

slight rise in the body temperature. This action is sometimes present after moderately large doses and instead of the anticipated fall there is a rise in the temperature curve with an exaggeration of symptoms already existing. This has been explained by vasomotor changes leading to dilatation of capillaries in the thermogenic centres. Gottlieb's experiments show that while loss of heat is much increased after antipyrine, heat production is likewise stimulated and it is possible therefore to account for these anomalous results by assuming the failure of the former action."

Whitla states that antipyrine produces convulsions in the lower animals, that it paralyses the frog's heart, that it alters the colour of the blood, and that it diminishes heat production by its action "upon the heat centres situated in the corpus striatum."

In this paper the subject will be treated in three divisions:

- (1) Experiments on frogs.
- (2) Experiments on rabbits.
- (3) General observations on the action of the drug.

EXPERIMENTS ON FROGS.

(1) Antipyrine in a toxic dose injected into the dorsal lymph sac causes paralysis. This begins in the posterior extremities and gradually extends forwards. At first the hind legs are dragged when a leap is accomplished but ultimately the frog is perfectly unable to leap at all, and when placed on its back is unable to regain its normal position. Tapping the spine or making a sharp sound will cause a spasmodic kick when voluntary motion is lost.

Spectroscopic examination of the blood gave the distinct bands of oxyhæmoglobin and never those of methæmoglobin.

(2) Sometime after injecting a toxic dose, (a) muscle nerve preparation was made and the muscle curves were taken in the usual way. Both "make" and "break" contractions were obtained, a large "break" and small "make." In half an hour the small contraction had disappeared, and the large though considerably diminished was of a fair size an hour later.

(3) Antipyrine was injected into a frog and preparations were made of both legs. The left was brushed with a normal saline solution and the right with a 4% antipyrine solution. The left gave contractions, but the right gave neither a "make" or "break" curve.

(4) Preparations were made of both legs of a frog to which no antipyrine had been administered. The sciatic nerve of one was allowed to lie for 5 minutes in an antipyrine solution and the other in normal saline. The one treated with antipyrine gave a "make" contraction