

equally, if they are large the dependant lung has the poorest ventilation. (Steinmann, E. P.: *Bronchspirometric Studies in the Lateral Position*, *Beitr. Klin. Tuberk.* 128: 159 (July) 1964.)

RESPIRATORY OXYGEN Oxygen consumption was 1.8 ml./liter of ventilation in patients with normal weight. In patients with a weight of 30 kg. on the thorax and abdominal wall, consumption was 3.4 ml., in patients with adiposity 2.9 ml., in Pickwickians 25.7 ml. and in emphysematous patients without respiratory insufficiency 17.8 ml. Respiratory insufficiency is not caused by adiposity but hypoventilation and hypercapnia develop in adipose patients with even slight degrees of bronchial stenosis because they have a higher need for oxygen. In bronchial stenosis, emphysema and the Pickwickian syndrome, the respiratory center is less sensitive to carbon dioxide. (Scherrer, M.: *Oxygen Consumption and Arterial Carbon Dioxide Tension in Normal Patients, Adiposity and Emphysema Before and During Voluntary Hyperventilation*, *Helv. Med. Acta* 31: 111 (July) 1964.)

NEWBORN VENTILATION Newborns and infants have a higher sensitivity of the respiratory center than adults and the slope of the sensitivity curve is steeper. The greatest difference exists between newborns and children up to two years but even after six years values do not reach those of adults. Newborns and small children have a lower base reserve. Babies have an apnea point of 24 mm. P_{CO_2} , pH 7.57 and bicarbonate 19.2 mEq. There is a decrease in respiratory sensitivity during sleep depending on the depth of sleep. Babies can tolerate 2 per cent carbon dioxide inspiratory concentration for only 5 minutes without signs of carbon dioxide narcosis. (Grusz, K. J.: *Sensitivity of the Respiratory Center in Children up to 6 Years*, *Pflüger. Arch. Ges. Physiol.* 280: 193 (June) 1964.)

THORACOTOMY Acid-base studies were performed during lung operations. With manual ventilation there is more fluctuation in pH and P_{CO_2} and respiratory acidosis may occur. Respiratory acidosis is a consequence of premedication and relaxants up to two hours

after operation; thereafter, it is an indication of complications (atelectasis, bronchopneumonia). Using the nomogram of Engström-Herzog with the Engström respirator, alkalosis occurs during operation. Respiratory alkalosis on the first and second day may be a sign of hypoxia. Metabolic acidosis is found consequent to shock or hyperventilation. Metabolic alkalosis may be compensatory due to respiratory or metabolic acidosis during or after surgery. Metabolic alkalosis must be avoided because of the known dangers of hypoventilation after surgery. (Quarz, W.: *Gas Exchange and Metabolic Disturbances During and After Lung Operations*, *Praxis Pneumol.* 14: 521 (Aug.) 1964.)

SMOKING One cigarette has the same effect as work of 20-25 watts in smokers and 10-15 watts in nonsmokers on blood pressure, work of the left ventricle, and pulse frequency. In coronary insufficiency, half a cigarette can do the same as work, cold, or fright in causing an attack. (Klensch, H.: *Effect on Circulation and Strain to the Heart in Smoking Cigarettes*, *Arch. Kreislaufforsch* 44: 1 (June-July) 1964.)

SHOCK Continuous infusion of angiotensin II in normotensive cat preparations failed to produce a sustained increase of ventricular contractility. In contrast, norepinephrine consistently produced a large sustained improvement in ventricular performance. Responses of preparations in which mean aortic pressure was reduced to 35-45 mm. of mercury for one hour or less were comparable to those seen in the normotensive preparations. Norepinephrine response in the group subjected to hypotension up to 90 minutes was similar to that of the group in which hypotension was maintained for a longer period. (Downing, S. E.: *Effects of Angiotensin II and Norepinephrine on Ventricular Performance During Oligemic Shock*, *Yale J. Biol. Med.* 36: 407 (June) 1964.)

