MEDICINE

UCLA Doctors Report Measles Vaccine Possible

➤ THE POSSIBILITY of an effective vaccine for regular measles has been reported by investigators at the University of California, Los Angeles, Medical School.

Drs. John M. Adams, David T. Imagawa, Stanley W. Wright and George Tarjan announced the results of a vaccine made from live distemper virus cultivated in chicken eggs.

Two hundred individuals at a state hospital were inoculated with the vaccine. For comparison, a control group of 200 received flu shots, another group of 200 were given mumps vaccine, and 1,400 who were not vaccinated served as a third control group.

Almost three years later an epidemic of measles occurred in the hospital afflicting more than ten percent of the patient population. More than three times as many cases occurred in the unvaccinated or control groups as occurred in the vaccinated patients.

The significance of this result is not yet established, the scientists cautiously stated. However, the results appear promising in light of the fact that the first test of immunity occurred almost three years following but a single inoculation of the vaccine. The odds of this threefold reduction happening by chance are 25 to one, they noted. A series of shots and perhaps periodic booster shots might afford better protection.

Dr. Adams emphasized the need for effective measles immunization. He pointed out that while measles is generally thought of as a not too serious childhood disease, it is in fact a serious problem.

"Last year there were more than twice as many deaths resulting from measles as from polio," he said. "Measles encephalitis is not common, but about 50% of all victims of this complication suffer permanent brain damage."

Science News Letter, April 4, 1959

MEDICINE

Uterine Cancer Deaths Cut in Half

➤ THE NUMBER of deaths caused by cancer of the uterus has been cut virtually in half within the past ten years, a radiologist has reported.

Within the past 30 years the percentage of women surviving cancer of the neck of the womb for five years or more has risen about threefold, Dr. Howard B. Hunt, professor of radiology at the University of Nebraska College of Medicine, said.

Dr. Hunt said the Nebraska death rate from cancer of the uterus has fallen from 11.5 per 100,000 population in 1944-48 to 6.6 during 1954-57. Although his statistics represented morbidity and mortality rates for that state alone, they are presumed to be generally representative of most of the United States.

He explained this marked improvement was due to earlier diagnosis, surgical removal or X-ray destruction of pre-cancerous lesions, making it impossible for the disease to develop, and better treatment.

Bleeding between periods or after the change of life, or development of vaginal discharge signals the need for a careful pelvic examination, Dr. Hunt emphasized. He spoke to a group attending the Seventh Annual Cancer Seminar in Phoenix, Ariz., sponsored by the Arizona Division of the American Cancer Society.

Pre-malignant changes and in situ cancers in their earliest stage are being detected by routine pelvic examination and smear studies, particularly in those women past 35 who have borne children, he added.

Overall, the improvement in survival is the result of more women reporting to their doctor with curable lesions and improved methods of treatment, both radiological and surgical, he concluded.

Science News Letter, April 4, 1959

MEDICINE

"Neglected" Type of Fats Cause in Heart Disease

➤ A COMMON type of fat that has long been neglected is suspected as a possible cause of coronary artery disease.

The common fat is one of the so-called neutral fats or triglycerides. These are the chief constituents of common fats in food and in the body's fat tissue.

Studies to date indicate some error in the manner by which the body manages this fat may be the most important abnormality in coronory artery disease, more so than the way the body handles the better known type of fatty material called cholesterol.

Dr. Margaret J. Albrink, Yale University Medical School, is studying 100 patients. If her initial findings are borne out by further study, abnormal triglyceride levels in the blood might serve as an indication that a person will later have problems with atherosclerosis, thickening of the arteries that underlies most heart attacks.

In addition, if Dr. Albrink is correct in suspecting the common fat, the usefulness of low fat diets in the treatment of atherosclerosis would become doubtful.

The study of the influence of triglycerides on heart disease has been neglected because methods to determine their presence in the blood are cumbersome, difficult and often inaccurate.

However, some of these obstacles have been overcome by a new measuring method developed by Dr. Albrink.

In a recent interview, she said that determination of triglycerides in a person's blood may be more significant than the determination of cholesterol. An abnormal level of cholesterol in the blood is used by many doctors as an index of suspicion in atherosclerosis although many others feel this is unjustifiable.

In one study, reported on earlier, Dr. Albrink found that most of 82 men who had suffered a heart attack had normal cholesterol levels in the blood. However, two-thirds had abnormal levels of triglycerides.

