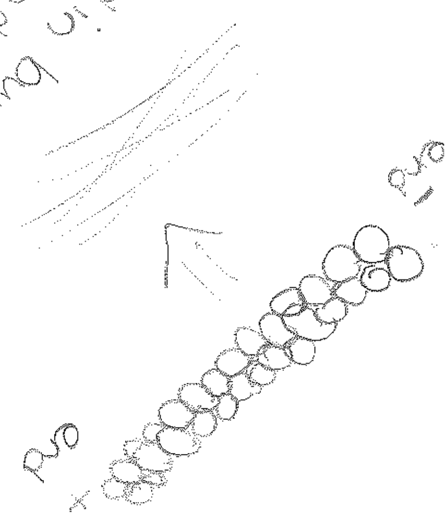


- Supports the cell and maintains its shape
- it holds cell organelles and other particles around within the cell
- involved with movements of the cytoplasm called cytoplasmic streaming
- In teracts with extracellular structures, helping anchor the cell in place

- between microfilaments and microtubules 5 diameter
- do not have dynamic instability
- only found in some eukaryotic cells
- good for bearing tension
- reinforce cell shape and anchor cell organelles
- made of proteins similar to keratin

- long, hollow, unbranched cylinders (largest) 25nm in diameter
- form rigid internal skeleton for some cells or cell regions
- act as a framework along which motor proteins can move structures within the cell
- important in cilia and flagella

- usually found in bundles (smallest) 7nm in diameter
- can make entire cell or part of cell move – ... cell ... off
- thin – actin, thick – myosin



Dynamic Instability