

Peptides and neuropeptides in the stomach and duod

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As with most of the gastrointestinal tract, the endocrine cells of the stomach produce peptide hormones and neurotransmitters. Previously, nerves and endocrine cells were considered distinct in terms of their products. However, it is increasingly realised that there is enormous overlap within these systems. Many peptides recognised as hormones may also be produced by neurones, hence the term neuropeptides. The term 'messenger' can be used to describe all such products. There are three conventional modes of action that overlap. 1 Endocrine. The messenger is secreted into the circulation, where it affects tissues that may be remote from the site of origin. 2 Paracrine. Messengers are produced locally and have Ivan Petrovitch Pavlov, 1849–1936, Professor of Physiology, St Petersburg, Russia. act in this way. 3 Neurocrine (classical neurotransmitter). Messengers are produced by the neurone via the synaptic knob and pass across the synaptic cleft to the target. Many peptide hormones act on the intrinsic nerve plexus of the gut (see Gastrointestinal motor activity) and influence motility. Similarly, neuropeptides may influence the structure and function of the mucosa. Some of these peptides, neurotransmitters and neuropeptides are listed in Table 67.1. The stomach is vital to regulation of appetite and weight control through a combination of mechanical and hormonal mechanisms (see Chapter 68).

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