

## SURGERY

# Cut Bleeding Deaths

Eight-point guide to discovery of prevention methods takes into account conditions associated with intestinal bleeding and relation to ulcer production.

► AN EIGHT-POINT guide to discovery of ways to cut deaths due to bleeding from stomach and intestinal tract was reported by Dr. Karl A. Meyer of Northwestern University Medical School, Chicago, at the meeting in New York of the U. S. and Canadian Chapters of the International College of Surgeons.

The eight-point guide consists of eight kinds of disease or damage found more often in patients with bleeding from the stomach and intestinal tract than would be expected. These are: coronary sclerosis in which the heart's arteries are hardened; heart disease with high blood pressure; damage to the big artery called the aorta resulting from syphilis; rheumatic heart disease; hardening of the kidneys and their arteries; liver damage; pancreas damage; and goiter.

Dr. Meyer and his associates feel that the possible relationship of these conditions with the known mechanisms of ulcer production point the way to studies which should help cut the present over-all ulcer hemorrhage mortality of 10% to "a safer level."

A study of about 1,200 ulcer patients

treated at the Cook County Hospital over a three-year period showed that hemorrhages were experienced by about one-third, he reported. Hemorrhages accounted for 36 of the 66 deaths in this series. Of 205 definitive stomach operations performed, massive bleeding was the chief reason in 105 cases.

Dr. Meyer reported that autopsies of patients dying of massive gastrointestinal hemorrhage showed that gastric and duodenal ulcers accounted for about one-half of the cases. Esophageal varices (enlarged veins in the esophagus), resulting from cirrhosis of the liver, were responsible for about 30% of fatal cases of bleeding. Various lesions accounted for the others.

"It was further learned that a fatal outcome of gastrointestinal hemorrhage was not limited to any decade of life, though there appears to be a trend wherein the vast majority of cases occurred between the fourth and the eighth decades," Dr. Meyer said. "A four-to-one preponderance of bleeding in the male sex and the white race suggested a possible endocrine aspect to this problem.

"Because of the striking frequency with

which bleeding occurred between the fourth and eighth decades, almost irrespective of the etiological factor, the investigation of the associated pathology in these patients was undertaken in the hope that some clue might be unearthed that might answer the problem of what causes the fatal outcome."

Science News Letter, September 26, 1953

## MEDICINE

## Scale Rates Jobs By Energy Cost

► A SCALE for rating jobs for patients who have had heart attacks has been devised by Drs. Joseph G. Benton and Howard A. Rusk of New York University College of Medicine.

The scale rates jobs in terms of energy cost. This is determined by measuring how much oxygen per unit of body weight is consumed in the course of each job or activity in comparison to the amount consumed while at rest.

The energy cost of making a bench out of pine board, which entailed such tasks as sawing, filing, sanding, boring holes with a hand drill and using a screw driver ranged from 1.2 to 2.5 times the resting rate. This energy cost was the same for heart patients and for normal, healthy persons.

Very few working situations, apart from heavy labor, take a sustained energy output of more than two to four times the resting rate. Work only becomes strenuous when its energy cost increases to eight, the doctors reports.

Moderate work has an energy cost of three.

In most jobs, persons in normal health rarely call on their full energy potential. Thus there remains a substantial margin which acts as a safe reserve for most heart patients in most jobs.

Except for extremely heavy labor, almost all the physical activities required in performing a job appear to be within the capacity of most people with heart disease, the tests with heart patients at the New York University-Bellevue Medical Center in New York showed. The results of these tests are reported in *Circulation* (Sept.), the monthly scientific journal of the American Heart Association.

Science News Letter, September 26, 1953

## PHYSICS

## "Cosmic Stopwatch" Splits Seconds Fine

► A "COSMIC STOPWATCH" splits time into billionths of seconds.

Under the direction of Dr. Harold Ticho, a group of physicists at the University of California at Los Angeles designed the instrument for cosmic ray studies under an Army Ordnance grant.

The device will be used to measure the



**LARGEST HELICOPTER**—This giant, believed to be the world's largest helicopter, will carry 40 passengers and a normal crew of three in the service of the U. S. Air Force. It is powered by two rotors mounted one behind the other, the blades of which are 82 feet in diameter.