?Ch 7.1 – 7.3 Notes

**Selective Permeability**: Allows some substances enter easily and others not

**Aquaporin**: Transport channel protein; Allows H2O to travel through membrane

**Amphipathic**: Phospholipid is /this; Means hydrophobic and hydrophilic

* Bilayer can exist as boundary between aqueous compartments

**Fluid Mosaic Model**: Mosaic of proteins/ in bilayer fluid of phospholipids

* **Lipid Rafts**: Groups of proteins that do common functions

Membrane floats around

* Usually sideways
* Rarely from one side to another

Sideways movement is fast

* Adjacent phospholipids switch 107 times a sec.
  + Since proteins are larger, they are slower than lipids

Some fixed in place EX: Cytoskeleton

Unsaturated = more double bonds = more fluid membrane

Cholesterol

* + High temp- makes it less fluid = restricts movement
  + Low temp- more fluid = can’t pack as much
  + Acts kind of like a buffer

Cold Environment = more Unsaturated

Hot Environment = Specialized lipids

Some can change ratio for adaptations

**Integral Proteins** = Penetrate hydrophobic interior of bilayer

* **Transmembrane Protein** = Span membrane; Some are channels

**Peripheral Proteins** = not in membrane/loosely bound to surface

Cytoskeleton can hold them in place

Extracellular Membrane can attach to some outside ones

* Note: This is mostly through the integrins

Cells recognize each other by binding molecules to PM surface

* Often Carbs

Glycolipids = Short carbs that are covalently bonded to a Lipid

Glycoprotein = Short carbs that are covalently bonded to a Protein

Carbs are a marker to other cells

Ch 7.2

Hydrophobic things (nonpolar) pass easily

* EX: CO2/O2

Hydrophilic/Charged (polar) thing can’t pass easily

* EX: Ions

**Transport Proteins** allow ions and hydrophilic stuff to pass into the cell

* Aquaporin help water enter

**Carrier Proteins** change shape to grab stuff