MEDICINE

Gamma Globulin Is Called "Material of Choice"

➤ GAMMA GLOBULIN, obtained as a by-product from the blood collected by the American Red Cross for our fighting forces, is the "material of choice" for protecting babies and children against measles, Dr. Morris Greenberg, Dr. Samuel Frant and Dr. David D. Rutstein, of the New York City Department of Health report (*Journal, American Medical Association,* Dec. 9).

It was given to 814 children between six months and six years of age who had not had measles but had been exposed to it through a case developing in a brother or sister or some other person living in the same house.

Of these 814 contacts, as they are called, more than three-fourths, or 641, escaped measles altogether. Mild measles attacked 160, while 13 developed moderate measles. Ordinarily, measles attacks four-fifths or more of children exposed to it by contact with a case in the home.

Gamma globulin, obtained by a method developed by Dr. Edwin J. Cohn of Harvard, was compared with another measles preventive, placental globulin, obtained from human placentas by a method developed in 1933 by Dr. C. F. McKhann and Dr. F. T. Chu then working at Harvard Medical School.

This placental globulin gave complete protection to 38.9% of the 90 children in whom it was injected, but severe measles developed in 23.3% and modified measles in 37.7%. Reactions occurred in almost half, 41% of those injected, but in less than 1% of those given the gamma globulin, which is a by-product of blood serum production for the fighting forces.

Science News Letter, December 16, 1944

MEDICINE

Penicillin Succeeds in Human Anthrax Cases

➤ PROMPT RECOVERY, thanks to penicillin, of three women suffering with anthrax is reported by Dr. Franklin D. Murphy, Dr. Alfred C. La Boccetta and Dr. John S. Lockwood, of the University of Pennsylvania (*Journal, American Medical Association,* Dec. 9).

These are believed to be the first human patients with anthrax treated with penicillin. Successful use of the mold chemical in mice infected with anthrax was announced in October of this year by Dr. F. R. Heilman and Dr. W. E. Herrell, of the Mayo Clinic (See *SNL,* Nov. 4).

The women treated by the Philadelphia doctors were wool workers. They suffered from an uncomplicated cutaneous form of the disease. Each had a painful sore on her skin which at first looked like a pimple but rapidly got larger, inflamed and discharging. Penicillin cleared up the skin condition rapidly and the women were well within nine or 10 days.

Larger doses, the doctors believe, would be equally effective in more severe skin infections and in cases in which the anthrax germ attacks internal organs. They believe it should have further clinical trial in this disease, which, although not widespread, is still an important medical problem in the wool and leather industries, killing more than 13 of every 100 attacked.

Science News Letter, December 16, 1944

BOTANY

Robomb Blasts Cause Plant to Fold Its Leaves

➤ BLASTS of Nazi robot bombs falling in the London area are just too much for one kind of potted plant kept in some greenhouses as a botanical curiosity. It folds up its leaves as if frightened, even when the explosion is at a considerable distance, reports E. S. Grew, a London botanist.

It must be added that this plant that can't "take it" is not a native English species, but an immigrant from the Indonesian tropics. It is commonly known as the telegraph plant; its scientific name is *Desmodium gyrans*. It is a member of the pea family.

Each of its compound leaves consists of a large middle leaflet and two small side leaflets, borne clover-fashion on a single stalk or petiole. By day, the leaves stand out at a wide angle from the plant's central stem; at night, the petioles fold up, the leaflets droop down, and the plant "goes to sleep." It assumes this "sleeping" posture when an explosion shakes the air, no matter what the time of day.

The plant received its common name from a peculiar habit of the two side members of each leaf. which are in constant visible motion when it is in its "waking" position, like a set of wig-wag signals. It was named something over a century ago, before the classic invention of Samuel Morse, when the name "telegraph" was commonly applied to the apparatus we now call a semaphore.

Science News Letter, December 16, 1944

IN SCIEN

MEDICINE

"Synthetic Blood Plasma" From By-Product of Sugar

➤ A METHOD for producing "synthetic blood plasma" from a by-product of sugar manufacture has been developed by two Swedish scientists, Anders Groenwall and Bjoern Ingelman, working under the supervision of Prof. Arne Tiselius of the University of Upsala, according to information received by the American Swedish News Exchange.

Dextran is the name given the material. Unlimited production of it is said to be possible. It can be easily transported as a powder, is reasonable in price and its use is not dependent on the blood group of the recipient.

Dextran has not yet come to the attention of medical authorities in Washington, but a number of preparations, such as pectin and gelatin, have been tried as substitutes for blood plasma in the treatment of shock.

One which the Germans developed has been investigated by authorities but has not proved very effective.

Blood plasma and serum albumen from human blood have not yet, however, been equalled as shock-combating substances by any of the substitutes so far investigated except, perhaps, under special circumstances.

Science News Letter, December 16, 1944

AERONAUTICS

Two-Thousand Mile Trip Made in Only 14 Hours

➤ POSTWAR airline promises were demonstrated recently when a group of Icelandic businessmen made a two-thousand-mile trip that would take 14 days by boat in only 14 hours, breakfasting at Reykjavik, Iceland, having luncheon in Canada, and dining the same evening in New York City.

Flown to the United States to attend the International Business Conference at Rye, N. Y., by the Air Transport Command, the men covered a distance almost equal to that between New York and Los Angeles. Higher-speed planes now being developed in American aircraft plants will be able after the war to complete the same trip in less than ten hours.

