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Further Observations on the Effect of Hypophysectomy on Lactation.

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The removal of the pituitary from a lactating rat leads promptly to a cessation of milk secretion.[1] Immature female rats treated with the anterior-pituitary-like hormone long enough to induce full development of their mammary glands secrete milk when the luteinized ovaries are removed, but not if the pituitary is removed at the same time.[2] These observations seem to support the view of Riddle[3] and others who believe that lactation is controlled by a pituitary hormone, prolactin. Less easily reconciled with this view was the observation[4] that pregnant rats hypophysectomized 10 days before term showed milk secretion for a few hours after parturition. It seemed possible that in these last experiments pituitary function was partly replaced by some stimulus from the pregnant uterus. We found in 10 experiments that if the uterus was emptied by Caesarian section late in pregnancy, lactation set in within 36 hours; similar observations have been made in the guinea pig[5] and the goat.[6] In 6 other experiments, however, in which the pituitary was removed when the uterus was emptied, no milk secretion was observed. This indicates that milk secretion is not possible in the rat if both the fetuses and the pituitary are absent.

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[1] Collip, Selye, and Thomson, *Nature,* 1933, **131**, 56.

[2] Selye, Collip, and Thomson, PROC. SOC. EXP. BIOL. AND MED., 1933, **30**, 588.

[3] Riddle, Bates, and Dykshorn, PROC. SOC. EXP. BIOL. AND MED., 1932, **29**, 1211.

[4] Selye, Collip, and Thomson, PROC. SOC. EXP. BIOL. AND MED., 1933, **30**, 589.

[5] Loeb and Hesselberg, *J. Exp. Med.*, 1917, **25**, 305.

[6] Drummond-Robinson and Asdell, *J. Physiol.*, 1926, **61**, 608.