

**Effect of an antihistamine on histamine release in unanaesthetized dogs /  
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**Publication/Creation**

[Place of publication not identified] : [publisher not identified], [1951?]

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[From the Proceedings of the Physiological Society, 9-10 March 1951.]  
*Journal Physiology*, Vol. 114.

**Effect of an antihistamine on histamine release in unanaesthetized dogs.** By W. D. M. PATON and M. SCHACHTER. *From the National Institute for Medical Research, Mill Hill, N.W. 7*

MacIntosh & Paton (1949) have shown in anaesthetized cats and dogs that a large group of compounds possesses the ability to release tissue histamine. We have used the gastric secretory response of dogs with gastric cannulae as a means of studying histamine liberation in the unanaesthetized animal; and for testing the action of an antihistamine drug on the liberating process, since the effect of histamine on gastric secretion is not sensitive to antihistamines.

The subcutaneous injection of 100 mg. propamidine isethionate or of 10 mg. Compound 48/80 (Burroughs Wellcome) (Paton, 1951) causes the secretion of acid gastric juice in amounts from 20 to 130 ml. N/10-HCl, after 10-20 min. At the same time, oedema and redness of the face and signs of severe itchiness occur. These effects last for 1-2 hr. The volume of gastric juice is roughly equivalent to that produced by 1-2 mg. histamine acid phosphate subcutaneously.

Whereas the signs of itchiness and the facial oedema are almost completely abolished by mepyramine maleate (Neoantergan), in a dose of 2 mg./kg., the gastric secretion is actually somewhat increased. It is concluded that the liberation of histamine by these compounds is not prevented by neoantergan in a dose adequate to block the effects of histamine. The increase in gastric secretion due to a histamine-liberator after neoantergan may be due to the action of the latter in preventing oedema of the gastric mucosa. Neoantergan did not significantly alter the gastric secretory response to injected histamine.

When injections of these histamine-liberators were repeated several times over a period of 1-2 weeks, the gastric secretory response diminished. This may be due to a reduction of the releasable histamine in the tissues.

REFERENCES

MacIntosh, F. C. & Paton, W. D. M. (1949). *J. Physiol.* **109**, 190.  
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