maxima and short sharp minima—likewise with no regular period. The variation in intensity is about 40 per cent., after the light from the rings has been eliminated.

Jupiter, Uranus, and Neptune, on the contrary, show a regular periodicity in their light variations; that is, after a certain interval of time, the period, they always return to the same brightness. The length of the period is with Jupiter 11.6, with Uranus 8.4, with Neptune 21 years. The variation in brightness is for each about 25 per cent.

Jupiter and Saturn show easily discernible changes in appearance that run parallel with the light variations. In the telescope Jupiter appears to be crossed by a number of parallel cloud belts, the central one of which follows the equator. During a brightness-maximum the equatorial and northern belts are reddish brown, the southern belts white. During a minimum the colors are reversed, the equatorial and northern belts being (*Turn to Page* 222)

PHARMACOLOGY

## Drug Given in Childbirth May Poison Baby

SUCH DRUGS as veronal and amytal when given to relieve the pain of childbirth may pass from the mother to the baby and poison the latter. Evidence of this was presented by James M. Dille, of Georgetown University School of Medicine, at the meeting of the American Physiological Society in New York City.

Obstetricians observing the condition of babies whose mothers had been given these drugs have reported conflicting views. Some found the babies were normal, others found the babies showed they had been poisoned by the drug.

The question appears to have been settled by the investigations Mr. Dille made on animals. Using a very exact method of determining the presence of these drugs, Mr. Dille was able to detect relatively large amounts of amytal or veronal or barbital in the unborn offspring of guinea pigs, rabbits and cats which had received doses of the pain-relieving drugs or sleeping powders. In some of the offspring he found almost enough of the drug to produce anesthesia.

"The conclusion to be drawn from these results," Mr. Dille said, "is that these drugs must be used with greater care and caution in the practice of obstetrics."

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MEDICINE

# Research Finds Four Glands Concerned With Diabetes

### Disease is Not Just a Matter of Sugar and Insulin; It is Influenced by Thyroid, Adrenals and Pituitary

DIABETES, a death-warrant disease until the discovery of insulin about a decade ago, is not merely a matter of the proper functioning within our bodies of the pancreas in which insulin is manufactured.

Other glands of internal secretion, the thyroid, the adrenals and the pituitary, play their parts in causing and preventing that disease of surplus sweetness. Dr. B. O. Barnes of the University of Chicago told at the meeting of the American Physiological Society in New York how these glands are interrelated.

For many years diabetes has been considered primarily a disease of the pancreas with its insulin-producing islands of Langerhans. During the last few years evidence has been accumulating that some of the other glands of internal secretion might also be involved, Dr. Barnes explained. For instance, experimentally-produced diabetes may be markedly improved by removal of the pituitary gland. This small structure located deep within the head has an important influence over growth and sex.

The thyroid also plays a part in diabetes. If a diabetic patient develops Graves' disease, due to overactivity of the thyroid gland, the diabetes becomes worse. Latest experiments now show that this effect is the result of the thyroid acting through the pituitary gland. When both pancreas and pituitary are removed, a mild diabetes occurs which is not aggravated by giving thyroid extract.

Just as removal of the pituitary improves the experimentally-produced diabetes in dogs, removal of part of the adrenal glands causes an improvement in the diabetic condition. It now appears that the pituitary may exert its influence on diabetes by acting through the adrenals, as the thyroid acts through the pituitary.

Considerable more experimental work must be done before these observations can be applied in the treatment of human diabetics, Dr. Barnes said, but these latest discoveries have led to better knowledge of the long-suspected interrelationship between the glands.

Research that sheds light on how the sugar-utilizing mechanism of the body breaks down in the absence of insulin, with diabetes resulting, was reported by Drs. C. N. H. Long, F. D. W. Lukens and Edith G. Fry of the University of Pennsylvania at the meeting of the Sosiety of Biological Chemists. After exercise uses some of the body's store of sugar, glycogen, which is the form in which sugar is stored, is rebuilt from lactic acid. This process goes on in the diabetic as well as in the normal animal, but at a much slower rate.

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CHEMISTRY

## New Antiseptic Found For Use Against Bacteria

AZOCHLORAMID, a new chlorine-containing antiseptic highly soluble in water and most other solvents, was described before the American Chemical Society by Dr. Franz C. Schmelkes and Henry C. Marks, industrial chemists of Belleville, N. J. They stated that it is highly stable, not being easily destroyed by heat, nor chemically weakened by substances that usually greedily seize upon chlorine-containing compounds. Blood serum and similar organic substances are especially troublesome in that way, weakening other antiseptics when they are used against bacteria. It was for germ-killing in the presence of such organic stuffs that the new chemical was suggested.

For the benefit of those who may think the name Azochloramid is a bit of a jaw-breaker, it might be mentioned that this is just a sort of shorthand title, conferred for convenience. The correct name, which in itself describes to the organic chemist exactly what is in the compound and how it is put together, is N-N-Dichloroazodicarbonamidine.

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