

Regulation of Insulin Secretion by Nerves and Neuropeptides

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Abstract

The pancreatic islets are innervated by sympathetic, parasympathetic and sensory nerves and within the terminals of these nerves several different neurotransmitters are stored, both the classical neurotransmitters, acetylcholine and noradrenaline, and several neuropeptides. The neurotransmitters affect insulin secretion both in a stimulatory and in an inhibitory direction depending on the nervous system activated, the neurotransmitter released and the status of the B cell. This neural regulation of insulin secretion is of importance during various forms of stress as well as during the cephalic phase of food intake.

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