MEDICINE

Gas Gangrene Yields To New Chemical Remedy

GAS gangrene, most serious danger in war wounds and frequently fatal condition whenever it develops, can be successfully treated with the new chemical remedy sulfanilamide, or Prontosil as it is also called.

Case reports and laboratory studies showing this were reported by Drs. Perrin H. Long and Eleanor A. Bliss of the Johns Hopkins Hospital and University at the meeting of the Canadian Medical Association in Ottawa. The laboratory work was done by Drs. Long and Bliss and the patients were treated by Dr. Harold Bohlman, also of the Johns Hopkins Hospital.

Drs. Long and Bliss were the first to use the new chemical remedy in this country in cases of deadly hemolytic streptococcus infection. They and other scientists have found that sulfanilamide is highly successful in treating infections of these streptococci and also infections of pneumococci, meningococci and gonococci. The particular diseases for which the chemical has been used include scarlet fever, erysipelas, childbed fever, meningitis, Type III pneumonia and gonorrhea.

Gas gangrene is due to infection of wounds with still another disease germ, which has many scientific names but is generally referred to as the Welch bacillus. It occurs particularly in cases involving severe bruises of the deep tissues about the wound, especially if cloth or dirt has been carried into the wound. The disease gets its name gas gangrene from the fact the germ causes gas bubbles to form as it invades the tissues. Treatment of the condition has heretofore not been very successful and it often has been necessary to amputate an arm or leg to save the patient's life.

Science News Letter, July 10, 1937

HYGIENE

Keeping Clean Important Even When Camping Out

THE camping season, initiated by the huge Boy Scout Jamboree in Washington, D. C., is on. Private camps for children and adults, and the camps conducted by organizations such as the Boy Scouts, Girl Scouts, and the Y. M. C. A. are running, and family and other small parties are planning their own camping trips.

The healthful results of such outings may, however, be entirely spoiled by failing to give enough attention to possible hazards, among them poor sanitation. To most small boys and many grown-up boys, half the fun of camping is getting away from such formalities as clean collars and washing hands before dinner, while the feminine campers may look forward to freedom from dish-washing and laundering.

Disease germs, however, take no vacations and rules of cleanliness that are made to check the spread of germs cannot be safely abandoned with conventional attire and fine table linen.

In supervised camps purity of water and food, and cleanliness of person, clothing and utensils are emphasized quite as much as swimming lessons and nature study. Cleanliness is one of the important features of camp craft, a fact which the small, unorganized camping party may forget.

Sunshine and fresh air are not enough to check the spread of disease germs. Soap and water are also needed. Laundry and dishwashing can be cut to a minimum by using paper plates, towels and napkins, but knives and forks must still be washed thoroughly after each use. So must hands, particularly those that prepare and handle the food.

Hardy campers may think it sissified to object to ants in the sugar, but food must be kept clean and protected from dirt, flies and other insects, if it is to be insured against disease germs.

Science News Letter, July 10, 1937

MEDICINE

Hormone Injection Gives Quick Test for Pregnancy

A NEW, quick and inexpensive test to determine whether a woman is going to become a mother was reported by Drs. John Huberman, Howard H. Israeloff and Benjamin Hymowitz of Newark, N. J. The test is made by injecting under the skin of the forearm one of the hormones present in the body of an expectant mother. If the skin becomes red and inflamed, the test is negative and the woman is not about to become a mother. If there is no reaction, the test is considered positive evidence that the woman is bearing a child.

The test was originally devised by Drs. G. C. Gilfillen and W. K. Gregg of Dayton, Ohio. The Newark physicians found it 90 per cent. accurate in tests of 200 expectant mothers and 95 per cent. accurate in 150 women known not to be expecting children.

Science News Letter, July 10, 1937

IN SCIENC

ASTRONOMY

Pittsburgh to Have $750,000 Planetarium

A PLANETARIUM in which the parade of sun, moon, and stars can be demonstrated for the public, will be built for Pittsburgh. That city will be the fifth in the United States to have one of these "glorified magic lanterns" which project images of the heavenly bodies on the inside of a white dome, and, by means of ingenious motors, show the apparent daily motion of the bodies across the heavens.

In recent years, planetariums have been built in Chicago, Philadelphia, New York, and Hollywood. The Pittsburgh planetarium is a gift of the Buhl Foundation, and will cost with equipment $750,000. It will be made by the famous Carl Zeiss optical works in Germany, originators of the planetarium.

Science News Letter, July 10, 1937

SEISMOLOGY

Atlantic and Pacific Have Quakes On Same Day

EARTHQUAKES under two oceans was the record hung up on Thursday, June 24, the U. S. Coast and Geodetic Survey's seismologists informed Science Service, after studying coded telegraphic reports from a number of American observatories.

The Atlantic shock occurred at one-tenth of a minute after 3:00 p. m., eastern standard time; its epicenter was located approximately in 36 degrees north latitude, 36 degrees west longitude, about 500 miles southwest of the Azores.

The Pacific quake started at 8:09.3 a m., eastern standard time, and had its epicenter somewhere near nine degrees north latitude, 90 degrees west longitude. This is a point about 700 miles off the north coast of Peru.

Observatories reporting to Science Service were those of the Jesuit Seismological Association at St. Louis University, Georgetown University, Fordham University, Canisius College, and Weston College, and those of the U. S. Coast and Geodetic Survey at San Juan, P. R., and Tucson, Ariz.

