

Mating Reaction of Hypophysectomized Male Rats Treated with Pregnancy Urine Extracts.

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Adult male rats are known to lose all libido immediately after hypophysectomy (Smith¹), though matings for some time after castration have been reported. Also motile sperm have been demonstrated in the epididymis of hypophysectomized male rats no longer than 21 days after the operation (White²). Complete fertility is restored to hypophysectomized males by giving rat pituitary implants (Smith¹).

Since it was observed that pregnancy urine extract (P.U.) slowed the degenerative changes in the testes of hypophysectomized rats (see previous article), matings were attempted at various times with oestrus females where treatment was begun immediately following the operation. Of 7 hypophysectomized males, 6 mated one or more times. In a total of 25 attempts at mating, 13 were positive and, furthermore, *11 of these were fertile, producing normal litters*. It was most interesting that of these fertile matings some took place 18, 20, 32, 34, and 47 days following hypophysectomy. It was not surprising because of the enlargement of the accessories that matings occurred, but the extended period of fertility was unexpected.

P.U. treatment restored the atrophied genital tract of hypophysectomized males to a degree when treatment was postponed following the operation. *That some hypophyseal factor is necessary and facilitates the restoring of the atrophied germinal epithelium is quite evident from our work, for the restoration secured by the injection of P.U. is not as complete as is the case with implants.* The relationship of P.U. to hypophyseal gonad stimulatory substances becomes even more obscure in the light of the findings reported in this series of papers.

¹ Smith, P. E., *Am. J. Anat.*, 1930, **45**, 205.

² White, W. E., *Anat. Rec.*, 1932, **54**, 253.