

## MEDICINE

# Speed Mumps Recovery

Preparation of enzyme chemicals made by streptococcus germs swiftly reduces the painful gland swellings of mumps, as well as of other inflammations.

➤ A REMEDY to speed recovery from mumps apparently is at hand. It is a preparation of enzyme chemicals made by streptococcus germs.

Its effectiveness in swiftly reducing the painful swelling of the glands in a man with mumps was disclosed at Springfield, Mass., by Dr. Joseph M. Miller, chief of the surgical service, Veterans Administration Hospital, Fort Howard, Md.

The man with mumps was one of 64 patients who got the enzyme remedy in a trial of a new way to use it. The other 63 patients did not have mumps, but suffered from inflammations due to other infections and also from inflammations and swellings following tooth extractions, bruises, wounds and operations.

The inflammation and swelling were better by the end of the first day of treatment and completely gone by the end of the third day in the majority of the patients. The remedy's score was "excellent" in 45 patients, "good" in 15 and "failed" in four. Of these, three had advanced complicated conditions and one had insufficient treatment.

The remedy is called Varidase, trade name for the preparation of the two streptococcus germ enzymes, streptokinase and streptodornase. Varidase has previously been used by local application to dissolve blood clots and pus in some surgical conditions.

To overcome inflammation, it is given by injection into the muscles. It acts by breaking down the mechanical barrier that the body sets up in response to injury or infection. The barrier is composed of fibrin clots in the tissue spaces around the injured or infected area.

Formation of the barrier is the body's attempt to keep the infection or injury from spreading. Although useful, the barrier also keeps out helpful elements such as red and white blood cells and antibiotics or sulfa drugs.

When streptokinase is given, the barrier is dissolved and the blood cells and anti-germ medicines can get through.

Dr. Miller stressed that antibiotics or sulfa drugs must be given along with streptokinase to stop any germs in the inflamed area. Otherwise, breaking the barrier would allow germs to spread and thus harm the patient. The man with mumps got achromycin, an antibiotic, at the same time he received Varidase.

He was given the treatment for swollen glands under the chin before it was known that he had mumps. The glands on the sides of the jaws had not swollen, but when he developed orchitis the second day, mumps

was suspected and a test confirmed the diagnosis.

This patient had been one of a group getting streptodornase, chemically freed of streptokinase.

"Dornase," as it is called for short, did not help him or any of the other patients getting it. The mumps patient was then given the two enzymes together, along with the antibiotic, and within three days was practically well.

Object of giving dornase alone was to see which of the two enzymes was the active part of the combination.

Kinase turned out to be the active one, but cannot at present be supplied without dornase, because the separation process for isolating pure kinase is so very costly.

A man with face mauled in a fight, another with swollen face and eye swollen shut from sinus infection, others with swellings and inflammation from cellulitis and from bone graft operations were among those helped by Varidase injections into the muscles.

The remedy shows promise also of preventing inflammation and swelling. This feature appeared in the case of a man who had to have many teeth extracted. Those on one side were removed first and his face became very badly swollen. Varidase promptly reduced this. So the remedy was given for three days before the teeth on the other side were extracted. Swelling was barely noticeable after that extraction.

Associated with Dr. Miller in the studies were Drs. John A. Surmonte and Milton Ginsberg of the VA hospital and Frank B. Ablondi of Lederle Laboratories, Pearl River, N. Y., manufacturers of Varidase.

Science News Letter, November 27, 1954

## PSYCHOLOGY

## Stop-Sign Violators Go Straight Ahead

➤ MOTORISTS HEADING straight through an intersection were the most frequent stop-sign violators in a traffic study in the Cook County area.

The investigation, reported by Leo G. Wilkie, showed that 11.2% of the straight-through traffic disobey stop signs, while only 6.4% of right-turning vehicles and 3.9% of left-turning vehicles fail to stop.

Straight-through violations in the morning rush hours accounted for 15% of all violations. More motorists failed to stop before turning in the morning rush than in the evening rush.

Science News Letter, November 27, 1954



**SOLAR-POWERED BATTERY** — Energy from the sun runs this midget experimental radio transmitter, built by Edward Keonjian, General Electric engineer. It uses transistors and selenium solar energy converters, and has a range of about 100 feet.

## PHYSICS

## Tiny Radio Transmitter Powered by Sun's Rays

➤ THE SUN'S rays provide the power for a new experimental radio transmitter the size of a package of cigarettes.

The device, developed by Edward Keonjian in General Electric's Electronics Laboratory, Syracuse, N. Y., uses transistors instead of tubes and has a range of 100 feet. The transmitter is self-contained. When light hits the special selenium solar energy converters, enough current is generated to operate the device.

The range could be increased either by adding more selenium converters or using silicon or germanium instead of selenium.

Science News Letter, November 27, 1954

## INVENTION

## Bicycle Coupler For Dual Riding

➤ A MODERN version of the "bicycle built for two" allows a young lady to smile at and talk with her partner rather than sit and stare at the back of his head as grandmother used to do. James W. Reside of Racine, Wis., won patent No. 2,694,582 for a coupling device that he claims holds the cycles firmly parallel and, when passing over "irregularities" of the road surface, the coupling allows the two vehicles to ride at different levels.

Science News Letter, November 27, 1954