

MEDICINE

Treatment for Flat Feet

Procaine hydrochloride is injected through the sole of the foot into the sore, painful places; has been successful in trial cases.

► SUCCESS with an injection treatment given sailors with flat feet or even normal feet that ache from over-exertion is reported by Lieut. Comdr. Herbert E. Hipps and Lieut. Hugh Neely, of the Navy Medical Corps (*Naval Medical Bulletin*, February).

The average hospital stay for this condition was reduced from about 33 days to six days. Usually after the second treatment the men said they wanted to return to duty.

To the surprise of the medical officers, the number of men coming to the hospital complaining of sore feet fell off 50% after the injection treatment was started. Fear of the new "needle" treatment, the officers believe, was enough to discourage the malingerers, misfits, dissatisfied men and those with only a very minor degree of foot discomfort.

The treatment follows a relatively new method of treating sprained ankles and other simple sprains. Procaine hydrochloride, a pain-killing chemical like that used in pulling teeth, is injected through the sole of the foot into the sore, painful places. Then the patient lies face downward with his knees bent to a right angle and the bottoms of his feet are massaged with an alcohol sponge for about five minutes. He then is required to walk up and down about the ward about 25 times, which makes a distance of about a quarter of a mile. After that he is free for the day.

The injections followed by the walking are repeated every third day. When the man is discharged from the hospital he is given a note requesting two weeks' light duty.

Besides speeding recovery, the injection treatment is not followed by nearly so many recurrences as other methods. The success of the treatment, the medical officers state, may be partly due to actual benefit to the foot and partly to the psychological effect on the patient. This last fits in with the 50% reduction in complaints of painful feet.

Stretching of the ligaments is considered the basic, major cause of persistent pain in all overused feet if infectious, degenerative, metabolic and gross injury cases are ruled out. With freedom from

pain after the injection, the patient can continue to walk. This prevents loss of strength and tone in leg and foot muscles during the recovery period and also allows the ligaments to increase in strength since they can be used painlessly.

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MEDICINE

Penicillin Injections Cut From Eight to Three Daily

► THE NUMBER of penicillin injections given patients can be cut from eight to three per day when the mold chemical is mixed with a special gelatin and a chemical of the kind used in nose drops, four University of Pennsylvania medical scientists report in (*Science*, Feb. 23).

The scientists are: William M. Parkins, Marjorie Wiley, Jacob Chandy and Dr. Harold A. Zintel.

The number of injections of penicillin can be reduced because the gelatin and chemical delay the absorption of penicillin, letting it remain in the blood longer. It does not reach as high a peak concentration, however, and in some cases it

may not be an advantage to have blood penicillin concentration kept at a constant level, the scientists point out.

The chemical used was of the type that constricts the small blood vessels. Two such chemicals, both popular for relief of stuffy noses in colds, were tried. Either of these chemicals alone or the gelatin alone was effective in maintaining blood penicillin levels. Chemical plus gelatin had an even better effect. The two chemicals tried were Privine (2 naphthyl-methyl imidazoline hydrochloride) or Neosynephrine (laevo-alpha-hydroxy-beta-methyl-amino-3-hydroxy-ethylbenzene hydrochloride).

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AERONAUTICS

Butterfly Tail on Plane Is Radical Departure

► A STRANGE-LOOKING plane with a V-shaped "butterfly tail" is being seen these days by residents of Wichita, Kans., and nearby communities as it is taken on test flights. The new tail, a radical departure from the conventional inverted T-shaped tail, was installed on an AT-10 trainer plane to investigate the possibilities of simplified structure, the elimination or reduction of compressibility effects at high speeds, and the effect on stability, control, and handling ease, (*American Aviation*, Jan. 1).

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BUTTERFLY TAIL—Stability and control characteristics of this V-tailed Beechcraft are rated "excellent" by test pilots who have flown it.