

SYMPOSIUM ON REGULATION OF PITUITARY FUNCTIONS

ABSTRACTS OF PAPERS

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Mutual relations between thymus and hypophysis.

Thymus was partially (14.4%) or totally removed from both male and female Wistar adult rats, and hypophysis was removed after 18-19 days from complete or incomplete thymectomy.

Its weight was found to be significantly higher in thymectomized than in sham-thymectomized female rats; the higher weight of hypophysis is accounted for by an higher water content.

The GH content of thymectomized adult male rats hypophysis is as high as that of sham-thymectomized male rats; it has been found on the contrary to be higher in thymectomized than in sham-thymectomized adult female rats.

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Do enterogen mechanoreceptive impulses contribute to liberation of GH from adenohypophysis?

The lasting enlargement of rat bowel by indigestible cellulose food, as tested, among others, by plentiful tender stools, is followed by a significant increase in GH content of rat pituitary, as tested either by tail relative lengthening, or by body weight gain, when rats were injected i.p. with corresponding doses of suspended aceton dried hypophysis powder.

The impulses from bowel reach probably anterior hypophysis or even hypothalamus by partly at least travelling along paravertebral sympathetic chain and periarterial (carotid a./or vertebral aa.) plexuses, as suggested among others by the significant increase in pituitary GH content, following 15 min lasting electrical stimulation of paravertebral sympathetic chain (Th. IV-X; Ag-AgCl electrodes; square waves; 40 Hz; 10 Volts).