

striction. The net effect of the mixture was no significant change in CO, but a 60 per cent increase in PVR and a 20 per cent decrease in SVR. An increased PVR and decreased SVR could alter the magnitude of left-to-right shunts, leading to misinterpretation of cardiac catheterization data. (Goldberg, S. J., and others: *The Effects of Meperidine, Promethazine, and Chlorpromazine on Pulmonary and Systemic Circulation*, *Amer. Heart J.* 77: 214 (Feb.) 1969.)

HYPERVOLEMIA Deliberate hypervolemia is effective in restoring cardiac output and renal blood flow to normal during maintained hypotension. The accompanying acidosis is also mitigated and the diminished clot-tensile strength is restored. (Shaftan, G. W., and others: *Hypovolemia during Ganglionic Blockade Hypotension*, *Surgery* 65: 321 (Feb.) 1969.)

BLOOD CLOTTING The clotting time of human plasma and blood could be accelerated by contact with human skin, the greatest activity being associated with those areas rich in sebaceous secretions. Cleansing with alcohol reduced this clot-promoting ability and rubbing cleansed skin or areas rich in sebaceous secretion restored it. (Ogston, D., and others: *Studies on the Clot-promoting Effect of Skin*, *J. Lab. Clin. Med.* 73: 70 (Jan.) 1969.)

Respiration

INTERCOSTAL MUSCLE ACTIVITY No evidence of reciprocal electrical activity in internal and external intercostal muscles of the rabbit could be shown during quiet breathing by use of clip electrodes. The greater part of the expiratory phase was characterized by slight activity of both internal and external intercostals. Inspiration was accompanied by continuous activity in both sets of muscles until the last 20 to 40 msec of this phase. (Boyd, W. H.: *Electrical Activity of Intercostal Muscles during Quiet Breathing in Rabbits*, *Canad. J. Physiol. Pharmacol.* 46: 749 (Sept.) 1968.)

PULMONARY FUNCTION Pulmonary function of infants and children was studied by measurement of alveolar ventilation and alveolar-arterial gas tension differences for O₂, CO₂, and N₂. The increased ventilation in these subjects was effective in eliminating CO₂, but there was evidence of considerable unevenness of distribution of ventilation-perfusion ratio (\dot{V}_A/\dot{Q}). A measure of \dot{V}_A/\dot{Q} unevenness was obtained by the use of the urine-alveolar nitrogen tension difference. It is likely that under the prevailing conditions of hyperventilation and hypoperfusion, maldistribution of perfusion is a major abnormality. Uneven distribution of perfusion is probably due to the effects of gravity enhanced by low pulmonary arterial pressure and blood flow. This represents an exaggeration of the normal physiologic overperfusion of the dependent parts of the lungs. (Lees, M. H., and others: *Ventilation Perfusion Relationships in Children with Heart Disease and Diminished Pulmonary Blood Flow*, *Pediatrics* 42: 778 (Nov.) 1968.)

ABTRACTER'S COMMENT: This study presents excellent scientific confirmation that patients with congenital heart disease may also have significant respiratory limitations. Significant derangements in either of these two vital systems cannot be managed without careful attention to the other.

ATMOSPHERIC OXYGEN The outline of the evolution of oxygen now seems clear, although argument and study will continue for many years to establish the details and the precise dating of the various stages. We see a remarkable chain of events, many of them irreversible, and most depending critically on the physical and chemical properties of the basic chemical substances of which the earth is composed. Each stage in the development of life is based on previous changes and often, the attainment of the new stage makes continuation of the previous changes impossible. Thus, we can never go back. If life were to be destroyed today, it could not be restarted unless the condition of the earth were to revert to that of at least 3,000 million years ago. We sit at the apex of a pyramid of development lasting 4,500 million years and man is