of non-hibernating homeotherms, including man, during hypothermic states. (*Kent, K. M., and Peirce, E. C. II: Acid-base Characteristics of Hibernating Animals, J. Appl. Physiol. 23: 336 (Sept.) 1967.*)

PULSATILE BLOOD FLOW A mechanical device was made which permits blood flow to be pulsatile or non-pulsatile while preserving autoregulatory mechanisms. When renal blood flow is deprived of its pulsatile characteristic, mean pressure and volume of flow are unchanged. There is an increase in water and sodium reabsorption, indicating that de-pulsation affects tubular function. (*Many, M., and others: The Physiologic Role of Pulsatile and Non-pulsatile Blood Flow, Arch. Surg. 95: 762 (Nov.) 1967.*)

HYPOXIA AND CIRCULATION Circulatory responses to breathing gas mixtures of low oxygen content were studied in trained conscious dogs in which electromagnetic flowmeters had been implanted, and also in healthy human volunteers. In dogs systemic hypoxia caused tachycardia, increased aortic blood flow, hypertension and hypocapnia. In man, changes attributable to hypoxia were tachycardia, increases in stroke volume and cardiac output, and decreases in peripheral vascular resistance and arterial P_{CO_2}; surprisingly, there was no change in mean arterial blood pressure. Since in dogs hypertension during hypoxia is mediated via the carotid body, it is postulated that this reflex mechanism is either relatively weak or modified by other factors in man. (*Kontos, H. A., and others: Comparative Circulatory Responses to Systemic Hypoxia in Man and in Unanesthetized Dog, J. Appl. Physiol. 23: 381 (Sept.) 1967.*)

BLOOD PRESSURE The errors in indirect blood pressure measurement (sphygmomanometry) and recommendations for overcoming these errors are discussed. The inflatable bag should be 20 per cent wider than the diameter of the arm. If the cuff is too narrow, the blood pressure reading may be erroneously high. The inflatable bag should be long enough to go halfway around the arm and should be applied directly over the artery. Both mercury and aneroid manometers are satisfactory if working properly. The stethoscope should be applied firmly but without pressure over the artery. Systolic pressure is defined as that pressure at which the sound is first heard. If palpatory systolic pressure is higher, it should be recorded as systolic pressure. Diastolic pressure is that pressure at which muffling of auscultatory sounds first occurs. In the presence of shock, indirect blood pressure readings may be falsely low, and direct arterial reading is necessary. (*Kirkendall, W. M., and others: Recommendations for Human Blood Pressure Determination by Sphygmomanometers, Circulation 36: 980 (Dec.) 1967.*)

HYPOXIA AND CEREBRAL BLOOD FLOW Cerebral blood flow and cerebral carbohydrate metabolism were studied in nine conscious volunteers during inhalation of 7 per cent oxygen. Hypocarbia was preventted by addition of carbon dioxide to the inspired gas. Changes in cerebral hemodynamics included an increase in cerebral blood flow from 45.0 to 77.1 ml./100 Gm./minute and a decrease in cerebral vascular resistance from 1.8 to 1.0 mm. Hg/ml./100 Gm./minute. Because of the low arterial oxygen tension (34.6 mm. Hg) several alterations in cerebral carbohydrate metabolism including increases in cerebral glucose uptake and lactate production were observed. Arterial and cerebral venous excess lactate did not appear during hypoxia. Electroencephalographic changes suggestive of hypoxia occurred in only two subjects. The most sensitive indices of cerebral hypoxia seemed to be changes in rate of glucose uptake and in the relative amounts of glucose accounted for by lactate production and by oxygen consumption. (*Cohen, P. J., and others: Effects of Hypoxia and Normocarbia on Cerebral Blood Flow and Metabolism in Conscious Man, J. Appl. Physiol. 23: 183 (Aug.) 1967.*)

CAROTID ARTERY SURGERY During carotid artery reconstruction in 200 patients with symptomatic extracranial stenosis, the anesthetic technique used consisted of enhancement of cerebral blood flow by hyper-