ARTIFICIAL VENTILATION Forty-four out of 61 patients survived following prolonged artificial ventilation through a tracheostomy by use of a volume-cycled respirator with positive-negative airway pressures. (*Björk, V. O., and Engström, Carl-Gunner: Treatment of Ventilatory Insufficiency by Tracheostomy and Artificial Ventilation, J. Thoracic Surg. 34: 228 (Aug.) 1957.*)

PULMONARY FUNCTION Following thoracotomy there is a marked decrease in vital capacity, a restriction in lung volume, and a depression of the patient's end-expiratory position. These changes persisted during the first three weeks and receded in the fourth to sixth weeks following surgery. (*Gorlin, R., and others: Effects of Thoracotomy on Pulmonary Function; Patients with Localized Pulmonary Disease, J. Thoracic Surg. 34: 242 (Aug.) 1957.*)

MECHANICAL HEART MASSAGER To obviate fatigue of the operator in cardiac resuscitation cases requiring prolonged massage, a mechanical massager has been developed. Basically, it consists of zipper-type bag containing inflatable pouches which can be applied snuggly over the heart. A motor driven piston pump rhythmically inflates and deflates the bag with air, producing clinically effective cardiac compression when tested on dogs. (*Vineberg, A.: Mechanical Heart Massager, Canad. M. A. J. 77: 495 (Sept. 1) 1957.*)

CLOSED CHEST DEFIBRILLATION Using a single application of 60-cycle alternating current in 401 experiments with hand electrodes on the chest wall, 400 dogs were defibrillated and 318 were sent to their cages alive. In man, the current used is 5 amperes; the voltage, 480 for adults and 240 for children; and the duration, 0.25 second. Two patients were successfully defibrillated using closed chest defibrillation. (*Kouwenhoven, W. B., and others: Closed Chest Defibrillation of Heart, Surgery 42: 550 (Sept.) 1957.*)

ACIDOSIS Design and results of experimental use of a simple De Wall type oxygenator and finger pump on 23 dogs is presented. Since mild acidosis increased oxygen utilization by tissues due to its effect on the oxygen dissociation curve of hemoglobin, it was allowed to occur. (*Williams, W. T.: Physiologic Observations During Complete Cardiopulmonary Bypass Employing a Pump Oxygenator, South. M. J. 50: 1038 (Aug.) 1957.*)

PULMONARY BLOOD FLOW In dogs anesthetized with chloralose, pentobarbital, or not anesthetized and made apneic with succinylcholine, the alveolar dead space and alveolar-arterial carbon dioxide tension differences were measured. The lung of the normal supine dog was not uniformly perfused; absence of flow in up to 20 per cent of alveoli was found. Small pulmonary emboli resulted in an interruption of blood flow in about one-third of ventilated alveoli. Epinephrine increased and hypoxia decreased the anatomic dead space. (*Severinghaus, J. W., and Stupfel, M.: Alveolar Dead Space as Index of Distribution of Blood Flow in Pulmonary Capillaries, J. Appl. Physiol. 10: 335 (May) 1957.*)

COLD AND BLOOD PRESSURE Venous and arterial blood pressures were measured in young men suddenly exposed to cold. Both pressures rose. The combined rise increases the work of the heart and may explain why cold precipitates original attacks. (*Keatinge, W. R., and McCance, R. A.: Increase in Venous and Arterial Pressures During Sudden Exposure to Cold, Lancet 2: 208 (Aug. 3) 1957.*)

DEXTRAN AND BLOOD VOLUME Dextran was infused intravenously into volunteer patients. Blood volume was measured by the iodine labelled human serum technique. Fifty cubic centimeters of 6 per cent Dextran increased the blood volume an equivalent amount and 10 per cent Dextran had a correspondingly greater effect. In four hours the excess blood volumes were reduced by 20 per cent. (*Koster, K. H., and others: Blood Volume Changes after Infusion of Dextran Solutions, Lancet 2: 262 (Aug. 10) 1957.*)