

on a suitable operating board, and a cannula placed in the trachea, thus facilitating the administration of ether, which may be necessary in order to abolish all reflexes. A cannula is inserted in the carotid artery and is attached to the recording apparatus, as described on p. 000 (see Fig. 21). When all is ready, the drum is started at a slow speed, and the clamp on the artery removed. A tracing of the blood pressure showing the individual heart beats is made on the drum. With every respiration, a small change in the pressure is recorded, the pressure being highest during the latter part of inspiration, and falling during expiration.

B. To Show the Effect of Varying the Pumping Action of the Heart on the Blood Pressure.

The vagus nerves on either side of the neck are found in the sheath with the carotid artery. A thread is passed loosely about both. A short bit of normal tracing is made on a slow drum, then one vagus is cut and a minute later the opposite one is severed. This is followed by a marked increase in the blood pressure and a quickening in the heart beat. The peripheral end of the vagus on one side is then stimulated by means of electrodes attached to an induction coil giving a tetanizing current. The heart is slowed or ceases to beat for a short period and the blood pressure falls to zero. The heart soon beats again, for the vagus is not able to inhibit its action for a long period of time (p. 000). This experiment shows that the pumping action of the heart is necessary to maintain the blood pressure, and that an increased rate of the heart is accompanied with an increase in blood pressure, other things remaining equal.

C. To Show the Effect of Varying the Peripheral Resistance on the Blood Pressure.

The stimulation of the splanchnic nerve.

The left splanchnic nerve is exposed just above the supra-renal capsule, and is laid on a pair of electrodes. While taking a normal tracing stimulate the nerve with a weak electrical current and then with stronger currents. A great increase in the blood pressure is obtained, due to the constriction of the vessels of the viscera and the increase in the resistance which they offer to the flow of blood through them (see p. 000).

D. To Show the Actual Changes in the Kidney Vessels Accompanying the Stimulation of the Splanchnic Nerve.

The left kidney is incased in a plethysmograph, which is connected with rubber tubing to a tambour equipped with a writing style. An