

# **Neuropeptide Y (NPY) inhibits dimethylphenylpiperazinium(DMPP)-induced gastric acid secretion in isolated rat stomach**

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摘要

## **Abstract**

The effect of neuropeptide Y (NPY) on gastric acid secretion was investigated on an everted preparation of isolated rat stomach. Perfusion with synthetic NPY did not modify the basal secretion of gastric acid. However, NPY reduced dimethylphenylpiperazinium (DMPP)-stimulated acid secretion at concentrations insufficient to affect acid secretion stimulated by muscarine, histamine or gastrin. The decrease in acetylcholine (ACh) release from postganglionic cholinergic neurons by NPY is therefore considered to be responsible. Determination of NPY content by radioimmunoassay, in mucosal and muscular layers of the stomach, indicates that NPY possibly produces cholinergic inhibition under physiological levels. The present study suggests, therefore, that NPY has the ability to inhibit the release of ACh from postganglionic cholinergic neurons, thus producing a decrease in gastric acid secretion.