

Histological study of these corpora lutea, however, show conclusively that ovulation did not occur, and that the corpora lutea produced by the injection of urine from pregnant women are the result of lutein transformation of corpora hemorrhagica with retained ova. Nevertheless, the clear differentiation between the effects of urine of pregnant women, and the urine of non-pregnant women, and the ease with which these effects can be seen by purely gross examination, justifies further study on a statistical basis to determine whether or not this procedure will be of clinical use in the diagnosis of pregnancy.

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### Some Pharmacological Reactions of Benzothiazole.

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(Introduced by Israel S. Kleiner.)

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Benzothiazole was prepared according to the method of Bogert and Stull,<sup>1</sup> by condensing o-amino thiophenol hydrochloride with formaldehyde. The constant boiling point of 231° C. corresponded with that given in the literature.

Owing to the fact that many compounds containing reduced or divalent sulfur are physiologically active, it seemed worth while to test the pharmacological action of this base. Accordingly, experiments of 2 types were performed; namely, cutaneous and intravenous tests.

In the cutaneous tests, a minute droplet of the oil was placed on the unbroken skin of the forearms of women and of men. Forty per cent of the number tested (43) developed a local dermatitis: the redness, swelling, and violent itching involving an area of at least 2 sq. cm. In the attempt to correlate these positive findings with various factors, it was observed that blondes seemed to be more susceptible than brunettes, but that sex apparently played no part. Two remarkable phenomena were noted; namely, delayed reactions, and increased hypersensitivity with repeated application. In most of the cases, the reaction appeared in from 2 to 18 days after the oil had been applied (average 9½ days), and in many it reappeared after

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<sup>1</sup> Dissertation of Stull, 1925.

having subsided for a few days. In one case, the application of the drug to the right wrist after the reaction on the left wrist had partly subsided caused, in addition to a direct reaction, a highly intensified recurrence of the original reaction of the left wrist.

For the intravenous administration, the benzothiazole was emulsified in saline or in an autogenous serum. Injection into cats caused a marked fall in blood pressure, with an increase in the pulse rate. The effect on the respiration varied, depending on the dosage. A small dose sometimes caused an increase in both the rate and the amplitude, while larger doses usually had the opposite effect.

Approximately 100 mg. per kilo. of body weight, administered in a single dose, intravenously, constitute the minimum lethal dose for a cat. If this total amount be given in several small injections, it is not always fatal; but if divided into 2 or 3 large doses, it is usually lethal. In every animal, the respiration ceased a few minutes before the heart stopped beating.

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### Effect of Respiratory Depressants on the Respiratory Quotient of Excised Tissue.

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We have investigated the effect of various depressants of the oxygen consumption of excised kidney tissue of the rat in the Warburg apparatus.

Table I gives the oxygen consumption and the respiratory quotients, and Table II the calculated effect on carbohydrate and fat using the Zuntz-Schumburg-Lusk table.

With the depression of oxygen consumption there was an elevation of quotient in 9 out of 11 observations. Analysis of these data indicates that the oxidation of fat is interfered with more than that of carbohydrate. This is in contrast to the situation in diabetes where the primary injury is to the oxidation of carbohydrate.

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