

SUGAR COMA MODEL:

An injection of glucose into the ventrolateral preoptic nucleus (VLPO) of the anterior hypothalamus fuels ATP production in sleep-promoting neurons located in the VLPO. This boost in cellular ATP closes potassium channels (K_{ATP}), leading to neuronal excitation and the onset of sleep. When the VLPO sleep-promoting neurons fire, they inhibit arousal-promoting areas of the brain (inset, orange; sleep-promoting areas in blue). Glucose can also reduce arousal by directly inhibiting orexin-releasing neurons.

