

## MEDICINE

# Salt Injections Ease Pain

**"Phantom" sensations of amputees in missing limbs disappear after injection of salt solution into certain areas of patient's back.**

► PAINFUL "PHANTOM" sensation of amputees sometimes disappears following the injection of salt solution into certain areas of the back near the spinal column, Dr. Bertram Feinstein of the University of California School of Medicine reported to the Robert Jones Club of orthopedic surgeons meeting in San Francisco.

About 95% of amputees have experienced sensations that seem to come from their missing members, appropriately called "phantom limbs." Usually only part of the missing limb is felt: in order of frequency, fingers and toes, hands and feet, other joints, and lastly the areas of the long bones. The sensation is usually described as a mild tingling similar to that felt in any limb when attention is directed to it. Only when the sensation is painful does it become a serious medical problem.

Of 180 amputee subjects studied by Dr. Feinstein and his associates, 35% said that they had experienced phantom pain. The pain varies from annoying tingling to excruciating cramping and may be a major obstacle to rehabilitation.

Dr. Feinstein cited instances in which the pain of a phantom foot was relieved by injection of an irritant solution (6% salt) into certain of the lumbar vertebral interspaces of the back. The solution itself at first caused pain which radiated from the back down into the phantom leg, increasing the pain in the leg and foot. But when these effects subsided, the amputee was left without pain or, in one case, without even a phantom. Amputees with pain-

ful phantom arms were given similar injections higher in the back. That relief is not always obtained was pointed out. Sometimes the pain merely shifts in position.

A theory proposed by Dr. Feinstein to explain these results is based upon a concept of sensory balance in the normal person. Amputation of a limb reduces the inflow of sensory stimuli to a certain part of the spinal cord and brain, upsetting the balance and increasing the individual's susceptibility to pain. Injection of an irritant solution at that level of the spinal cord in effect restores the balance.

Science News Letter, May 26, 1951

## MEDICINE

## Fund for Medical School Support Organized

► A PHILANTHROPIC organization, the National Fund for Medical Education, to provide financial assistance for all the nation's hard-pressed medical schools has been organized.

The undertaking has the sponsorship of industry, the medical profession, organized labor, agriculture, a group of university presidents and 12 scientific and educational foundations.

The American Medical Education Foundation, founded last December by the American Medical Association in Cleveland, will funnel its contributions from doctors through the new organization. These and other grants will be made available immedi-

ately to the nation's medical schools, many of which have large deficits.

Initial support had come from the medical profession and such other groups as 18 leading life insurance companies and many industrial corporations. Starting resources are more than \$1,000,000, toward a \$5,000,000 goal for the first year.

The fund has set up appropriate machinery for distributing the money equitably among the nation's medical schools.

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