of impulses is changing to the idea that labile and integrative processes take place at several loci within different parts of the neuron, and the neuron does not pass on all signals in a one-to-one ratio, but may exert some selective and evaluative action on received signals. Spontaneous neuronal activity may rest on a continuous change of state of intraneuronal subthreshold potentials, which in turn determines the cell's responsiveness to input stimuli. (*Bullock, T. H.: Neuron Doctrine and Electrophysiology, Science 129: 997 (April 17) 1959.*)

FLUOTHANE Most of over 2000 surgical and obstetrical patients received the agent via a semi-closed circle absorption technique from the Foregger copper kettle machine. Eight known asthmatic patients received Fluothane with no complications. Although no difficulties were experienced with its use for delivery, fluothane has been abandoned for deliveries because of reports of excessive bleeding postpartum. Considerable reduction of the pharyngeal and laryngeal reflexes was noted with less "bucking" on the endotracheal tube even under light anesthesia. Rapid reversibility of action, reduction of nausea and vomiting, and minimal complications were principal advantages. (*Ausherman, H. M., and Adan, A.: Fluothane: A New Nonexplosive Volatile Anesthetic Agent, South. M. J. 52: 46 (Jan.) 1959.*)

FLUOTHANE The incidence of hypotension in a group of 100 patients anesthetized with Fluothane was compared with hypotension noted in a similar group of patients anesthetized with other agents. Fifty-nine of those anesthetized with Fluothane exhibited a fall in blood pressure during induction, while only 31 of those anesthetized with other agents showed a similar hypotension. Four possible causes of hypotension have been suggested: ganglion blocking; myocardial depression; central depression of the vasomotor center, stimulation of baroreceptors. Data is presented which makes the first two seem unlikely. No data is available to support the third thesis. Use of vaporizers delivering a known amount of Fluothane into a semi-closed system with 4 to 6 liters constant gas flow is recommended. If a closed system is used, the vaporizer must be placed between the gases being supplied from the machine and the inlet to the circle system. (*Bourgeois-Gavardin, M., and others: Fluothane: Incidence and Significance of Hypotension, South. M. J. 52: 53 (Jan.) 1959.*)

ADDICTION TO FLUOTHANE A case report and court disposition of an anesthetist accused of addiction to Fluothane are presented. (*Medicine and the Law: Lancet 1: 464 (Feb. 28) 1959.*)

ANALGESICS In the rat, the ratio of the analgesic to the respiratory depressant potency was the same for morphine, codiene, diamorphine, and methidone. The relative respiratory depressant activity of pethidine tended to be less, but the difference was not significant. Some compounds (morphine) had a greater effect on gastrointestinal propulsion than others (pethidine) when given at moderate analgesic dose levels. (*Green, A. F.: Comparative Effects of Analgesics on Pain Threshold, Respiratory Frequency and Gastrointestinal Propulsion, Brit. J. Pharmacol. 14: 26 (March) 1959.*)

HYDROCORTISONE LEVELS The effect of therapeutic doses of morphine and nalorphine on ACTH release in man has been studied. The primary effect of therapeutic doses of morphine or nalorphine on early morning ACTH release in sedated normal subjects is a suppressant one. In non-sedated subjects, morphine was capable of depressing midday ACTH release as well as ACTH release induced by a vasopressor. This effect may vary depending upon the responsiveness of the recipient. (*McDonald, R. K., and others: Effect of Morphine and Nalorphine on Plasma Hydrocortisone Levels in Man, J. Pharmacol. & Exper. Therap. 125: 241 (March) 1959.*)

