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A PENICILLIN INJECTOR.

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The discomfort of three-hourly penicillin injections is an obvious disadvantage of this form of therapy, especially in the prolonged course necessary for the treatment of subacute bacterial endocarditis.

The following simple apparatus has been devised and used with success in a Military Hospital for routine penicillin therapy, and is at present being used in a case of subacute bacterial endocarditis. It is a modification of an appliance described recently by Gayar, B.M.J., March 16, 1946, page 394.

The apparatus can be made easily in a few minutes, so breakage does not matter (no Breakage Forms to be rendered!), and nocturnal injections, by a light-fingered Sister, can be performed without waking the patient. The latter is the main advantage and is appreciated by patients on a long course of therapy.

The parts are:

1. A strong intramuscular hypodermic needle (e.g. 5 c.c. serum needle, 21 G × 1½ inches).
2. A piece of stout walled natural rubber tubing (e.g. Size No. 12, bore 7/32 inch and wall 1/16 inch) 2 inches long.
3. A piece of glass tubing (e.g. 5·5 to 6 mm. diameter) 2½ inches long.

The glass tube is sealed and rounded at one end and carefully sealed at the other end, to form a small bulb. The bulb forms the head or handle of the
plunger (fig. 1). The rubber tubing should fit the collar of the needle and the plunger tightly to prevent leakage, but not so tightly that the plunger cannot be moved up and down, like the plunger of a syringe.

![Fig. 1.](image1)

The apparatus is sterilized by boiling. The area to be used is shaved and sterilized (the lateral aspect of the thigh is most suitable) and the needle thrust deeply into the muscle. A collar of collodion is painted round the needle at its entrance through the skin and the apparatus is secured with a collar of adhesive tape. The plunger is pulled back about \( \frac{1}{2} \) inch, an area of the tubing is cleaned and the penicillin injected through the tubing with a syringe and fine needle, care being taken that the needle is inserted diagonally to prevent leakage after the tube has been punctured several times, then the plunger is pushed home (fig. 2). The glass plunger is covered with a swab and strapping until the next injection. It is advisable to remove the injector and needle, re-sterilize it, and change the site once in twenty-four hours. This prevents the area becoming too painful and lessens the risk of sepsis.

Shaving a fairly wide area prevents disturbing a sleeping patient when removing the swab and strapping. An apprehensive patient does not like the idea of an indwelling needle, but after twenty-four hours of three-hourly injections, he welcomes it, and is very pleased to change to the new system.

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