

MEDICINE

Muscle Weakness Drug

➤ A DRUG for the serious muscle weakness disease, myasthenia gravis, has been tried on more than 75 patients and 59 are still taking it with more benefit than from medicines they had taken before, Drs. Robert S. Schwab, Clare K. Marshall and William Timberlake of Massachusetts General Hospital, Boston, reported in the *Journal of the American Medical Association* (June 25).

The new drug is known by the trade-name Mysuran chloride. It has a longer lasting effect than either neostigmine or Mestinon, two other drugs that have been used in myasthenia gravis. Some patients report fewer side reactions with the new drug than with the older ones.

A few have to take as many doses daily as they did of the other drugs, but report feeling better, stronger and closer to their normal health.

Myasthenia gravis is marked by fatigue and exhaustion of the muscular system with progressive paralysis. The muscles, however, do not waste away. Any muscle of the body may be affected, but those of the face, lips, tongue, throat and neck are especially affected. Eyelids often droop. Pa-

tients may be unable either to chew or swallow.

Before 1934, there was no effective treatment and between 80% and 90% of the patients died within the first two years after the disease started. In that year an English physician, Dr. Mary Walker, discovered that the anticholinesterase drug, physostigmine, and later, neostigmine, were effective in overcoming the muscle weakness temporarily and in keeping the patients alive.

These drugs and the newer Mestinon have been used to treat myasthenia gravis patients since then. Patients take these medicines in pills, but may have to take their pill every hour day and night because the effect wears off so quickly. This and unpleasant side effects make treatment trying.

The new drug's advantage is that it does not have to be taken so often. The patients, however, must have greater care and supervision to guard against over-dosage. None of the drugs cures the condition. The drugs only relieve the symptoms.

Mysuran is made by Winthrop-Stearns, Inc., of New York.

Science News Letter, July 9, 1955

MEDICINE

Human-Tissue Polio Virus

➤ SOLUTIONS TO some of the big problems of poliomyelitis vaccination appear to have been found by a group of University of California scientists.

They reported in *Science* (July 1) development of a way of growing the virus that may eliminate one possible hazard of the vaccine. The method would also make production cheaper and more convenient.

The scientists said they had successfully grown polio virus on the tissue cultures of cells taken from part of human afterbirth. The tissue is the amniotic membrane, the

lining of the sac that surrounds infants in the uterus.

At the present time, polio vaccine is made from virus grown in monkey kidney tissue. Some scientists have suggested that the vaccine made from monkey kidney tissue may sensitize some individuals to kidney protein, with some risk of allergic nephritis.

In addition, the importation of monkeys from India, with elaborate care and operative procedures being required, makes monkey kidney tissue culture expensive and inconvenient.

Cultivation of polio virus on such a human non-organ tissue as the amniotic membrane—long an objective of polio research—apparently would eliminate the sensitization problem.

Use of the method should cut the cost of vaccine production. Amniotic membranes presently are waste tissues, and could be salvaged in clinics and hospitals all over the country. One amniotic membrane will yield about as much virus as one kidney.

The scientists reporting the work, Elsa M. Zitcer, Jorgen Foch and Thelma H. Dunnebacke of the Biochemistry and Virus Laboratory, said all three types of polio virus can be mass produced by the method.

The work was supported by grants from the U. S. Public Health Service, the American Cancer Society, the Rockefeller Foundation and Lederle Laboratories.

Science News Letter, July 9, 1955



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