

MEDICINE

New Pregnancy Test

Gives the answer in only two hours and with 97% accuracy. New test uses rats, of which no shortage is reported, instead of valuable rabbits.

► A NEW TEST that foretells blessed events with 97% accuracy was demonstrated by four physicians of Mt. Sinai Hospital, New York City, at the meeting of the New York State Medical Society in Buffalo. The doctors presenting the test are Dr. Udall J. Salmon, Dr. Samuel H. Geist, Dr. Charles S. Poole, and Dr. A. Austin Salmon.

Speed and low cost are the chief advantages of this new pregnancy test. Its speed may help save the lives of some women.

The doctor making it can tell within two hours whether or not the woman is going to become a mother. Older pregnancy tests required from 48 to 96 hours to complete.

The new test is made with rats instead of rabbits. Widely used in other pregnancy tests, rabbits are now very

expensive, costing as much as \$3.50 apiece when they can be obtained. Increasing use of rabbits for meat has caused such a shortage that in the New York City area it was often impossible for days on end, Dr. Salmon said, to get any for pregnancy tests.

The rats cost from 40 to 60 cents apiece, and a doctor can keep two to four rats, which is all the supply he needs, in a box in his office, Dr. Salmon pointed out. Keeping rabbits for the older pregnancy test is a much more involved and space-consuming procedure. There is no shortage of rats, Dr. Salmon said, adding wryly that he doubts whether these animals will be diverted to food purposes.

The new pregnancy test is based on a new observation. If the kidney excretions of a pregnant woman are in-

jected into an infant rat, a marked engorgement of the blood vessels in the rat's ovaries will occur within two hours after the injection. The older pregnancy tests were based on the development, after injection of the same material, of graafin follicles in the test animal's ovaries. This required about 48 hours. Apparently, Dr. Salmon said, no one looked at the ovaries of the test animal immediately, so that the blood vessel engorgement was missed.

The new test has been used in 948 cases. If the patient is pregnant the chances of a correct diagnosis are 97 or 98%. If she is not pregnant, the test is 100% accurate. With tests using rabbits, on the other hand, there was a one-half or one percent chance of inaccuracy in the case of a non-pregnant woman.

The speed with which the new test gives the answer, as early as two hours, and always within six hours, is especially important in cases of ectopic pregnancy. In such cases, the baby is beginning to develop outside the womb and an operation must be performed to save the mother's life. The earlier the doctor knows that the condition is a pregnancy the earlier he can operate and the better the patient's chances. The test also gives positive results in cases of pregnancy accompanied by hydatid mole or by a certain kind of tumor.

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DONE WITH MIRRORS—With this optical sighting gage invented by General Electric engineers, the sights of a Garand rifle can be correctly adjusted in less than two minutes and without firing a shot. The job used to take up to 13 rounds of ammunition.

ENGINEERING

New Gage Aligns Sights Of Garands Without Firing

► IT'S ALL done by mirrors, without firing a shot. A new precision gage operated by a girl will correctly adjust the sights of each Garand rifle in less than two minutes.

The job formerly took two men twice as long and used up as much as 13 rounds of ammunition on a rifle range. All the rifle now fires during a test is a light ray.

Reflected by mirrors onto a ground glass screen in the image of a cross, the ray permits the operator correctly to position the rifle. Magnified shadows of the front and rear sights are then brought into the same relative positions by adjustment of the rear sight.

The idea for this optical sighting gage was conceived by N. F. Barnes and K. R. Geiser of General Electric's general engineering laboratory. Their colleagues, C. B. Sitterson and William Fears, handled the mechanical engineering and design, respectively.