5.2

MEMBRANE TRANSPORT

One of the primary functions of the membrane is to separate the intracellular environment from its extracellular environment. This separation is crucial for the maintenance of the proper conditions for cell function. To perform this important function, the membrane must regulate what enters and leaves the cell. For example, the proper nutrients must be allowed to enter, and wastes must be allowed to leave the cell. Additionally, some things must not be permitted entrance to or exit from the cell. In this section, we will discuss how various substances are moved across the plasma membrane.

Passive vs Active Processes

Watch this Video on Passive Diffusion

Watch this Video on Active Diffusion

Processes that move substances across membranes can be grouped into two general categories based on whether the process requires energy or not. If no energy input is required for the transport, we say particles move via **passive transport**. On the other hand, if the process requires cellular energy, then it is an **active transport** process.

Simple Diffusion

Facilitated Diffusion

Active Transport

Osmosis



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