

# medical sciences

## PLASTICS

### Adaptable surgical appliances

British scientists have produced a highly malleable plastic sheeting called Plasterzote that can change its shape as needed for a variety of medical uses.

Within seconds of taking it from a 285 degree F. oven doctors can press it into shape as a cast on patients' fractured limbs without burning them. It also can be used to construct spinal corsets, surgical collars and contour beds. It was originally designed as an insulator for wall coverings.

## INFECTION

### Germ-free ward in Britain

A 22-bed sterile ward for treating infection-prone patients is a feature of a \$1.5 million extension to the Royal Marsden Hospital being built in Sutton, near London. It is intended primarily for leukemia patients.

The original Royal Marsden Hospital in Fulham Road, London, was the first hospital in the world devoted exclusively to cancer. It was founded by William Marsden in 1851.

Although the hospital is not now moving into the transplant field, a spokesman says surgery is moving so rapidly in this direction that the sterile ward could conceivably be used for patients on drugs used to counter the rejection phenomenon when they are receiving a graft. Lung cancer, for example, might be treated by transplanting sound lungs, and the danger of infection would be minimized by the germ-free ward.

## EQUIPMENT

### Auto heaters adapted in hospital

Specialists in London's Hammersmith Hospital child health department are using an auto heater radiator in an especially designed piece of apparatus that provides an oxygen-rich environment for premature babies.

The radiator is immersed in water that surrounds a tube carrying oxygen to the infant. The heater's output is adjusted so the oxygen can be warmed to the temperature required in the incubator. The device is credited with saving a number of lives.

## HEART DISEASE

### WHO sponsors cholesterol study

The first international long-range double-blind study to determine whether a cholesterol-lowering drug will actually reduce the incidence of coronary heart disease among men still healthy, but believed to be in danger because of high blood-fat levels, has been announced by the World Health Organization in Geneva.

The drug is clofibrate, which has a British patent but is produced by Ayerst Laboratories in the United States under the trade name Atromid-S.

Doctors at Edinburgh's Royal Infirmary started the study, testing clofibrate on 5,000 men, mostly 30 to 49 years old. Dr. Zdenek Fejfar of Czechoslovakia, chief

of the WHO Cardiovascular Diseases Unit, says the United Nation's medical agency has arranged for two more groups of 5,000 in Prague and Budapest to participate in the study, which will run five years.

Dr. Fejfar also has announced a new citywide plan for cardiac registries. Each selected city will gather all possible data on heart attacks and how patients are treated, including how long it takes for a doctor to come or get them to a hospital, and followup, including the results of autopsies. Prague is collaborating, and the European Regional WHO office in Copenhagen is supervising the studies.

## PROSTHESES

### Artificial arm controlled by nerves

Perhaps the most sophisticated of above-elbow artificial arms is the so-called Boston arm, developed by four institutions in that city.

The Boston arm is the first above-elbow device that an amputee can simply will into action. It is at a stage in which it could be developed for mass production; with future changes researchers believe it can be made to work for those of the 7,000 thalidomide children with above-elbow stumps.

When a person wants to move a normal arm the brain sends an electric signal down the spinal cord and out to the motor nerve, which stimulates the muscle. In contracting, the muscle gives off an electric signal.

The amputee who has lost his arm above the elbow ordinarily retains the muscle in his stump, so if he wills his arm to move, the stump muscle will discharge the same electric signal as though he had an arm. In the Boston arm, that signal is amplified and used to control a battery-powered electric motor in the arm.

The Massachusetts General Hospital, Massachusetts Institute of Technology, Harvard Medical School and, through its Rehabilitation Center and Research Center, the Liberty Mutual Insurance Company, developed the arm.

Meanwhile in Haifa, Israel, a gas-powered artificial upper limb one-third lighter than existing arms is in production. The idea was conceived at the University of Oxford, where Dr. Dino Bousso of Haifa Technicon formerly worked. It, too, should be of value with thalidomide-crippled children.

## TERMINOLOGY

### Language to be overhauled

A beginning is being made toward an end to the Babel of medicine that confuses international specialists with as many as 30 names for the same disease.

Dr. Vittorio Fattorusso, executive secretary of the Council of International Organizations of the Medical Sciences (CIOMS), with headquarters in Paris, says the organization has approved establishment of a committee in medical lexicography and terminology.

At present the medical language is full of conflicts and redundancies that confound practitioners, researchers, teachers, hospital record librarians, translators and editors alike, Dr. Fattorusso says.