pine have consistently demonstrated lack of correlation between pharmacological effects and tissue concentrations. Labeled reserpine was found to be present in brain and liver throughout and beyond the entire period of observable pharmacological response. The concentration in the brain varied little during the entire period of observable activity and bore no relationship to the intensity of response. It is suggested to look to some tissue other than the brain as the primary site of action of reserpine. (*Sheppard, H., and others: Brain Reserpine Levels Following Large and Small Doses of Reserpine-II*[3], *Proc. Soc. Exper. Biol. & Med. 97: 717 (April) 1958.*)

NEUROMYAL BLOCK Histamine administered to cats by intraarterial injection is capable of reversing a depolarizing type of neuromuscular block and of potentiating a nondepolarizing type block. Histamine injected intravenously does not produce this effect, presumably due to either dilution or plasma protein binding. No explanation for the mechanism of action of this agent is available, although it is interesting to note that the substance can cause a marked release of potassium from cells. (*Schenk, E. A. and Anderson, E. G.: Effect of Histamine on Neuromyal Blocking Agents, J. Pharmacol. & Exper. Therap. 122: 234 (Feb.) 1958.*)

DIGITALIS The pharmacological response to digitalis appears to be antagonized by potassium chloride in spite of the fact that the LD_{50} for potassium chloride is less in the presence of digitalis than it is in normal dogs. An effect due to the anion present with the potassium is possible. *Keyl, A. C.: Digitalis Antagonism, Part I, A. M. A. Arch. of Int. Med. 101: 849 (May) 1958.*)

BARBITURATE POISONING The respiratory arrest dose (RAD) of pentobarbital sodium in cats given no specific treatment was 69 mgs./Kg. of body weight. Artificial respiration alone supported life in animals until doses of barbiturate averaging 4.3 times the RAD had been given. Treatment with neosynephrine in addition to artificial ventilation sustained life until 6.7 times the RAD had been given. In another series of animals, picrotoxin reinstated spontaneous respiration up to but not beyond 2.0 times the RAD. Cardiac arrhythmias appeared in three-fifths of the animals who remained apneic during picrotoxin treatment. Convulsions were frequent. Mikedimide (Megimide) reinstated spontaneous respiration in animals who had received pentobarbital up to, but not beyond, 1.4 times the RAD. Cardiac arrhythmias appeared in one-fifth of all animals treated with Mikedimide. Convulsions appeared in two-thirds of the animals who remained apneic. (*Lavenson, G. S., Jr., Plum, F., and Swanson, A. G.: Physiological Management Compared with Pharmacological and Electrical Stimulation in Barbiturate Poisoning, J. Pharmacol. & Exper. Therap. 122: 271 (Feb.) 1958.*)

THIOPENTAL SHOCK Sudden release of large amounts of catechol-amines after administration of Pentothal in patients with pheochromocytoma has been found to precipitate a peculiar form of peripheral shock. There is tachycardia, sweating, pallor, cyanosis and absence of peripheral pulses, but there is no evidence of respiratory failure, and central arterial pressure is elevated with an extremely narrow pulse pressure. (*Marc-Aurele, J., and others: Peculiar Form of Clinical Shock, Canad. M. A. J. 78: 589 (April 15) 1958.*)

SHOCK AND ACIDOSIS Two healthy human subjects were given intravenous epinephrine during eupnea (arterial pH 7.37), during 10 per cent carbon dioxide rebreathing (arterial *p*H 7.23), and during voluntary hyperventilation (arterial pH 7.61). Increments in heart rate and arterial pressure following epinephrine injection were greatest during respiratory alkalosis and least during respiratory acidosis.

