The pyretogenic effect of lysergic acid diethylamide.

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The administration of lysergic acid diethylamide (LSD) intravenously or subcutaneously to rabbits, cats, and dogs produces a rise in body temperature. Most experiments were carried out on rabbits which proved to be the most responsive. Body temperature was measured rectally with a mercury thermometer. Dose levels ranged between 0.5 and 50 microgm./kg. Maximum rise in temperature occurred at about the end of one hour and the total duration of the effect was six to eight hours.

Measurement of surface temperature of the skin

and ear by means of a McKesson "Dermalor" indicated that the skin temperature did not change whereas the ear temperature fell markedly. The fall of the ear temperature outlasted the rise of the rectal temperature. The effect of LSD on the surface temperature of the ear appears to be unrelated to the pyretogenic effect of LSD.

In an attempt to find a mechanism for the pyretogenic effect of LSD, cervical spinal sections were made in rabbits. This abolished the pyretogenic effect. The administration of d-tubocurarine or sodium pentobarbital also abolished the pyretogenic effect. The administration of antipyrine, Dibenamine, dihydroergotamine, or Hydergine did not modify the effect of LSD. The administration of morphine augmented the pyretogenic effect of LSD. There is an indication that the pyretogenic effect is central in origin.