

How Opiates Relieve Pain

Opiate (narcotic) drugs work differently than aspirin. Aspirin blocks pain directly at the site of a hurt. Opiate drugs block pain signals that have already entered the central nervous system by preventing the transfer of pain signals from the dorsal horn to the thalamus.

For 2,000 years, drugs of the opiate family have been the most effective pain relievers known. Opiate drugs are made from the juice of the poppy and have been used to treat ailments ranging from pain to shortness of breath to congestive heart failure.

There are specific sites in the spinal cord and brainstem where morphine and similar opiate compounds inhibit the production of pain signals. These are known as 'receptors'. In the spinal cord, morphine directly inhibits the cells responsible for receiving and transmitting pain messages from the skin to the brain. In the brainstem, morphine excites the cells that send messages down to the spinal cord to turn off pain-transmitting cells.