Science News Letter, December 16, 1944

CE FIELDS

ZOOLOGY

Arabian Oryxes Now at National Zoological Park

➤ A ROYAL GIFT, consisting of a pair of Arabian oryxes, has been received at the National Zoological Park, Washington. These animals, the rarest and most beautiful of their kind, were presented by Sheikh Hamid Suleiman, son of the Arabian king, Ibn Saud, to James M. Landis, Minister of the Foreign Economic Mission to the Middle East, now at Cairo. They were brought by ship to Baltimore, and have just been released from quarantine there.

Arabian oryxes are among the most beautiful of all the antelope tribe, with great, curving horns. They show their desert affinities in at least two characters, Director William M. Mann of the Zoo pointed out: they are the lightest of all the oryxes, being almost white; and they have unusually large feet, enabling them to get about rapidly and without fatigue over the loose sand.

Science News Letter, December 16, 1944

SEISMOLOGY

Earthquake in Japan in Industrial Center

➤ THE MAIN Japanese islands were given a smashing jolt by the Pearl Harbor anniversary earthquake, is the indication of data transmitted through Science Service and interpreted by seismologists of the U. S. Coast and Geodetic Survey. Information received from Honolulu, and from the New Zealand observatory at Wellington, added to data from North American stations, placed the epicenter somewhere near latitude 33½ degrees north, longitude 132 degrees east.

This point is close to the southwestern tip of the largest Japanese island, Honshu, and near the smaller islands of Shikoku and Kyushu. Cities in this area that are the sites of important naval bases, great dockyards and crowded industrial developments include Nagasaki, Sasebo, Fukuoka, Shimonseki, Kobe and Osaka.

All reporting observatories agree that this earthquake was exceptionally severe —to be compared with the shock that wrecked Tokyo and Yokohama in 1923. There is at least a fair chance that one or more of the southwestern Nipponese cities vital to the Empire's war effort, have been laid in ruins. An earthquake of the force shown by the instruments, especially when the great sea waves stirred up add to the havoc, can do more damage in a few minutes than a whole fleet of battleships lying off shore and shelling away all day.

North American stations reporting were the Dominion Observatory at Ottawa, Canada; the Seismological Laboratory at Pasadena, Calif.; Pennsylvania State College; the observatories of the Jesuit Seismological Association at Georgetown University, St. Louis University, Spring Hill College and Weston College, and the observatories of the U. S. Coast and Geological Survey at Tucson, Ariz., Ukiah, Calif., and San Juan, P. R.

Science News Letter, December 16, 1944

METALLURGY

Lithium, Lightest Metal, Ready for Postwar Use

➤ LITHIUM, lightest of all metals, weighing only one-fifth as much as aluminum, promises to have many postwar industrial applications. This silver-white metal, that occurs more plentifully in the earth than lead or tin, was little used before Pearl Harbor.

Today lithium and its compounds are used in high-conductivity copper castings, tin bronzes, silicon bronzes, aluminum welding, magnesium melting and casting, and in the heat-treating of metals. Removal of priority restrictions on lithium has opened the way to new uses, states Dr. Hans Osborg, vice president of Lithaloys Corporation, the country's largest producer of lithium metals and alloys.

Science News Letter, December 16, 1944

MEDICINE

New Chemicals May Prove Better Disease Remedies

➤ SYNTHESIS of new arsenic-containing chemicals that may prove effective as remedies against disease is under way in the organic chemical laboratories of Columbia University, Prof. Marston T. Bogert and Prof. William C. Stickler announce. (*Science,* Dec. 8).

The chemicals are known as guanidino arsenicals. They are related to another group of arsenicals which includes carbarsone, used in treating amebic dysentery. The guanidine part of the new group may be recognized by the layman who remembers that one member of the sulfa drug family is sulfaguanidine.

Science News Letter, December 16, 1944

MILITARY SCIENCE

Equipment Standardized for Army, Navy and Marines

➤ COMBAT MEN on battle fronts where the Army, Navy and Marines are fighting together will use increasingly similar equipment wherever possible, with interchangeable parts, in order to save each service branch from having to carry complete inventories of supplies. This is the result of the work of the joint Army-Navy Committee on Specifications, which has already standardized many items. Decreased costs and increased production are by-products.

Radio tubes, aircraft armor, ammunition components, explosives and photographic equipment are a few of the items for which joint specifications have been completed and are in use. The list covers a wide range, from articles of clothing to airfield landing mats, and includes electronic components, chemicals, insecticides, leather preservatives, and raw materials such as steel, brass and plastics.

The joint committee was created in December, 1942, and set to work without delay to bring about as extensive a standardization as possible of military items of similar characteristics used by both the Army and Navy. It is composed of representatives of the technical bureaus of both branches. It establishes, through joint specifications, common Army and Navy standards for capacity, performance, dimensions, packaging, and other necessary requirements.

The many advantages of joint specifications are discussed in a recent issue of *Industrial Standardization,* published by the American Standards Association by Col. B. L. Neis, War Department chairman of the joint committee.

He states, "Through the medium of Joint Army-Navy Specifications, the Army and Navy are energetically effecting standardization on the greatest possible amount of needed equipment, achieving thereby interchangeability of parts and conservation of manpower, materials, facilities, and the taxpayer's dollar." They are of great benefit to the producing industries, he says, as well as to the services.

A joint specification is an obvious prerequisite, Col. Neis declares, for the many items used by soldiers and marines when the two organizations are fighting in the same area. They are proving of particular value, for instance, in the Southwest Pacific where joint operations are being conducted.

Science News Letter, December 16, 1944