

TABLE I.
Summary of Neutralization Tests.*

Immune Serum Used	Virus				
	From	Stomatitis (New Jersey)	Stomatitis (Indiana)	Encephalitis (St. Louis)	Encephalo- myelitis (Western)
Vesicular stomatitis New Jersey strain	Rabbit	S	D	D	D
Vesicular stomatitis Indiana strain	Rabbit	D	S	D	D
Equine encephalomyelitis Western strain	Rabbit	D	D	D	S
Equine encephalomyelitis	Rabbit†	D	D	D	D
Eastern strain	Horset	D	D	D	D
Encephalitis St. Louis Type	Monkey	D	D	S	D
Normal serum					
Control	Rabbit	D	D	D	D

* = At least 84 mice or 24 guinea pigs were employed for each virus tested.

S = All animals inoculated with serum-virus mixture survived.

D = All animals inoculated with serum-virus mixture succumbed to experimental infection.

† = Both these antisera neutralized the eastern encephalomyelitis, but not the western type virus.⁴

ence of virus by intracerebral injection into animals.† For the stomatitis and the encephalitis virus mice were employed, and for the encephalomyelitis virus guinea pigs.

The results as tabulated showed that a particular virus was neutralized only by its homologous antiserum. Hence no cross-immunity reactions occur between any of the viruses studied. Webster and Fite¹ have stated that the results of animal inoculation tests indicate that encephalitis virus is not related to equine encephalomyelitis or vesicular stomatitis viruses. The results of the serological tests here reported are in accord with their observations.

7188 C

Metabolism Masks for Dogs.

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In energy metabolism experiments in which the same dogs are used for a year or more, it is desirable to have masks which are sufficiently durable to be used for all of the experiments, and which

† All operative procedures were performed under ether anesthesia.

fit the individual animal, therefore causing a minimum of dead space. These ends are readily accomplished by making the masks on casts of the heads to be fitted, by a method similar to that which is used by makers of orthopedic appliances.

The lower jaw of the animal is padded from the angles to the snout with a piece of felt, one half inch in thickness. The felt is secured by means of a gauze bandage which also binds down the ears. Stockinette is drawn over the animal's head, and plaster bandages are then applied until a mould varying from one-eighth to one-fourth inch in thickness has been made. After the plaster has set sufficiently the mould is readily pulled off if its posterior portion has not been applied too tightly. The felt pad and stockinette are removed from the mould, which is allowed to harden and is then filled with plaster of Paris mortar. Into the mortar a piece of gas pipe is inserted, to serve later as a handle. When the plaster has hardened, the mould is cut away, leaving a cast of the dog's head. Any modifications desired in the final mask, such as providing more space for the ears, or lengthening the mask posteriorly, can be made at this time by applying fresh plaster to the cast in the appropriate places. Space to permit the animal to open its mouth slightly has already been provided by padding the lower jaw before making the mould.

To enlarge the cast so that the final mask will not be too tight, 4 layers of stockinette are pulled over it and tied at the ends (Fig. 1, right). A piece of light steel tubing, about 57 mm. in inside diameter is then placed in front of the cast. The next layer of stockinette is drawn over the previous ones and over the tubing. It is tied in 3 places, in front of the tube, at the posterior end of the tube, and around the handle behind the cast. The stockinette is then painted

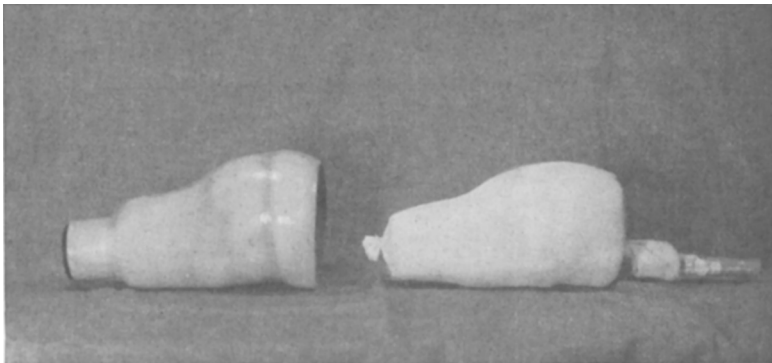


FIG. 1.

repeatedly with a 10% solution of X-ray films in acetone until the surface remains smooth after drying. The writer uses discarded "safety" films, freed of emulsion with a brush and warm water. These dissolve quickly in acetone. Three more layers of stockinette are drawn over the cast, each being painted individually in the same manner. After drying for a day, the mask is cut off in front of the steel tube and behind the cast. The cast is removed piecemeal with chisel and hammer. The 4 inside layers of stockinette which were not painted are pulled out. Several rounds of 2-inch bandage can be wrapped about the posterior end of the mask, and painted on, to remove slight corrugations due to the ribs of the stockinette (Fig. 1, left). The inside of the mask is also painted with the X-ray film solution. Leaks which can be demonstrated under pressure occur only between the steel tube and the first layer of stockinette. They are readily closed by applying shellac after cutting off the mask so that the steel tube extends out about one-fourth of an inch. After the mask has stood above a warm radiator for a day it is practically odorless.

A No. 12 rubber stopper fits the steel tube, and through it the large inlet and outlet tubes pass. Posteriorly an air tight connection to the neck of the dog is made by means of a bandage of 6-inch dental dam.¹ Applying a gel of gum ghatti² or tragacanth to the clipped neck of the animal enables one to obtain a satisfactory connection without applying the bandage too tightly.

7189 C

Spread of Poliomyelitis Virus Along Nerve Fibers of the Sympathetic System.*

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Flexner and Lewis¹ were the first to show that poliomyelitis could be produced in monkeys by the intranasal instillation of the virus. Faber² states that the virus is absorbed by way of the olfactory bulb

¹ Boothby, W. M., and Sandiford, I., *Am. J. Physiol.*, 1923, **66**, 93.

² Gaebler, O. H., *J. Exp. Med.*, 1933, **57**, 349.

* Expenses defrayed in part by a grant from the Marion R. Spellman Fund, The Cleveland Foundation.

¹ Flexner, L., and Lewis, P. A., *J. Am. Med. Assn.*, 1910, **54**, 1140.

² Faber, H. K., *Medicine*, 1933, **12**, 83.