VASOPRESSORS The critical factor in maintenance of adequate circulating volume depends on moment vasomotor control at the level of metarterioles and precapillaries to prevent excess amounts of blood going through capillary beds and being sequestered there. It is estimated that 17 per cent or more of circulating volume can be pooled in peripheral capillary beds. When low blood volume shock

is present for a length of time, tissue hypoxia, toxic humoral factors, and arteriolar constriction and capillary damage combine to produce "irreversible" shock and this may be accentuated by use of vasopressor drugs which act by peripheral vasoconstrictive mechanisms. Outlined are four clinical states where vasopressors may be of value: (1) peripheral circulatory failure secondary to loss of arteriolar vasomotor function; (2) central circulatory failure secondary to coronary thrombosis; (3) peripheral circulatory failure associated with suspected coronary or cerebral arteriosclerosis; (4) extreme systemic hypotension with clinical signs of inadequate coronary and/or cerebral blood flow. Humans who face supervised hemorrhage (extensive surgery) may benefit from prophylactic adnergic blockers to reduce peripheral vasoconstriction combined with vasopressors to increase cardiac output. (*Greisman, S. E.: Physiologic Basis for Vasopressor Therapy during Shock, Ann. Int. Med. 50: 1092 (May) 1959.*)

NORADRENALINE Stimulation of the cervical sympathetic nerve with an electric current caused an increase in protein-bound noradrenaline in the heart. After prolonged stimulation of the superior cervical ganglia there was a tendency to a decreased protein-bound noradrenaline content in the heart. Castration or administration of desoxycorticosterone acetate also influenced the level of the protein-bound noradrenaline in the heart. On the basis of results obtained the author postulates that binding with protein of noradrenaline in the heart is an important part of chemical mediation of sympathetic nerve stimulation. (*Barts, M. P.: Protein-bound Noradrenaline in a Rabbit Heart as a Factor of Chemical Mediation, Biokhimiya 22: 677 1957.*)

LEVARTERENOL The effectiveness of levarterenol in treatment of shock due to prolonged oligemia was studied in the dog. The survival time of animals receiving levarterenol and whole blood was significantly greater than that of animals receiving a placebo and whole blood. (*Fozzard, H. A., and Gilmore, J. P.: Use of Levarterenol in Treatment of Irreversible Hemorrhagic Shock, Am. J. Physiol: 196: 1029 (May) 1959.*)

LEVARTERENOL AND CORTISONE The response of animals to levarterenol was unchanged after the administration of hydrocortisone or aldosterone. (*Small, H. S., Weitzner, S. W., and Nahas, G. G.: Cardiovascular Effects of Levarterenol, Hydrocortisone Hemisuccinate and Aldosterone in the Dog, Am. J. Physiol. 196: 1025 (May) 1959.*)

CATECHOL AMINES Catechol amine depletion in cats was carried out by pre-treatment with reserpine and bilateral cervical sympathectomy. Isolated cardiac papillary muscle strips were prepared and subjected to repeated stimulation. Amplitude of contraction was found to be significantly lower in pretreated cats than in controls. Conclusion was that depletion of catechol amines results in depression of cardiac contractility and that under normal conditions stores of epinephrine and norepinephrine in the myocardium are released in small amounts and are necessary as humoral agents for the regulation of cardiac pacemaker and to maintain a normal state of contractility. (*Lee, W. C., and Shideman, F. E.: Role of Myocardial Catechol Amines in Cardiac Contractility, Science 129: 967 (April 10) 1959.*)

RESERPINE When the heart-lung preparation is made from a dog treated with reserpine, catechol amines such as noradrenaline and isoprenaline have a greater effect on the rate of the heart than they have in a preparation from a normal dog. Other sympathomimetic amines such as tyramine and ephedrine, on the other hand, are found to have lost their action. Since treatment with reserpine has been shown to cause the store of noradrenaline in the heart to disappear, and the infusion of noradrenaline into the preparation made from a reserpine-treated animal restores the action of tyramine, it is concluded that substances like tyramine and ephedrine normally act by liberating noradrenaline from the store, and do not act directly. (*Bejrablaya, D., Burn, J. H., and Walker, J. M.: The Action of Sympathomimetic Amines on Heart Rate in Relation to the Effect of Reserpine, Brit. J. Pharmacol. 13: 461 (Dec.) 1958.*)

DIGITALIS TOXICITY In toxic doses digitalis may act as a myocardial depressant or