centrifuged and the sediment is resuspended in a measured volume of water or salt solution. This is not true of the so-called synthetic media which contain no protein substances.

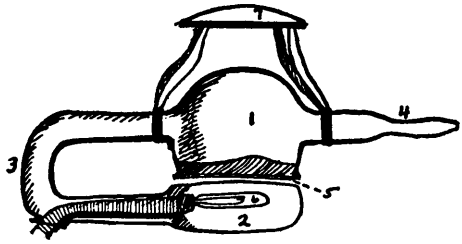
144 (2104)

Demonstration of an instrument for taking repeated blood pressures in rabbits, with report of some experiments.

By H. C. ANDERSON (by invitation).

[*From the University of Minnesota, Minneapolis, Minnesota.*]

In connection with a study of renal insufficiency in rabbits,[1] it became desirable to take a series of blood pressures on the animals. An instrument has been perfected by means of which the blood pressure can be taken in the central artery of the ear. The instrument is composed essentially of three parts; namely, a pressure piece, a "U" tube containing mercury, and a rubber bulb with which to make pressure.



The pressure piece is made of glass. It is composed of an open cup (1) (see drawing) an apposing smooth, slightly convex stage (2), a connecting curved arm (3), and a short glass point (4) by means of which the cup may be connected with the "U" tube. The mouth of the cup is covered by a rubber membrane (5) which, when pressure is made within the cup, bulges against the stage. The rabbit's ear is slipped between the stage and rubber membrane. The stage contains a light

[1] To be reported at a later date.

(6). Above the cup a lens (7) is placed for the purpose of magnifying the stage.

In use, pressure is made within the cup by means of the rubber bulb. The membrane presses against the ear vessel and the pulsations are observed by means of the light transmitted from within the stage. When pulsations cease, the pressure is read in millimeters of mercury on the "U" tube.

Factors Which Vary the Pressure

Age. It was found that age has a definite influence on the pressure. Unless the rabbit is full-grown the pressure is inclined to be low.

Excitation. Anything which excites the animal increases the pressure. Six rabbits which were mildly excited by lifting them from the table by the ears and gently rubbing the ribs showed an average rise of 13.3 mm.

Heat. Warming the ear by any means, or rubbing it with the fingers, causes a definite rise which may be as great as 20 mm. This seems to be because of the vaso-dilation.

Exercise. Almost any small amount of exercise raises the pressure. The ten readings were taken in rapid succession. At the third reading the animal stood up, stretched, and lay down again. As a result the pressure promptly rose 10 mm., but immediately returned to its former level.

The pressure readings must always be made at the same point in the vessel. The pressure decreases as the vessel becomes smaller.

Results obtained. The average systolic readings on various individuals lie largely between 76 and 87 mm. Isolated readings may run 90 or somewhat above and as low as 70. The averages on nine rabbits, representing between 500 and 600 readings, are as follows:

Rabbit 21.....83 mm.	Rabbit 25.....78 mm.	Rabbit 28.....83 mm.
Rabbit 23.....85 mm.	Rabbit 26.....82 mm.	Rabbit 29.....79 mm.
Rabbit 24.....87 mm.	Rabbit 27.....82 mm.	Rabbit 30.....79 mm.

Action of adrenalin. Subcutaneous injection of adrenalin results in a typical rise of pressure beginning from 10 to 20 minutes after the injection.

Sources of error. The greatest source of error seems to be in the changes of vessel diameter due to vaso-motor stimula-

tion. This is controlled largely by using ear muffs to prevent heat radiation.

Other sources are excitement and movement on the part of the animal.

Conclusions.

1. The blood pressure in the central artery of a rabbit's ear under properly controlled conditions ranges from 75 to 90 mm. of mercury.
2. The figures are sufficiently consistent to allow experimental study of the blood pressure.
3. Excitation, exercise and any stimulation tending to dilate the vessels locally increases the pressure above basal figures.
4. Injection of adrenalin shows the typical rise.

ABSTRACTS OF COMMUNICATIONS.

Western New York Branch

Fifth meeting.

Syracuse, New York, February 17, 1923.

145 (2105)

The production of experimental anemia with symmetrical di-isopropyl-hydrazine hydrochloride and related compounds.

By MEYER BODANSKY and HENRY C. HARTMAN (by invitation).

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In its physiological behavior, phenylhydrazine differs very markedly from hydrazine in that it is extremely destructive of red corpuscles. This effect may perhaps be attributed to the phenyl group in the phenylhydrazine molecule. That alkyl substitution products of hydrazine, such as symmetrical di-isopropyl-hydrazine,[1] may produce a very pronounced anemia, is shown by the data in the following table:

[1] This compound was synthesized by H. L. Lochte in the laboratories of J. R. Bailey and W. A. Noyes (*J. Am. Chem. Soc.*, 1921, xliii, 2597). The authors are indebted to Dr. Lochte for supplying them with this compound.