

SCIENCE NEWS

Science Service, Washington, D. C.

PROTECTION FROM MEASLES

PROTECTION from measles will be available to children, and grown-ups too if necessary, through a by-product of blood donated to the Red Cross for the nation's fighting men. The protection will be given by a substance called gamma globulin, separated from blood plasma by Dr. Edwin J. Cohn, of Harvard University. The globulin can be used either to prevent measles or to modify the attack so the patient is not very sick but develops resistance to further attack. The American Red Cross, functioning as coordinator, will assist in transferring the measles preventive from the manufacturers to state and local health departments. These will pay the cost price and distribute the material without charge.

Announcement of this latest development of the blood donation program comes from the Navy Department with a detailed progress report by Vice-Admiral Ross T. McIntire, Surgeon General of the U. S. Navy.

Fully a year before Pearl Harbor the Navy's Bureau of Medicine and Surgery began the project which has yielded gamma globulin for the prevention or modification of measles; concentrated serum albumin for saving lives threatened by shock from battle wounds; fibrin film and fibrin foam which are proving valuable in surgery of battle wounds, especially brain surgery; and blood grouping globulins essential in blood typing procedures before transfusions.

First aim of the program was to develop a concentrated protein for treatment of shock that would be lighter in weight and less bulky than blood plasma. The mobile nature of Naval and Marine operations and the need to conserve space in all types of ships, planes and land vehicles, dictated this need. It was filled when, in 1940, Dr. Cohn perfected a process for separating the protein fractions of blood plasma, and Captain Lloyd R. Newhouser, of the Navy Medical Corps, developed a satisfactory dispensing package for the albumin which was to replace plasma in many cases.

When, after months of painstaking tests of the albumin as a shock-reliever, the Navy finally let contracts to manufacturers for processing it, a foresighted clause was included directing them to store at low temperatures the plasma fractions which remained after the albumin was removed. Various by-products of albumin processing were then available when their usefulness was established.

Cooperating with the Navy in the program which has developed these valuable products for Navy, Army and, now, civilian use, are the National Research Council and the Committee on Medical Research of the Office of Scientific Research and Development.

ITEMS

STRANGE long-distance bursts causing interference in high frequency bands, including those assigned to FM broadcasting, have been discovered by the Federal Communications Commission. A "burst" is defined as a sharp increase in signal strength of momentary duration,

seldom covering more time than is necessary to speak a single word or to play a note or two of music. They may occur at the rate of several hundred an hour. The bursts, under normal conditions, are not observed near FM stations. They usually are picked up by receiving sets at a considerable distance from the FM transmitter. Bursts have been observed at distances up to 1,400 miles from certain high-powered FM stations, but are neither so intense nor so numerous as they are at distances of 300 to 700 miles. For several months FCC engineers have been conducting tests to determine the nature and extent of the interference. The FCC is not ready yet to make a statement as to the cause of the bursts, but research is continuing, and a report may be made available soon.

MUCH attention is being attracted by the report of a diet that seems to help patients with high blood pressure and kidney disease. Dr. Walter Kempner, of Duke University, developed the diet and reported it to the Chicago meeting of the American Medical Association. It consists solely of rice, fruit juices, sugar, vitamins and iron. Dr. Kempner's theory is that one of the kidneys' functions, that of deaminating the amino acids of protein, is disturbed by lowered oxygen supply and the result is high blood pressure. The rice diet was developed to reduce the amount of protein the kidneys have to handle and thus lower the amount of harmful, abnormal substances which he believes causes the high blood pressure. Not all patients benefit from the diet, though no ill effects from it have been seen. Blood pressures were reduced in about 60 per cent. of the patients, he said.

A NEW fire-detecting and fire-extinguishing system, that signals the driver the moment a fire breaks out and then extinguishes the flame is being used in U. S. Army tanks, saving many of them from destruction by fire in the tank itself. The system, developed by Walter Kidde and Company, consists of a detector containing two filaments which are destroyed by fire, closing an electric switch which causes a red fire signal to appear on the instrument panel of the tank. The driver pulls a manual control level switch, instantly flooding the engine compartment with a blanket of carbon dioxide gas which smothers the fire. Operation of the new carbon dioxide fire-fighting system is confined to the engine compartment.

IN an effort to get the most out of our dwindling supply of several western pine species, the Office of Price Administration has requested lumber mills to manufacture lath in connection with lumber production. This measure was taken so that fuller use would be made of the logs, and that a minimum of the precious wood would go to waste. Due largely to over-cutting and fires, the supply of western pine is far below normal. Lath made from slabs that would otherwise go to the burner will be used to manufacture boxes and crates needed for the shipment of war material, thus stretching the supply of wood for such purposes.