

MEDICINE

Syphilis Treatment With Mapharsen Is Safer

SYPHILIS can be treated with greater safety and fewer toxic reactions when mapharsen is used instead of neoarsphenamine, Dr. Edward A. Levin and Dr. Frances Keddie, of the University of California Medical School, found in reviewing records of over 15,000 patients.

Only six deaths have been reported from use of this drug, although over 12,000,000 doses have been manufactured and distributed, the California doctors report (*Journal, American Medical Association*, Jan. 31).

Reports from the U. S. Navy show no deaths in 121,689 injections of mapharsen, but 49 deaths in 1,301,913 injections of neoarsphenamine. Non-fatal reactions were also many fewer with mapharsen than with neoarsphenamine.

The deathrate following mapharsen, reports in medical literature show, is less than one-half that of neoarsphenamine.

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PSYCHOLOGY

Rats Bite Their Nails When Faced With Dilemma

ARAT may bite his nails, too, when he is faced with a problem that is too difficult for him.

An animal that developed this nervous habit when forced to jump in a situation where he couldn't tell the right jump from one leading to punishment is described by Drs. B. H. Sampson and T. C. Schneirla, of New York University (*Journal of Comparative Psychology*, December).

The animal did not actually bite his nails entirely off, but he did shorten them and the nail-biting was "energetically performed," the scientists report.

The rat, called by coincidence the same name as the "morale vitamin", B₁, had previously learned to distinguish between a black card containing a white circle and another card that was white with a black circle. He would jump to the white card and be rewarded.

Then the cards were changed in shade to be more alike and make the problem more difficult. But if the rat hesitated more than a minute, a strong blast of air was blown at him until he jumped.

The mental strain of this coercion coupled with the difficulty of the problem was too much for B₁. He started biting his nails.

Other rats have been observed to bite

their nails under similar difficulties, but in these others it has not been persistent, the psychologists report.

Science News Letter, February 7, 1942

PSYCHOLOGY

Personality Will Not Disclose Brain Injury

PERSONALITY traits cannot be relied upon by physicians as a means of diagnosing brain injuries, Dr. Olga Bridgman, psychologist and specialist in child diseases, has concluded from a study of children who were brain injured at birth.

The 123 children studied by Dr. Bridgman at the University of California Hospital during the past five years were so injured at birth that they suffered from the peculiarly hopeless type of paralysis known to physicians as "spastic."

Despite their serious physical and mental handicaps, they nevertheless differed widely in personality, Dr. Bridgman found. Some were shy, some friendly, some aggressive. And each had his own predominating mood—happy, unhappy or contented.

Science News Letter, February 7, 1942

PUBLIC HEALTH—RESOURCES

Hemp Will Be Grown, But Bureau Will Police Areas

HEMP growing in the United States, which the U. S. Bureau of Narcotics has tried to stop in order to prevent marijuana addiction, is now apparently going to be allowed and even encouraged as a result of the war.

This is seen from a War Production Board order prohibiting the use of domestically produced hemp seed for any purpose except the growing of hemp fiber or the growing of additional hemp seed. The officially stated reason is to conserve and increase the domestic hemp supply. In the past the bulk of this country's hemp requirements for rope and sacking have come from the Philippines.

The Bureau of Narcotics, however, will police the areas where the hemp is produced, Commissioner H. J. Anslinger states. He believes that through cooperation with federal, state and local authorities, it will be possible to control the hemp growing so that none will be diverted to the making of "reefers" or any other form in which it could contribute to narcotic drug addiction.

Science News Letter, February 7, 1942

IN SCIEN

SEISMOLOGY

Severe Earthquake Off Coast of New Guinea

THE Netherlands Indies have been visited by a severe earthquake—as if Japs weren't enough. News of the shock was relayed by the earth's core itself to American seismological observatories, which reported to Science Service. The quake centered somewhere near the eastern shore of Geelvink Bay, a deep indentation on the northern coast of the Netherlands half of New Guinea, in approximately 3 degrees south latitude, 137 degrees east longitude. This location is about 1,200 miles east of battle-blasted Macassar strait.

The earthquake began at 10:29.4 p.m. (New Guinea time) on Tuesday, Jan. 27. Transmission and decoding of data were delayed by wartime conditions.

Observations were made at St. Louis University, Utah State College at Logan, the Pasadena Seismological Observatory, and the observatories of the U. S. Coast and Geodetic Survey at College, Alaska, Tucson, Ariz., and San Juan, P. R.

Science News Letter, February 7, 1942

NUTRITION

Pneumonia Susceptibility Affected by Diet

NEW evidence that vitamins play an important part in building resistance to germ diseases such as pneumonia appears in a report from Jerald G. Wooley and Dr. W. H. Sebrell, of the U. S. National Institute of Health.

Susceptibility to fatal infection with Type I pneumonia germs is greater, in mice at least, when the daily diet does not contain enough of the two B vitamins, the morale vitamin B₁ and riboflavin, these scientists find. Details of their experiments appear in the current issue of *Public Health Reports*.

The mice had been on short rations of these two vitamins for some little time before pneumonia germs were dropped into their noses. Attempts to ward off the infection by increasing the vitamin rations after the germs had been introduced into the animals' noses were unsuccessful.

