

The jar was placed in front of the animals at a distance of 2 to 3 inches from its snout. In another half hour there was no secretion of saliva. If at the end of this period the cover was taken off the jar, the animal immediately changed its indifferent attitude, became agitated, began to sniff and to stretch its neck toward the food. Saliva began to flow through the fistula and drip from the mouth at once. In 15 minutes it generally secreted from 0.5 to 2.5 cc. of saliva from the fistula alone. Since all these animals were accustomed to the appearance of the food, it is clear that the dog does not recognize food at sight, and that the natural conditioned reflex or psychic flow of saliva is due to the odor of the food only.

¹ Kleitman, N., and Crisler, G., *Am. J. Physiol.*, 1927, lxxiv, 571.

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Effect of Intraperitoneal Magnesium Sulphate on Parathyroid-ectomized Rats.

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Having been engaged in an experiment which was hampered by the high death rate among thyroparathyroidectomized rats, the authors have developed an exceedingly simple and convenient method for reducing this mortality. This method was suggested by the work of Luckhardt, Waud, and Brannon¹ on the effects of magnesium chloride given *per os* to dogs. The method consists in the intraperitoneal injection of magnesium sulphate. For a rat weighing 150 grams the injection consists of 5 cc. of a 1 per cent solution of the crystalline salt. Experience has shown that asepsis is unnecessary here, so that the dosage can be given to any number of rats with greater speed and accuracy than would be possible by oral administration.

A normal rat can easily tolerate as many as 5 hourly injections of this quantity. After each injection one sees the manifestations of the well-known anesthetic and curare-like actions of magnesium. The rat becomes unable to raise its body off the floor of the cage, and may cease to right itself when laid on its back. If, instead of the divided doses, one gives a single dose of 25 cc., the above symptoms are followed by death.

Parathyroidectomized rats should be watched closely beginning, say, with the tenth or twelfth hour after operation. When the tetany has become sufficiently marked to prove the completeness of parathyroid extirpation, the injection is given. No signs of pain or irritation follow; inactivity, be it due to apathy or myasthenia, sometimes appears within 2 minutes. The signs of tetany, however, seem to persist a few minutes longer; carpopedal spasms, or the characteristic fibrillary activity of the vibrissae, may continue for a time after the rat has become unable to walk. Recovery from the immobilizing effects of the magnesium occurs within an hour, but the freedom from tetany lasts much longer. At first daily injections are necessary, given preferably in the evening, so as to preclude possible attacks of tetany during the night; in less than a week (the rat having survived the stage of acute deficiency) the injections need no longer be given daily.

¹ Luckhardt, Waud, and Brannon, *Am. J. Physiol.*, 1926, lxxvi, 228.