

conditions were the same, antipyrine was the agent to which this was due.

II. Incubator Experiments.—The temperature of rabbits was taken and they were put into an incubator and their temperature thus raised artificially by it. These were repeated but with the difference that antipyrine was administered to show if it prevented or checked the rise.

In some cases it seemed to prevent it rising so rapidly or so high but in others it seemed absolutely without any effect.

III. Incubator and Calorimeter Combined.—In this series the temperature was artificially raised and the animal was then put into the calorimeter and the heat given off estimated. The experiment was varied by the administration of antipyrine before putting the rabbit into the calorimeter.

The general conclusions arrived at were that thermogenesis was actually checked.

B.—EXPERIMENTS IN WHICH THERMAL CENTRES WERE DESTROYED.

In such a class of experiment as this it is very difficult indeed to exclude error and fallacy. We have to remember that the shock of the operation itself has a decided effect on the temperature apart from actual destruction of the thermal centres, so it is by no means a simple case of *post hoc ergo propter hoc*. A test experiment was first tried and the conditions were as far as possible maintained the same in all the cases. The skull was trephined and the area of the thermal centres, between and encroaching on the optic thalami and corpora striata, destroyed with a needle. The rabbits were then put into the calorimeter with and without the administration of antipyrine; also into the incubator under like conditions.

It actually did seem as if even then antipyrine diminished the quantity of heat produced, thus the following results were obtained and corroborated on several occasions although not always.

A rabbit's temperature was 100° F. It was put into the calorimeter for an hour and the temperature of 14 litres of water was raised 2° F. while the rabbit's fell from 100° to 84° F.

Antipyrine was then administered and after another hour the water was raised 1° F. and the rabbit's fell 4°.

From this it would appear that 15.5 calories were given off in the first hour and 7.7 calories in the second.

The question arises however, as to whether it was due to heat dissipation or diminished production and how many calories in these cases represent the specific heat of the rabbit.