Science News Letter, April 4, 1959

IN SCIENC

GENERAL SCIENCE

Closed-Circuit Television Links Medical Schools

➤ COURSES ARE being given simultaneously at five medical schools over closed-circuit television.

This first in medical education will allow 1,300 students to share the knowledge of leading specialists without leaving their own school auditoriums. It will save valuable time for specialists who otherwise would have to repeat their lectures at each of the five schools.

The color telecasts are being received on screens as large as four and one-fourth feet by six feet. A telephone hook-up lets students relay questions directly to the lecturer through a moderator at each school.

The schools, all in Philadelphia, are the University of Pennsylvania School of Medicine, Jefferson Medical College, Temple University School of Medicine, Hahnemann Medical College and Woman's Medical College of Pennsylvania.

The first series of lectures is being given by Dr. Joseph W. Spelman, medical examiner for the city of Philadelphia. The programs will be produced by the Smith Kline & French Laboratories of Philadelphia.

Science News Letter, April 4, 1959

BIOLOGY

White Blood Cells Are Born Large, Grow Small

➤ WHITE BLOOD cells are born full-sized and grow smaller as they age, and finally disappear.

This was discovered by Drs. N. B. Everett of the University of Washington, J. M. Yoffey of The University, Bristol, England, and W. O. Reinhardt of the University of California, Berkeley.

The scientists traced the development of white blood cells in guinea pigs by injecting the animals with radioactive tracers.

They found that within 30 minutes after the injections radioactive white cells began appearing in the blood-manufacturing lymphatic tissues. The cells then quickly moved into the bloodstream to perform their normal function of keeping the blood clear of foreign matter.

About an hour after the injections, it was discovered the cells were dividing, and, unlike most other cells which divide and grow, they remained half-sized. The second generation white cells were found to divide into still smaller cells. There was no further reproduction and the smallest cells eventually disappeared in an unknown way.

The American Cancer Society reported the research which the U. S. Public Health Service supported.

Science News Letter, April 4, 1959

E FIELDS

MEDICINE

Urge Indicating Drugs On Prescription Labels

➤ PHARMACISTS should put the names or ingredients of prescribed medicines on prescription labels when the doctor sees fit, the American Medical Association suggests.

In an editorial in its *Journal* (March 21) the AMA says, "it is suggested that with a somewhat larger section of the public than in former days the naming of drugs on prescription labels will work for good rather than for harm."

Reasons for listing the name of the drug on the label are that other doctors may be consulted by the patient, and even the original prescriber may be unable to recall or find a record of the precise medication he prescribed. Furthermore, identification of the drug may become urgent in emergencies involving accidental poisoning, overdosage, or attempted suicide. Learning the exact identity of the drug might be further delayed if the pharmacy were closed.

Such labeling would also aid the patient who might be out of town when obliged to consult an alternate physician for a refill of a prescription that could be determined only by contacting the office of the prescribing doctor or the dispensing pharmacy.

But the AMA carefully points out that there were cases where naming the medicine might be unwise. These cases might include patients with mental disturbances.

Science News Letter, April 4, 1959

MEDICINE

UCLA Specialists Propose New Syphilis Approach

➤ A NEW APPROACH to the serological diagnosis of syphilis has been proposed by a group of specialists at the University of California, Los Angeles, Medical School.

They are Drs. Charles M. Carpenter, Ruth A. Boak and James N. Miller who point to a national concern for the increasing venereal disease problem, complicated by false positive Wassermann tests.

The approach utilizes three procedures:

1. The standard serologic tests for syphilis (STS). If the STS are negative and there is no history or clinical evidence of syphilis, the patient is considered to be noninfected.

2. The Reiter Protein Complement Fixation test (RPCF), a new test employing a spirochete protein. It is carried out twice for accuracy on individuals who have a positive STS. If the RPCF test is also positive, treatment for syphilis should begin immediately if adequate treatment has not been previously administered.

3. The Treponema Pallidum Immobilization test (TPI), which utilizes living spirochetes obtained from experimentally infected rabbits and is the most specific and sensitive test for syphilis. The TPI is used on patients with the positive STS and a negative RPCF.

A negative TPI test is accepted as proof that the patient does not have syphilis and confirms the falsity of the STS. But if it is positive, patients are diagnosed as having or having had the disease. Again treatment is dependent upon the patient's previous record of therapy.