ANTIEMETIC In a double-blind study, trimethobenzamide (Tigan) hydrochloride 200 mg. and placebo were administered intramuscularly in random order immediately after induction of anesthesia to 60 children ranging in age from 1½ to 12 years undergoing adeno-

tonsillectomy. Postoperatively, 10 per cent of patients receiving trimethobenzamide had symptoms of nausea or vomiting as compared with 47 per cent of those receiving placebo, a statistically significant difference. The duration of effect of trimethobenzamide is estimated to be between 3 and 4 hours. Excessive drowsiness was the only side effect noted; however, this was probably not drug related since it was observed more frequently in the placebo patients. The routine use of trimethobenzamide as prophylaxis against postoperative vomiting is warranted in adenotonsillectomies, since the incidence of emesis was significantly reduced and serious side effects were not encountered. (Marcus, P. S., and Ettenberg, M.: *Antiemetic Prophylaxis in Adenotonsillectomies*, J.A.M.A. 189: 695 (Aug. 31) 1964.)

BLOOD TRANSFUSION Homologous serum jaundice occurs in 0.3 per cent to 1 per cent of all people receiving blood, involving one of every 200 transfusions. The acceptable uses of blood should be scrutinized, and hospital transfusion practices reviewed by an appropriate committee. In the usual anemic patient, a hemoglobin level of 10 g. per 100 ml. or less justifies transfusion. In a patient receiving a general anesthetic, a safe hemoglobin level is believed to be 10 g. per 100 ml.; below this level a transfusion is not questioned. Hemoglobin of 8 g. per 100 ml. or less justifies transfusion in the usual obstetrical patient. However, because isosensitization producing hemolytic disease of the newborn is always possible, perhaps transfusions should never be given to obstetrical patients who have iron deficiency anemia and hemodilution of pregnancy as their only problem. Rather, reliance should be placed on the recuperative powers, with iron therapy, of the average young woman. (Walz, D. V.: *An Effective Hospital Transfusion Committee*, J.A.M.A. 189: 660 (Aug. 31) 1964.)

HYPERBARIC OXYGENATION Observations in nine patients with clinical tetanus revealed active regression of symptoms following hyperbaric oxygen therapy. Progression of the disease was arrested and reversed, and seizures were reduced. The improved mental clarity and cooperation of these patients re-

sulted in better control of respiratory problems and nutritional requirements. The need for tetanus antitoxin and tracheotomy was avoided. The mechanisms by which hyperbaric oxygen exerts its effect are probably suppression of tetanus bacteria by the penetration of high oxygen tensions into areas of anoxia, thereby preventing toxin formation; direct oxidation of the toxin; and a beneficial effect on the diseased nerve cells by high oxygen partial pressure. No apparent ill effects were noted during therapy, although treatments were interrupted at 15 to 30 minute intervals as prophylaxis against oxygen toxicity. (Pascale, L. R., and others: *Treatment of Tetanus by Hyperbaric Oxygenation*, J.A.M.A. 189: 408 (Aug. 10) 1964.)

OXYTOCIC DRUGS A group of 1,459 parturient women were the subjects of a controlled double-blind study assessing the effects of oxytocin, methylergonovine maleate and a placebo upon the fourth stage of labor. Although patients in the placebo group had a higher incidence of hemorrhage and more often required additional treatment in the form of an oxytocic agent, 88 per cent of this group had no difficulty. Methylergonovine maleate was the agent most effective in preventing postpartum hemorrhage. Postpartum blood pressure rises occurred in all three groups, most frequently following methylergonovine maleate and least often following placebo. In patients with toxemia of pregnancy, methylergonovine maleate was associated with a high incidence of severe pressor responses. In patients with toxemia, if an oxytocic agent is required, oxytocin is the drug of choice. (Howard, W. F., and others: *Oxytocic Drugs in Fourth Stage of Labor*, J.A.M.A. 189: 411 (Aug. 10) 1964.)

CARDIOVERSION Patients were prepared with quinidine sulfate for a minimum of 18 hours, and digitalis was temporarily withheld until reversion was completed. Patients were anesthetized with intravenous thiopental sodium. They received the precordial electroshock after anesthesia was established, and awakened when normal rhythm had occurred, anesthesia time being three to seven minutes. This short-duration anesthesia proved to be no