irritation. Five of these subjects had already been exposed to a patient with a cold, and, having developed no symptoms of a cold after an incubation period of 5 days, were then inoculated directly with the nasal secretions of another donor.

Our experiments on a group of 24 presumably susceptible subjects, when kept in an environment arranged for maximum comfort, and exposed to sufferers from a common cold in the early stages, suggest that the common cold is not transmissible under these conditions. We expect to increase the number of subjects exposed and the number of donors to secure results of statistical value. The predisposing factor or factors responsible for the common cold are being investigated.

7290 P

Experimental Encephalography with Anesthetic Gases.*

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Dogs prepared by previously performed lumbar laminectomies were found most suitable for experimental encephalography studies. Intravenous sodium amytal was given in sufficient amount to quiet the animal so that it could be handled and X-rayed easily, but not in high enough dosage to obscure painful or possible deeper narcotic effects of the anesthetic gases used for encephalographic injection. A lateral skull plate was first obtained. Then the dog was strapped on its side to a special table, the head end of which could be tilted to a 42° angle and which in all positions allowed maximum opportunity both to manipulate and observe the animal's reactions. Next with aseptic technique and local anesthesia a lumbar puncture was performed. The table was elevated and intermittently between collections of spinal fluid the gas to be tested was injected slowly by syringe into the subarachnoid spaces. Rotation of the head aided drainage. A 3-way petcock attached to the injecting syringe and connected by tubing to the controlling valve

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TABLE I.

Gas	No. Cases	X-Ray Results: Ventric. Filling	X-Ray Results: Gas Present	Handling	Danger	Irritation	Narcotic Effects: Sedative	Narcotic Effects: Anesthetic	Narcotic Effects: Recovery	After Effects: Post-inj. Whine, Struggle	After Effects: Depression	After Effects: Hind Leg Weakness or Paresis	Deaths
Air	21	18	7 days	Easy	Safe	20	0	0	—	10	21 (1-3 days)	2	0
Ether	7	?	?	Difficult	Dangerous	7	2	4	10-15 min.	1 (1-?)	0	5	1
Divinyl Oxide	7	5	15-18 min.	”	Very dangerous	6	—	7	10-15 min.	2	0	3	2
Ethyl Chloride	10	5 (2-?)	45 min.	Fairly easy	Very dangerous	10	—	10	20-30 min.	1	0	1-?	1
Vinyl Chloride	5	3 (1-?)	25 min.	Easy	Slightly dangerous	5	?	1	20	0	0	0	0
Nitrous Oxide	5	4	2-3 hr.	”	Safe	1-?	2 (2-?)	0	1-2 hr.	0	0	0	0
Ethylene	7	2 (2-?)	2 hr.	”	”	1-?	4 (1-?)	1	1-2 hr.	1	0	0	0
Acetylene	6	1 (1-?)	30 min.	”	”	2 (late)	2 (2-?)	2	20 min.	4	0	0	0

of the gas tank afforded a simple and convenient closed system for handling the gases. Replacement of the spinal fluid by the gas was carried as far as possible—usually until bubbles returned through the needle. Then the needle was withdrawn and another lateral skull plate was taken. If the ventricular outline appeared, other views were taken to follow the course of the injection. Throughout the entire procedure, pulse, respiration, color, reflexes, tonus, etc., were observed closely and recorded. Repeated encephalograms were obtained on the same animal to compare under as nearly identical conditions as possible the effects of the various gases. Air injections were initially performed in all cases as a standard by which the results obtained with the anesthetic gases could be compared.

With improvements in technique, standardization of routine and experience this method proved quite satisfactory for determining the following information on the various anesthetic gases: (1) ease of handling; (2) early irritative effect; (3) sedative or narcotic effect; (4) after effects, both immediate and late; (5) safety; and (6) X-ray results, including time of absorption.

Using this method, 19 dogs were employed to test the following anesthetic gases: ether, divinyl oxide, ethyl chloride, vinyl chloride, nitrous oxide, ethylene, and acetylene. Special heating coils were used to volatilize the ether and divinyl oxide to body temperature before injection. The results obtained are summarized in Table I. Ethylene and nitrous oxide, because of their non-irritative action, safe sedative effect, lack of after effects and good X-ray results are being studied further.

7291 P

Studies upon Secretory Activity of Glands of the Oral and Pharyngeal Mucous Membranes.*

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These studies were undertaken to extend our very limited knowledge relating to the secretory activity of the small mucous and

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