

MEDICINE

Move Glands in Cancer

Eleven breast cancer patients have been helped by a revolutionary operation in which the ovaries were removed and the adrenal glands relocated inside the abdomen.

► **RELOCATING THE** adrenal glands, famous as sources of anti-arthritis cortisone, has given a longer lease on life to 11 patients in far advanced stages of breast cancer. Some have lived as long as two years and continue to improve.

The dramatic results of this new operation were reported by Drs. Donald E. Bernstein, Gerson R. Biskind and A. Lincoln Brown of Mount Zion Hospital, San Francisco, at the meeting of the American Association for Cancer Research in San Francisco.

One patient, 51 years old, had her breast removed two years previously. She was brought to the hospital to die, with so much fluid in her chest from the renewed spread of cancer that she was unable to lie down and had to sleep sitting up. She was operated on 16 months ago. She has now gained 30 pounds and is leading a relatively active life.

Another patient, only 46 years old, who had her breast removed two years before for cancer, came into the hospital when her cancer reappeared and spread into her lungs. The spread was so extensive that large masses, some of them the size of walnuts, could easily be recognized by X-ray. A few months after the operation these lumps had completely disappeared and she is now doing well 16 months after coming into the hospital in what seemed to be the end stage of the disease.

The operation which has been helping these women consists in removing both ovaries and transplanting the adrenals from their location above the kidneys to another structure within the abdomen called the mesentery. This location lets the liver act as a sieve to filter out cancer-stimulating hormones and at the same time allows products of the adrenals necessary to life to remain.

Doctors have known for a number of years that removal of the ovaries would slow down breast cancer. More recently they have found that removal of the adrenals also slows the cancer. Since cortisone and other adrenal gland hormones have become available some doctors have removed these glands, giving the hormones to compensate.

The Mount Zion doctors have gone a step further and relocated the adrenals. Most of these patients can get along with less of the hormones than patients whose adrenal glands are completely removed from their bodies.

So far the operation has been done on 17 patients with critical or terminal cases of breast cancer. Two died immediately after the operation and four within 45 to 200

days after. Of the remaining 11, four have been observed less than one year. Seven have been observed for 12 to 24 months. The oldest case did show reactivation of the cancer after 16 months. The others continue to improve at the present time.

The operation resulted from 15 years of animal investigation at Mount Zion laboratories where it was shown that:

1. The liver inactivated sex hormones.
2. That experimental cancer resulted when male or female sex glands were transplanted in such a way that the hormones they produced were filtered through the liver before distribution throughout the body.

3. That an adrenal gland similarly transplanted grew and maintained the life of the animal. It was then found that simultaneous grafting of both of these glands (the adrenal and the ovary) in some animals prevented the development of the experimental cancer. It was these findings that suggested this new approach to the treatment of terminal cancer of the breast.

This is a new procedure which has given added years of life to a number of patients and has demonstrated that the adrenals may successfully be grafted in human beings. Whether or not it will have an important place in the treatment of terminal cases of breast cancer will only be determined after the study of many more patients for a longer period of time.

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STATISTICS

Most Accidents Occur While Away From Work

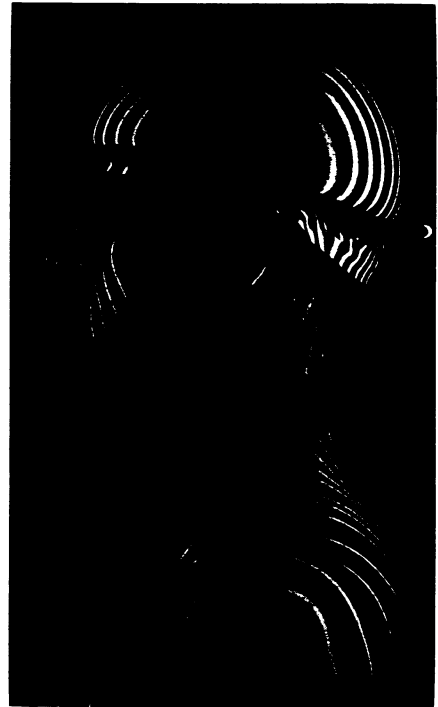
► **MORE ACCIDENTS** occur when people are not at work than when they are working.

Accidents at home, on the streets and highways, and during recreation account for nearly 70% of the accidental deaths and more than half of the disabling accidents, a compilation of statistics on male industrial insurance at Metropolitan Life Insurance Co. shows.

In some occupations all or nearly all the fatal injuries were sustained off the job.

Examples of such groups are workers in cotton or woolen mills and in furniture factories, barbers, and operatives in shoe and clothing factories. For white collar workers, such as clerks and other office workers, merchants and storekeepers, and store clerks and salesmen, fewer than one in ten of the accident fatalities arose in the course of their employment.

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HEAD CHARTED—This contour map of a man's head will help the Air Force design oxygen masks and helmets that really fit. Even the small depression from the rubber band holding the skull cap shows up clearly.

PHYSIOLOGY

New Camera Can "Map" Curves of Human Figure

► **A MACHINE** that can map photographically the curves of the human figure was reported to the meeting of American Association of Physical Anthropologists.

Flyers' helmets and oxygen masks will probably fit better and be more comfortable as a result of precise measurements made of men's heads and faces with this new device.

Reported in Philadelphia by H. T. E. Hertzberg and Lt. Frank P. Saul of the Aero Medical Laboratory, U.S. Air Force, the new instrument is called the Lange-U.S.A.F. Contourometer. It can make a "topographical map" of a man's head and face and thus yield better measurements than the calipers and other instruments used previously.

The contourometer is basically a camera with attached light sources mounted on each side of the head so that a thin sheet of light is exposed in brief flashes. The traces made when the light sheet intersects with the surface of the skin are recorded by the camera to sketch the "map."

Although used so far on the heads and faces of Air Force men, the contourometer can be adapted to make precise measurements of other parts of the anatomy and to aid in dental and physiological research.

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