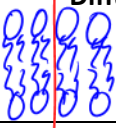


**TRANSPORT ACROSS THE CELL MEMBRANE: SUMMARY TABLE**

**1. PASSIVE WAYS (No energy/ATP required)**

NAME OF PROCESS	DIRECTION	REQUIREMENTS	EXAMPLES
<b>A) Simple Diffusion</b> 	[high] to [low]	- concentration gradient	- small, non-charged lipid soluble molecules - CO <sub>2</sub> , O <sub>2</sub> - alcohol - hormones
<b>B) Facilitated Diffusion</b> (faster)	[high] to [low]	- concentration gradient - carrier protein	- charged molecules - amino acids - ions - glucose
<b>C) Osmosis</b> - aqua pore channel	high [water] to low [water]	- concentration gradient (water)	- water

**2. ACTIVE WAYS (Requires energy/ATP)**

NAME OF PROCESS	DIRECTION	REQUIREMENTS	EXAMPLES
<b>A) Active Transport</b> * mitochondria	[low] to [high]	ATP + carrier protein	- Na <sup>+</sup> /K <sup>+</sup> pump in nerve cells - iodine (thyroid)
<b>B) Endocytosis</b> i. Phagocytosis → solids (large molecules) ii. Pinocytosis → liquids (small molecules)	from outside to inside the cell	- ATP - vesicle	- White Blood Cell (WBC) engulfing bacteria - enzymes taken into a cell
<b>C) Exocytosis</b>	from inside to outside of cell	- ATP - vesicle	any secretory protein