

overflow valve on the mask Y-piece to make the most widely-used machine also the most economical. As a Madison wag might put it, "now is the time for Wayne to make hay while the eager sun shines." Others whose task will not be so simple, it is hoped, will carefully consider how best they can apply the principles so clearly defined here. However, they are unlikely to do so unless anesthesiologists express a keen interest in obtaining the economy Dennis Jackson sought so diligently.

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#### Reference

1. Jackson, D. E.: New method for production of general analgesia and anesthesia with description of apparatus used, *J. Lab. Clin. Med.* 1: 1, 1915.

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### Anesthesia

**HYPOTHERMIA** A marked decrease in adrenocortical secretions was noted in dogs during extracorporeal circulation and deep hypothermia. After extracorporeal rewarming, the blood levels of these compounds increased toward control levels. The rate of return varied according to the thermal level and the type of steroid. These observations illustrate the selective influence of cold per se on the enzyme systems involved in adrenocortical steroid biogenesis and that the C-21 steroid synthesis is more sensitive than the C-19 steroid synthesis. (Milcu, S. M., and others: *Effect of Extracorporeal Circulation and Deep Hypothermia on Adrenocortical Secretion*, *J. Endocr.* 80: 1174 (June) 1967.)

**MAGNESIUM NARCOSIS** Two human subjects were given  $MgSO_4$  by intravenous infusion, to cause a tenfold increase in plasma magnesium concentration. This caused profound skeletal muscle relaxation, ECG evidence of slowing of atrioventricular conduction, but no loss of consciousness. The patients remained alert, felt pain, could see and hear normally, and subsequently recalled the experience correctly. Despite a widespread acceptance of the concept of magnesium narcosis, it has never been proven to occur in man. These experiments indicate that general anesthesia cannot be provided by parenteral magnesium. (Somjen, G., Hilmy, M., and Stephen, C. R.: *Failure to Anesthetize Human Subjects by Intravenous Administration of Magnesium Sulfate*, *J. Pharmacol. Exp. Ther.* 154: 652 (Dec.) 1966.)

**FETAL HEART RATE** A correlation was established between fetal heart rate and fetal scalp acid-base values during labor. When scalp blood pH was greater than 7.20, the infant was likely to be born with a low Apgar score (mean 3.6). Of 23 fetuses with acidosis, two were stillborn and one died neonatally. In the presence of clinical evidence of fetal distress, measurements of fetal blood acid-base status improved prognostic accuracy threefold. The importance of fetal heart-rate changes during contractions was confirmed. Two abnormal heart-rate patterns were distinguished, those being associated with low Apgar score. A correlation was also found between abnormal fetal heart-rate patterns and fetal acidosis. All other heart-rate patterns were associated with high mean Apgar scores. Fetal heart-rate monitoring and fetal blood acid-base measurement are valuable in assessing fetal conditions and are complementary to each other. (Wood, C., and others: *Fetal Heart Rate and Acid-Base Status in the Assessment of Fetal Hypoxia*, *Amer. J. Obstet. Gynec.* 98: 62 (May) 1967.)