Science News Letter, July 10, 1937

E FIELDS

ANATOMY

Famous Brains Reveal "Signs of Inferiority"

EXAMINING hundreds of human brains, famous and otherwise, a Soviet anatomist, Gregoire Levin of the Bekhterev Institute for Brain Research in Leningrad, has discovered that supposed "signs of inferiority" exist in brains of prominent civilized personalities just as frequently as in brains of benighted savages.

His verdict, which deals a blow to the hope of science to find visible reasons for inferiority in human brains, is reported in the United States in the *Journal of Physical Anthropology.*

M. Levin checked up on six of the supposed signs of inferiority, which are often pointed out in brains of primitive peoples, or in brains of mental defectives. He concludes that no special racial characters have yet been detected in the structure of the brain.

"The whole subject," he declares, "demands a thorough expert and adequate determination in the future."

Science News Letter, July 10, 1937

ARCHAEOLOGY

Hunting Traps Are Clues To Man's Prehistory

INDIANS now living in Labrador make hunting traps like those devised by Europe's cave men when they hunted big game 30,000 years ago.

This may seem merely an "odd fact." But it is a valuable scientific clue for prehistorians who are trying to figure out where on earth our prehistoric ancestors were at various stages of time, and how man migrated to America and other lands.

Similarity between Indian gravity traps and traps pictured by Stone Age artists on European cave walls has been detected by Prof. Julius E. Lipps, one of the noted scholars who fled Nazi Germany. Formerly professor at the University of Cologne, Prof. Lipps has come to America.

In Stone Age pictures, Prof. Lipps points out bison and mammoth with crude lines in front of them. Prehistorians used to think these lines represented ornaments or huts.

He interprets the low bars and slanting lines as gravity traps made of logs and other heavy objects. He points out a mammoth's foot drawn below ground level, as if in a pit.

Stone Age hunters apparently used such pictures as sympathetic magic. By conjuring over the picture, they hoped to make the scene come true when they set a real trap.

Finding Montagnais-Naskapi Indians using this 30,000-year-old trapping system shows how widely it was diffused. Prof. Lipps thinks it was invented somewhere in Asia. From there, in the later Old Stone Age, it became known in Europe. From Spain it reached Africa.

In the opposite direction, more recently, it apparently spread to Siberia's northeast tip, thence to Alaska and east to Labrador.

Prof. Lipps says it would be worth while to trace this trap all over the globe, because it would provide much information about the migration of an invention in the prehistoric world.

Science News Letter, July 10, 1937

CHEMISTRY

Smoke Cigarettes Tandem To Avoid Nicotine

FOR people who still worry about the amount of nicotine present in the smoke of the cigarettes they use, scientists suggest that they use two at once. One to smoke and the other to filter the smoke from the first.

Smoking cigarettes in tandem with special holders removes 54 per cent. of the nicotine when a small puff is drawn, states a report to the American Chemical Society.

The report does not come from cigarette companies, as one might suspect at first, but from scientists R. B. Derr, A. H. Riesmeyer and R. B. Unangst of the Research Laboratory of the Aluminum Company of America.

The cigarette holders used in the study need not be excessively long, state the scientists. One 3.75 inches long and three-eighths of an inch in diameter is large enough to hold an ordinary cigarette acting as a filter.

Extra mildness is imparted to the smoke by the cigarette filter, it was found. Yet the characteristic taste blends of the tobacco remain distinguishable. The test was also made with pipe where the cigarette filtering system worked even better.

Science News Letter, July 10, 1937

PHYSICS

Thinnest Protein Films Measured on Tiny Drum

A TINY drum whirling in egg albumen is one of the new techniques helping scientists to measure the thickness of protein films, such as constitute the walls of the cells of living matter.

Films only 86 billionths of a centimeter thick can be measured, the Fourteenth Colloid Symposium of the American Chemical Society meeting at the University of Minnesota learned from the report of Dr. Henry B. Bull of the Northwestern University Medical School.

The drum, of exactly known dimensions, builds up a film at a known rate. The volume of protein film is calculated and divided by the total area of the drum to obtain the thickness of the film.

Science News Letter, July 10, 1937

ENGINEERING

Tobacco Smells Increase For Hours After Smoking

ENGINEERS may discuss ventilating and air conditioning and use their layman-baffling "cfm's" to describe the flow of air, but what most people want to know is what to do about odors when they think of ventilating.

At the meeting of the American Society of Heating and Ventilating Engineers, two scientists from Harvard's School of Public Health disclosed their studies about odor removal from rooms and auditoriums.

Prof. C. P. Yaglou and W. N. Witheridge showed that there is a characteristic human smell which can be detected in a room after the occupants have left it. This human odor is apparently highly complex, unstable and rapidly breaks down, but there is a certain minimum amount of the odor left in a room which will last for days until it is thoroughly ventilated. The findings show that where numbers of people gather large rooms should be used, for great size acts as a sort of reservoir of odor which allows the initial decrease in intensity of odor to occur harmlessly.

Sharply in contrast, they reported, is the characteristic of tobacco smoke which becomes more noxious with time up to periods of three hours after active smoking has ceased. The rise in odor intensity of tobacco smoke is more offensive than the odor of fresh smoke.

It would thus appear, state the Harvard scientists, that smoking rooms should be small with very rapid ventilation for the best results.

Science News Letter, July 10, 1937