CELL TRANSPORT

Cells need to transport food, proteins, lipids, carbohydrates, Water, CO₂, O₂ Wastes, Minerals, Hormones

No Energy

PASSIVE TRANSPORT (From High-Low Concentration)

Particles

Facilitated Diffusion:

Diffusion using carrier proteins/ protein channels

Osmosis:

Water

Movement of
water from high
conc. to low
concentration
through a
semi-permeable
membrane

Energy

ACTIVE TRANSPORT (From Low-High Concentration)

Endocytosis (movement of material **into** a cell)

liquid solid

Exocytosis (movement of material **out** of cell)

Phagocytosis

Cell Drinking

Pinocytosis

Cell Eating

an area of
high
concentration
to an area of
lower

concentration

Diffusion:

Movement of

particles from

<u>Osmosis</u>

Movement of water from high conc. to low concentration through a semi-permeable membrane

Hypotonic

- 1. Low concentration of particles outside the cell (high water outside)
- 2. Water moves inside the cell.
- 3. Cell Swells.

Isotonic

- Concentrations are equal inside and outside of the cell
- 2. No net water movement
- 3. Dynamic Equilibrium

Hypertonic

- High concentration of particles outside cell (low water outside)
- 2. Water moves outside the cell
- 3. Cell Shrinks

CELL TRANSPORT No Energy Energy **PASSIVE TRANSPORT ACTIVE TRANSPORT** (From Concentration) (From _Concentration) **Particles** Water **Endocytosis Exocytosis** (movement of material (movement of Osmosis: a cell) material Movement of **Facilitated** Movement of of cell) water from high Diffusion: solid liguid particles from conc. to low Diffusion using an area of concentration high through a concentration to an area of lower Cell Cell concentration Drinking Eating

Osmosis

Hypotonic

1. Low concentration of particles outside the cell (high water

_____)

2. Water moves ____the cell.

3. Cell _____.

Isotonic

- Concentrations are inside and outside of the cell
- 2. No _____ water movement
- 3. D______ Equilibrium

- High concentration of particles outside cell (low water outside)
- 2. Water moves outside the cell
- 3. Cell _____

Resources

• Click Here to Begin! - 10 question Transport Quiz

• Osmosis virtual lab