Science News Letter, February 7, 1942

CE FIELDS

AERONAUTICS

German Bumper on Bombers Considered Clumsy Device

GERMAN clumsiness when it comes to devising some of the gadgets of war is shown, according to the British aviation journal, *Flight*, by the way they have attempted to meet the problem imposed by the sort of heavenly wire entanglements dangled by barrage balloons.

Heinkel bombers are now being cumbered with huge fend-off bars like automobile bumpers or cow-catchers that weigh several hundreds of pounds and which do not serve to cut the wires at that.

"What happens to the c.g. (center of gravity) and bomb load with all this weight projecting in front can be guessed," the journal comments.

By contrast, *Flight* shows a close-up photograph of the neat wire cutters the British Avro Manchester has set into the leading edge of the plane.

With either the British or the German type of gadget, however, de-icing of the leading edge of the plane becomes a serious problem, the journal points out.

Science News Letter, February 7, 1942

ARCHAEOLOGY

Quivira Province Located In Southern Kansas

GOLD-GLEAMING cities of Quivira, whose mythical promise lured Coronado's exploring army from Mexico far up into the Great Plains 400 years ago, were in reality humble straw-built huts of Wichita Indians in what is now central and southern Kansas, it appears from a new Smithsonian Institution report, based on researches by Dr. Waldo R. Wedel, U. S. National Museum archaeologist.

This elusive province, long sought by historians and archaeologists, was in the valley of the Arkansas river, Dr. Wedel believes. Excavations on old sites of human occupation in that area indicate that the Indians there had direct or indirect contact with white men, for scraps of chain mail, such as the armored warriors of Coronado wore, have been

found, mingled with scraps of Indian pottery, stone and bone tools and weapons and other remains. Other finds of European origin include glass beads and an iron ax blade.

Further evidence of trade contacts with tribes to the southwest are found in such things as turquoise, obsidian and pieces of painted glazed pottery. It was among Southwestern Indians who produced such goods that Coronado heard tales of the fabulous wealth of "Gran Quivira," far beyond the ever-receding northeastern horizon.

The protohistoric "Quivirans," Dr. Wedel's researches show, were farmers, whose principal crops were corn, beans and squashes. They cultivated the rich black soil with hoes made from bison shoulder-blades. They obtained meat by hunting bison, antelope and smaller animals. Timber-strips along the streams afforded a variety of fruit and berries, especially grapes, plums and mulberries.

Science News Letter, February 7, 1942

MEDICINE

New Quick Method of Testing Blood Group

A NEW, quick method of determining a patient's blood group before transfusion is reported by Dr. William Thalheimer and Dr. Sophronia A. Myron, of the Manhattan Convalescent Serum Laboratory and the New York City Health Department laboratories (*Journal, American Medical Association, Jan 31*).

With this method, an intern or technician can determine the patient's blood group in from five to 30 seconds. The test is made on a card or paper which becomes a permanent record that can be attached to the patient's hospital history.

The test resulted from the discovery of the New York doctors that blood group specific isoagglutinins for determining blood types can be greatly concentrated. These isoagglutinins are the substances in blood serum which make red blood cells of another person's blood clump together if the two do not have the same type of blood.

It is difficult to get large amounts of group A and B serums suitable for determining blood groups because relatively few people in groups A and B have high concentrations of these isoagglutinins. By using chemical methods for concentrating the agglutinins, a satisfactory preparation can be easily obtained for blood grouping. This preparation is used in the new, quick and permanent test.

Science News Letter, February 7, 1942

AERONAUTICS

Jet-Propelled Airplane Tested in Italy

THE WORLD'S first propellerless, jet-driven airplane has been built and tested in Italy, it is stated in a late-December issue of the British aviation journal, *The Aeroplane*. The craft, invention of an Italian engineer named Secondo Campini, takes in air through a large opening in its nose, compresses and heats it in a tunnel passing through the fuselage, and expels it in a powerful jet through the tail. It thus acts on a rocket-like principle, though properly speaking it is not a rocket-plane. In a rocket, the propelling jet is furnished by the rush of gases from the combustion of the fuel itself.

The Campini jet-propelled aircraft, which weighs about 11,000 pounds, flew from Milan to Rome in 2¼ hours, at an average speed of about 130 miles an hour. Since this is a pioneer model, high speeds were not attempted. Jet propulsion, however, does aim ultimately at higher speeds. The inventor believes that the upper limit of speeds possible to screw-propelled aircraft has been about reached, and that if higher velocities are to be attained radically new principles of propulsion must be worked out.

Science News Letter, February 7, 1942

PUBLIC HEALTH

AMA Urged to Set Up Contraceptives Standards

THE American Medical Association is urged to set up standards for contraceptives, as it already has for drugs and foods, in a report on three birth-control clinics in New York, Cincinnati and Spartanburg, S. C., by Dr. Regine K. Stix, of New York. The study, financed by the Milbank Memorial Fund, is reported in the *A.M.A. Journal* (Jan. 24).

Patients at the clinics were largely women whose health would be injured by child-bearing. The study convinced Dr. Stix that a standard set by the Association after proper study would do much "to improve the quality of commercial contraceptives."

Dr. Stix asserted that "wise pressure" on makers of contraceptives would help to reduce prices to a point where many people in the poorer sections of the country could afford them. These families, it was pointed out, are least able to bear the cost of raising and educating children.

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