

BIOCHEMISTRY

Detect Pancreas Cancer

► A SIMPLE starch test for showing disease, especially diffuse cancer, of the pancreas was announced by Drs. Theodore L. Althausen and Kahn Uyeyama of the University of California School of Medicine, San Francisco, at the meeting of the American College of Physicians in Chicago.

The test is based on the assumption that amylase, one of the digestive enzymes of the pancreas, plays an important part in breaking down starch in the small intestine, and that the rate of digestion of a starch meal can be estimated by the rise in blood sugar that follows.

In the test, patients drink a solution of a specially prepared starch. The blood is tested for sugar content during the next three hours. The greatest rise in blood sugar is compared to that following consumption of an equivalent amount of sugar (glucose).

In normal persons, the California doctors found, the mean rise in blood sugar after glucose was 14% greater than after starch.

In 23 patients with chronic disease of the pancreas, however, the mean maximum rise in blood sugar was 234% higher after glucose than after starch.

In five patients suffering from diffuse cancer of the pancreas, the difference was even more pronounced. The rise in blood sugar averaged 342% higher after glucose than after starch.

In 10 patients with suspected disease of the pancreas, the rise was 112% higher after glucose than starch but only five of these patients had a difference of over 100%.

In two patients after surgical removal of most of the pancreas, which resulted in apparent recovery of the patients, the starch tolerance test was normal several months after the operation.

The pancreas, sometimes called the sweetbread, contains the islands of Langerhans which produce insulin and which are affected in diabetes, failing to produce enough insulin for proper handling of sugar. But the presence of diabetes did not interfere with the results of the starch tolerance test for other disease of the pancreas, such as cancer.

The new test, the California doctors report, compares favorably with several more complicated tests of pancreas function.

Science News Letter, April 17, 1954

MEDICINE

Polio Vaccine Safe

► PARENTS WHO want polio vaccine trials to be put on in their community, with the chance of their children getting polio protection this season, may defeat their own wish by raising too much excitement about the vaccine safety question.

The U. S. Public Health Service and the National Foundation for Infantile Paralysis have declared that only safe vaccine, made from definitely killed viruses, will be used.

If tests by the Public Health Service's National Institutes of Health, vaccine manufacturers and Dr. Jonas Salk of Pittsburgh show live virus in a particular batch of vaccine, that batch will be discarded and not used.

However, time for vaccinating is growing short. The vaccine cannot be properly tried as a polio preventive unless given before the polio epidemic season starts. Once the season starts, it would be hard to know whether a child got extra polio-fighting antibodies in his blood from the vaccine, or from small amounts of polio virus that got into his body because there was so much of it in his community. And, of course, unless the vaccine had been given in time to call up plenty of antibodies, it might not do any good in protecting the child.

In planning the vaccine trials, it has been decided that if an epidemic starts in an area selected for vaccinating, the trials may be called off by the State Health Officer on the basis of the situation at the time.

If many parents get worried about the vaccine's safety, the time needed to reassure them may cause enough delay to put their area into the no-trials class because polio had already gotten into an epidemic or near-epidemic stage.

Difficulties in transferring Dr. Salk's laboratory scale vaccine production methods to large scale manufacturing have already delayed the start of the trials by at least two months. Originally scheduled to start early in February, they are now expected to start about mid-April.

Questions to be answered are:

Will the vaccine protect children?

Can the trials this season be staged in a way to show its value?

Dr. Salk, who developed the vaccine, and the National Foundation seem confident the answer to the first question is yes. On the second, the unforeseeable delays may be making them wonder.

Science News Letter, April 17, 1954

PSYCHOLOGY

Girls "See" the Average At a Glance, No Figuring

► IT IS possible to look at pins appearing one after another along a plain background and tell with "considerable accuracy" where the average (mean) pin was located. It is also possible to give a reasonably accurate

estimate of the middle location, what statisticians call the median.

This ability of the mind, called by the discoverers "subjective statistics," was reported to the Eastern Psychological Association meeting in New York by Drs. H. H. Corbin, James L. Morey and Mrs. Barbara V. Parshley of Mount Holyoke College, University of Utah, and Hanover, N. H., respectively.

It was found in experiments with ten college girls. Their judgments of the median are quite regular, it was found, and lie between the actual median and the actual mean. Judgments of the mean are also regular and lie considerably closer to the actual mean than to the actual median.

Science News Letter, April 17, 1954

Questions

ASTROPHYSICS—What is the source of the yellow corona line in the sun? p. 245.


HERPETOLOGY—How does a rattle snake's rattle indicate temperature? p. 247.

MEDICINE—How do scientists now know that cancer cells grown in a test tube are still human? p. 245.

NUTRITION—Why should doctors first try themselves diets they prescribe for patients? p. 249.

TECHNOLOGY—What industrial uses are now being made of bagasse? p. 250.

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