

## MEDICINE

## Plastic Balls for TB

**Patients undergo fewer operations and have less deformity when these ping pong balls are placed in their chest. Only a piece of one rib needs removing.**

► **LITTLE PING PONG**, or table tennis, balls made of acrylic plastic are helping some tuberculosis patients back to health, Dr. Allan Hurst, medical director of the National Jewish Hospital, Denver, reported at the meeting of the National Tuberculosis Association, in New York.

The patient does not play games with the balls. They are put into his chest, sometimes as many as 100 of them. There they stay, holding his diseased lung collapsed and at the same time preventing a cave-in deformity of the chest.

Up to April 15, 1948, 50 operations using these lucite spheres have been performed at the National Jewish Hospital. In 14 months experience with the operation, no complications have been noticed.

The plastic ball operation is used in some cases instead of the standard procedure of removing the ribs over the diseased part of the lung and letting the

soft rib covering fall in and collapse the lung. With the plastic balls, only a piece of one rib need be removed. The advantages are fewer operations per patient, appreciably less deformity, maintenance of lung function, better collapse where it is desired, less shock, and earlier getting out of bed for the patient.

One possible future disadvantage is that certain vital organs may become eroded because lucite is so rigid. With this possibility in mind, other plastic substances are now being investigated as substitutes.

Enthusiasm for this surgery must be restrained, Dr. Hurst warned, until further knowledge is gained with more experience. Care must be taken in selecting patients for the operation, in order to avoid complications after the operation.

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producing a 20-million volt X-rays was developed by University scientists and the Allis-Chalmers manufacturing company of Milwaukee.

One of these will be installed at the college of medicine. Delivery is expected in approximately five months. Dr. Roger A. Harvey, head of the college's department of radiology, will be in charge. Because of tests and developmental work necessary with this entirely new type of cancer weapon, it is unlikely that any patients will be treated until some time in 1949.

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## Plant-Fruit Extract Aids Heart Disease Patients

► A "POWERFUL DRUG" for treating heart disease was announced at the meeting of the Interamerican Cardiological Congress, in Chicago.

"Distinct improvement" in 140 of 250 patients and "moderate improvement" in another 85 patients given daily doses of the drug were reported by Dr. M. R. Kenawy of Cairo, Egypt. Only 25 of the group showed no benefit.

The drug is called khellin. It is extracted from the fruit of a plant growing in the Middle East. The fruit is called *Amni visnaga*.

Khellin is a powerful dilator of the blood vessels of the heart. Constriction of these blood vessels, with decreased blood supply to the heart muscle, is the trouble in some kinds of heart disease. Khellin's dilating action is very prolonged, lasting for many hours. It is apparently nonpoisonous.

Because of its antispasmodic action, khellin also has been found suitable in treatment of bronchial asthma.

For clearing the swelling, or dropsy, in advanced heart failure, lots of water, some acid and a moderate reduction in salt are needed, Dr. F. R. Schemm of Great Falls, Mont., declared.

This treatment scheme succeeded in four-fifths of 322 instances. But in 160 other instances, the swelling was not cleared when only two of the three measures were used. No two succeeded alone, even when salt was completely removed from the diet, or as much as eight quarts of water was given daily, or when heavy doses of acids were given with one or the other measure. But much less drastic salt restrictions, acid doses and water drinking when used together produced "dramatically" good results.

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## Betatron Fights Cancer

**High energy x-rays of 20,000,00 volts will be produced by the machine for treatment of patients with deep-seated cancer. Will start some time next year.**

► **PATIENTS** with deep-seated cancer of internal organs will be getting treatment with 20 times more powerful X-rays starting some time next year (1949).

The high energy X-rays, 20,000,000 volt instead of 200,000 to 2,000,000 volt, will come from the new betatron to be installed at the University of Illinois College of Medicine in Chicago. It is the world's first installation of a betatron for cancer treatment and research, university officials said.

Advantage of the betatron-produced X-rays for cancer treatment is that they can be concentrated at their maximum intensity on organs deep within the body, such as the stomach and liver. Danger of surface damage, at points where the X-ray beam enters and leaves the body, will be less than with lower energy X-rays. These have their greatest effect

at point of entry into the body which limits their value in treating deep-seated cancers.

The X-rays from the betatron are produced by bombardment of a platinum target with high energy electrons. The high energy electrons themselves have great possibilities for cancer treatment. They offer the possibility of even greater concentration of effect at a point inside the body and of completely using up their energy at that point so none go on to an exit.

The betatron was invented by Prof. Donald W. Kerst of the university's physics department at Urbana-Champaign. He immediately pointed out its cancer-fighting possibilities but research in this direction was delayed during the war.

A push-button controlled instrument