

B., and Law, W.: *Urinary Excretion of Adrenaline and Noradrenaline by Rats Under Various Experimental Conditions*, *Brit. J. Pharmacol.* 13: 35 (Mar.) 1958.)

EPINEPHRINE The increase in cardiac output produced by infusion of epinephrine is due to an increase in force of contraction, rate, velocity of conduction and an increase in venous return. The latter is caused by an increased mean circulatory pressure. The rise in cardiac output is due more to the increased venous return than to the increased pumping ability of the heart. (Guyton, A. C., and others: *Mechanism of Increased Venous Return and Cardiac Output Caused by Epinephrine*, *Am. J. Physiol.* 192: 126 (Jan.) 1958.)

SEROTONIN-NOREPINEPHRINE The effectiveness of iproniazid (Marsilid) in treating depressed mental states may be due to the fact that this drug protects the neurohormones, serotonin and norepinephrine from monoamine oxidase, an enzyme that normally destroys them in the brain. Earlier studies had shown that the tranquilizer Resperine releases serotonin and norepinephrine from their stores in the brain. The theory is presented that serotonin and norepinephrine normally regulate brain centers that help govern bodily functions which are beyond voluntary control i.e. blood pressure, heart rate, emotional activity, etc. (Spector, S., and others: *Effect of Iproniazid on Brain Levels of Norepinephrine and Serotonin*, *Science* 127: 701 (Mar. 28) 1958.) (Recently a death has been reported to have resulted from a dose of Marsilid as originally recommended by the manufacturer—Editor.)

ADRENALINE RELEASE Plasma concentrations of adrenaline and noradrenaline and their changes after electroshock therapy (EST) were determined in psychiatric patients and in rats. EST caused a transient rise in both adrenaline and noradrenaline. Pretreatment with barbiturates and ganglionic blocking agents was found to suppress the adrenaline and noradrenaline responses; pretreatment with succinylcholine caused less inhibition. (Griswold, R. L.: *Plasma Adrenaline and*

Noradrenaline in Electroshock Therapy in Man, *J. Appl. Physiol.* 12: 177 (Jan.) 1958.)

THORAZINE JAUNDICE Four jaundiced State Hospital patients on large doses of Thorazine were allowed to continue on the drug. Liver function studies and liver biopsies in three of the four subjects raised doubts as to the likelihood of chlorpromazine jaundice being due to hepatotoxicity, chlorpromazine sensitivity, or to significant underlying hepatic disease. Other authors have suggested that biliary sphincter spasm occurs and leads to a marked slowing of bile flow. (Schneider, E. M., Daugherty, C., and DeVore, J. K.: *Chlorpromazine Jaundice*, *South. M. J.* 51: 287 (March) 1958.)

TRANQUILIZERS The use of tranquilizers in combination with reduced amounts of the older premedicant drugs has introduced a major change in preoperative regimen. Presently available phenothiazine derivatives, while not the ultimate in premedication, are worthy of appraisal because of their specific action on those areas of the central nervous system concerned with stress and emotional response and because of possible shock-sparing properties. Four potentially useful compounds, in order of decreasing effectiveness, are chlorpromazine (Thorazine), mepazine (Paental), promethazine (Phenergan) and diphenhydramine (Benadryl). The effective dosage range for chlorpromazine is 12.5-50 mg. intramuscularly, for mepazine 200-400 mg. orally, for promethazine 25-50 mg. intramuscularly and for diphenhydramine 50-100 mg. intramuscularly. These drugs are administered two hours preoperatively. One hour preoperatively meperidine 25-50 mg. intramuscularly combined with a belladonna derivative is injected. The resulting sedation has as its advantages (1) less over-all depression, (2) reduction in amounts of anesthetic drugs and undesirable reflex activity, (3) decreased incidence of emergence delirium and of postoperative nausea and vomiting, (4) reduction in dose and postponement of the postoperative reaction dose of narcotic. (Lear, E., and others: *Comparative Studies of Tranquilizers Used in Anesthesia*,