

## 10433 P

**Effect of Castration on Body Weight and Length.\***

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(Introduced by J. C. Krantz, Jr.)

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The recent availability of synthetic sex hormones for laboratory and clinical use has aroused new interest in their effect on somatic development. In an attempt to gather data concerning castration effects which could be used for comparison with stimulating or replacement effects of injected hormones, differences of opinion reported in the literature were found to be so striking<sup>1</sup> that it became necessary to establish our own standards for future comparison.

Accordingly, 32 male albino rats of Wistar stock were divided into 2 groups, one of which (16 animals) was castrated at 22 days of age while the other group of 16 served as unoperated controls. All animals were kept under similar conditions.<sup>1</sup> Weekly weights were determined for all animals while the body lengths were estimated (between the tip of the snout and anus) at the time of sacrifice on the 80th day of life. All data were statistically computed. In addition, theoretical body weight according to Formula No. 5 of Donaldson<sup>2</sup> was determined and this was compared with the observed terminal weight.

It was found that the initial body weight of  $38.44 \pm 0.91$  g for the castrates and  $36.00 \pm 1.43$  g for the normals were not significantly different from each other. The final mean body weight of the castrates was  $192.0 \pm 3.85$  g as compared to  $217.88 \pm 3.40$  g for the normal. This difference of  $25.88 \pm 5.09$  g in favor of the normal was probably significant. In addition, the final body length of  $194.1 \pm 1.3$  mm for the castrate as compared to that of the normal,  $205.0 \pm 1.2$  mm, showed a difference of  $10.9 \pm 1.8$  mm in favor of the normal. This, too, was a statistically significant difference.

The ideal final body weights calculated by formula disclosed a figure of  $175.0 \pm 3.85$  g for the castrates which was significantly less by  $17.00 \pm 5.46$  g from the observed weight ( $192.0 \pm 3.85$  g). On the other hand, similar determinations carried out for the normal

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\* The authors acknowledge the cooperation of the Ciba Pharmaceutical Products Company, Inc., for partially defraying the expenses of this study.

<sup>1</sup> Rubinstein, H. S., Abarbanel, A. R., and Kurland, A. A., *Endocrinology*, in press.

<sup>2</sup> Donaldson, H. H., *The Rat*, Wistar Institute of Anatomy and Biology, Philadelphia, 1924.

group disclosed a theoretical final body weight of  $211.40 \pm 3.40$  g. This figure was not significantly different from the observed weight for this group ( $217.88 \pm 3.40$ ).

These observations, namely a suppression of somatic growth as determined by body weight and body length, both of which were significantly inhibited, agree with the recent reports of Commins<sup>3</sup> and Lawless,<sup>4</sup> who also found an inhibition in body weight of castrated males. It may be added, however, that in contrast to the report of Lawless who, on the basis of comparison of body weight-body length ( $W/L^3$ ) ratios concluded that weight and length were proportionately depressed, we feel that body length is affected more than body weight since at 80 days of age the castrate male had become relatively heavy for its smaller body length as determined by the formula of Donaldson.

## 10434

**Absorption and Excretion of Sulfanilamidopyridine  
(2-Para-aminobenzenesulfonamidopyridine).<sup>\*†</sup>**

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This report concerns the absorption and excretion of sulfanilamidopyridine (2-para-aminobenzene sulfonamidopyridine) in 2 normal adult humans, following the oral administration of a single dose of the drug. Such data are of immediate interest since experimental studies,<sup>1, 2</sup> and preliminary clinical reports<sup>3, 4, 5</sup> indicate that sulfanilamidopyridine may be useful in the treatment of pneumococcus infections.

<sup>3</sup> Commins, W. D., *J. Exp. Zool.*, 1932, **63**, 573.

<sup>4</sup> Lawless, J. J., *Anat. Rec.*, 1936, **66**, 455.

<sup>\*</sup> Sulfanilamidopyridine was supplied by Dr. David A. Bryce, The Calco Chemical Company, Bound Brook, New Jersey.

<sup>†</sup> The name of this drug has been officially changed to sulfapyridine.

<sup>1</sup> Whitby, L. E. H., *Lancet*, 1938, **1**, 1210.

<sup>2</sup> Hilles, C., and Schmidt, L. H., *Proc. Soc. Exp. Biol. and Med.*, 1939, **40**, 73.

<sup>3</sup> Telling, M., and Oliver, W. A., *Lancet*, 1938, **1**, 1391.

<sup>4</sup> Evans, G. M., and Gaisford, W. F., *Lancet*, 1938, **2**, 14.

<sup>5</sup> Flippin, H. F., and Pepper, D. S., *Am. J. Med. Sci.*, 1938, **196**, 509.