The UCLA plan eliminates the second step now employed by most Public Health Laboratories—the Cardiolipin Kolmer test, which uses an extract of beef heart and is therefore no more specific than the other STS.

It also eliminates the need of the more expensive and technically difficult TPI test, available in only a few laboratories throughout the world, for those who are positive in the relatively simple and inexpensive RCPF test.

Science News Letter, April 4, 1959

MEDICINE

Achieve First Successful Treatment of Rare Disease

➤ A 31-YEAR-OLD woman wrinkled her brow. It was a historic moment. It meant that another formerly invincible disease was beginning to wilt under the attack of medical science.

The disease is called acrosclerosis. Not as widespread as cancer and heart diseases, it nevertheless is the source of wretched misery and pain to the unfortunate few afflicted.

Skin over the arms, chest, neck and face becomes red, leathery, hard and tight. The patient is unable to wrinkle his brow or smile, if he can find a reason to smile. Hands swell and grow stiff and ulcers develop on the fingertips and elbows. Some muscles are rigid. A kind of arthritis cripples the joints.

Dr. James Price, a clinical pathologist at the University of Wisconsin, working under an American Cancer Society lifetime grant, found a useful drug as a by-product of his metabolic studies.

The drug is called EDTA (ethylenediamine tetra-acetic acid). It is one of a group of chelating agents, compounds having the ability to wrench unwanted metals out of body chemicals.

In acrosclerosis, some metabolic disturbance induces large deposits of calcium and perhaps other metals in body tisues. These deposits cause all of the disease symptoms.

Dr. Price, together with dermatologists John G. Rukavina, Sture A. M. Johnson and Charles Mendelson and biochemist R. R. Brown, all of the University of Wisconsin, tried EDTA, which leaches calcium, on their first patient some 30 months ago. After a week and a half of treatment, the woman achieved her historic wrinkle. The only reminder of her disease today is a tenderness in her wrists.

Six patients have been treated to date, and all have been helped in varying degrees.

Science News Letter, April 4, 1959

MEDICINE

Test Detects Carriers Of Infant Disease

➤ VICTIMS of the often-fatal infants' disease galactosemia can now be helped, a team of researchers has reported.

A test has been developed for detecting carriers of the disease which is inherited. Galactosemia is seldom noted but this may be because it is difficult to diagnose and is often mistaken for other diseases, said Dr. Roger G. Hansen, head of the Michigan State University agricultural chemistry department.

Galactosemia is caused by a lack of the enzyme transferase. This enzyme is needed to change galactose, found in milk sugar, into glucose, a sugar the body can use.

Victims can be saved if the disease is diagnosed early and milk is taken from their diets.

Diarrhea, lack of appetite, loss of weight and jaundice are among the first signs that galactose is accumulating in the body. Enlargement of the liver, eye cataracts, mental retardation and death may follow.

By finding a way to measure the amount of transferase in an individual's blood, Dr. Hansen and Roger K. Bretthauer, a graduate student at MSU, have discovered that carriers of the disease have approximately one-half the transferase a normal person has. It is believed that carriers have recessive genes responsible for the condition.

Drs. George Donnell and W. R. Bergren, pediatricians at Children's Hospital, Los Angeles, cooperated in the study. Details of the report prepared by the four researchers appear in *Proceedings of the National Academy of Sciences.*

Science News Letter, April 4, 1959

ANTHROPOLOGY

Apple Corer May Be Oldest Human Tool

➤ THE HUMBLE and familiar apple corer may have had the lengthiest run of any device contrived by human intelligence, Dr. Raymond A. Dart of the University of Witwatersrand reports from Johannesburg, Union of South Africa. Such tools have been in use for some quarter of a million years.

Dr. Dart had dug up some scoop-like cannon bones (the lower leg bone of a hoofed animal) among the remains of the ancient man-apes, the Australopithecines. At first he was puzzled as to the possible use of these ancient tools. But a visitor showed him a very similar scoop made from the cannon bone of a sheep in Herefordshire, England, in 1890.

This device, the visitor said, was an apple corer made for elderly people who had lost their teeth so they could scoop out the core and then the meat of an apple for easy eating.

This kind of use for the feeding of flesh and pulp to babies and the aged gave the ancient instruments such a smooth surface that they look as if they had been oiled and polished, Dr. Dart reports in *Nature* (March 21).

Science News Letter, April 4, 1959