



How Drug Move through the Body

Receptors

Drugs interact with cell receptors, small parts of proteins that control a multitude of chemical reactions and functions in the body. Receptors have a specific, chemical structure compatible only with certain drugs or endogenous compounds-substances that originate within the body such as hormones and neurotransmitters. This relationship can be compared to that of a lock and key: A drug molecule-the "key"-attaches briefly to its specific receptor-the "lock" that only this molecule can open. The lock-and-key combination of the drug and receptor results in a cascade of chemical events. The extent of the response is determined by the number of receptors activated. Stimulation of only a few receptors may not produce a response while stimulation of a certain number of receptors is needed to produce the desired effect.