

9. Giammona, S. T., and Modell, J. H.: Drowning by total immersion: Effects on pulmonary surfactant of distilled water, isotonic saline and sea water, *Amer. J. Dis. Child.* 114: 612, 1967.
10. Laver, M. B., and Seifen, A.: Measurement of blood oxygen tension in anesthesia, *ANESTHESIOLOGY* 26: 73, 1965.
11. Comroe, J. H., Jr.: *Physiology of Respiration*. Chicago, Year Book Medical Publishers, Inc., 1963, pp. 147-159.
12. Jalowayski, A., Lauterbach, R., Smith, B. E., and Modell, J. H.: A computer program for determination of acid-base and oxygenation variables in adult and infant blood samples, *J. Lab. Clin. Med.* (in press).
13. Theye, R. E., and Tuohy, C. F.: The value of venous oxygen levels during general anesthesia, *ANESTHESIOLOGY* 26: 49, 1965.
14. Comroe, J. H., Jr.: *Physiology of Respiration*. Chicago, Year Book Medical Publishers, Inc., 1965, p. 19.
15. Mainland, D.: *Elementary Medical Statistics*. Second Edition. Philadelphia, W. B. Saunders, 1963, pp. 290-293.
16. Modell, J. H., Moya, F., Ruiz, B. C., Showers, A. V., and Newby, E. J.: Blood gas and electrolyte determinations during exposure to ultrasonic nebulized aerosols, *Brit. J. Anaesth.* (in press, February 1968).
17. Colebatch, H. J. H., and Halmagyi, D. F. J.: Reflex pulmonary hypertension of fresh water aspiration, *J. Appl. Physiol.* 18: 179, 1963.

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### Anesthesia

**PORPOISE ANESTHESIA** Anesthesia was induced by injecting thiopental 10 mg./kg. into the tail fluke veins of the porpoise. The trachea was then intubated without the use of succinylcholine because of the reported absence of plasma cholinesterase in these animals. Following thiopental, no more than 2 per cent halothane vaporized with a Mark 2 vaporizer was necessary for induction. Swimming movements of the free tail flukes were found to be a most reliable indicator of depth of anesthesia. During induction, swimming movements disappeared after loss of strong corneal and eyelid reflexes. When these movements disappeared, the animal was sufficiently anesthetized for surgery to begin. A Bird Mark 9 respirator was used for ventilation. The use of nitrous oxide was discontinued after three trials, because it was not reliable as an anesthetic agent and when pushed to high concentrations was associated with cyanosis. The halothane technique was used satisfactorily in 18 porpoises. (Ridgway, S. H., and McCormick, J. G.: *Anesthetization of Porpoise for Major Surgery, Science* 158: 510 (Oct.) 1967.)

**FULMINANT HYPERTHERMIA** Rapid, progressive hyperpyrexia is becoming a cause for concern. It occurred in 12 patients, ten of whom did not survive the acute episode. Conventional anesthetic drugs, including thiopental sodium, succinylcholine chloride, nitrous oxide, and halothane, were employed in most of the patients. No specific signs or symptoms heralded the onset of the hyperthermia. Usually the first observation was that the skin of the patient felt very hot; cardiovascular collapse developed shortly thereafter. At the moment, the primary treatment is prophylactic: continual monitoring of body temperature will detect the beginning of increases in body heat and permit therapy before the condition becomes irreversible. When the syndrome develops, drastic measures must be instituted at once to reduce body temperature, provide high concentrations of oxygen with hyperventilation, and combat metabolic acidosis. (Stephen, C. R.: *Fulminant Hyperthermia during Anesthesia and Surgery, J.A.M.A.* 202: 178 (Oct.) 1967.)