Clinical patients with septicemia and shock who had become refractory to pressor agents were studied. When refractory to the pressor effects of sympathomimetic amines, arterial blood studies demonstrated metabolic acidosis with arterial blood pH values as low as 7.06. Correction of acidosis by intravenous administration of molar sodium lactate resulted in an increased pressor response to sympathicomimetic

amines. (*Campbell, G. S., and others: Depressed Response to Intravenous Sympathicomimetic Agents in Humans During Acidosis, Dis. Chest 33: 18 (Jan.) 1958.*)

ADRENAL INSUFFICIENCY Adrenalectomized dogs had a lower initial mean systolic and diastolic blood pressure in both femoral and pulmonary arteries than did control dogs. There was no significant difference between the adrenalectomized dogs and the control animals in ability to respond intravenously injected norepinephrine by an increase in force of cardiac contraction or by an increase in systemic or pulmonary blood pressure. Myocardial or coronary artery lesions did not occur in any of the animals. (*Reidenberg, M. M., Ohler, E. A., and Sevy, R. W.: Cardiovascular Responses to Norepinephrine in Acute Adrenal Insufficiency, Proc. Soc. Exper. Biol. & Med. 97: 889 (April) 1958.*)

CORTISONE Hydrocortisone or corticosterone given for 60 days to normal rats caused an elevation of the total circulating red cell volume from 1.45 to 1.64 times that of normal, untreated controls. There was a significant elevation in erythrocyte, hematocrit and hemoglobin values. (*Fisher, J. W.: Increase in Circulating Red Cell Volume of Normal Rats After Treatment with Hydrocortisone or Corticosterone, Proc. Soc. Exper. Biol. & Med. 97: 502 (March) 1958.*)

DIBENAMINE IN SHOCK Development of irreversibility to transfusion in hemorrhagic shock has been shown to be caused by bacterial endotoxins and dibenamine prevents the development of irreversibility. On the basis of experiments on rabbits, it is concluded that dibenamine blocks the action of the toxin, and thereby not only preserves the responsiveness of the circulation, but also prevents the hemorrhagic lesion in the bowel wall, which is characteristic of irreversible shock. (*Smiddy, F. G., Segel, D., and Fine, J.: Proc. Soc. Exper. Biol. & Med. 97: 584 (March) 1958.*)

ADRENALINE AND NORADRENALINE A photo fluorimetric method for the determination of adrenaline and noradrenaline in peripheral plasma is described. The sensitivity of this technique is 0.2 µg./l. of adrenaline and 0.3 µg./l. of noradrenaline. By use of a differential oxidizing procedure the concentrations of both adrenaline and noradrenaline in a mixture can be determined. Values for these substances in peripheral blood were found to be very much lower when precautions were taken to prevent the disruption of platelets. This observation is in harmony with the view that the platelets may act as vehicles for the transport of adrenaline and noradrenaline. (*Robinson, R., and Scott, F. D.: Fluometric Determination of Adrenaline and Noradrenaline in Plasma, Biochem. J. 68: (March) 1958.*)

SEROTONIN Serotonin probably participates in a wide variety of metabolic and physiologic functions. The cardiovascular response to serotonin is "amphibaric" and seems to vary with the dose and test animal. Vasodilatation generally follows from slow infusion of small doses and vasoconstriction occurs when larger doses are given quickly. Single intravenous injections given to normotensive and hypertensive patients while causing an increased pulse rate and cardiac output, had a variable effect (pressor, depressor, or biphasic) on the arterial pressure. The pressor effect may be augmented by cocaine, reserpine and pituitrin. The depressor response may be due to release of endogenous histamine by serotonin and/or peripheral inhibition of neurogenic vasoconstriction. The coronary vessels were dilated. Respiration was consistently increased, possibly by stimulation of the chemoreceptors. Pulmonary vasoconstriction always occurred as manifested by a rise in pulmonary artery pressure and a fall in left atrial flow without a concurrent change in aortic pressure and heart rate. Serotonin was the only substance studied that affected the pulmonary vasculature in doses insufficient to affect systemic and arterial pressure. Serotonin is probably formed in enterochromaffin tissue and is found in particularly large quantities in the brain, platelets and gastrointestinal tract. Reserpine seems to cause its release from these sites, while Iproniazid, by interfering with