of intravenous meperidine. In view of the proved epileptogenic properties of phenothiazine drugs, promethazine should not be given to patients with a history or evidence of preeclampsia, epilepsy, convulsions, intracranial trauma, or severe hypertension. (*Adelman, M. H., and others: Promethazine Hydrochloride in Surgery and Obstetrics, J.A.M.A. 169: 73 (Jan. 3) 1959.*)

PROCAINE ESTERASE The activity of Novocaine esterase, hydrolysing Novocaine, and also the activity of the enzyme which acetylates para-aminobenzoic acid—the product of Novocaine hydrolysis—were studied. It was found that the activity of Novocaine esterase in the blood serum of patients with endarteritis obliterans was always lower than normal. After Novocaine block a tendency to a further decrease was observed. In cases of the control group on the other hand, the introduction of Novocaine increased the Novocaine esterase activity. In patients with endarteritis obliterans in all forms and periods of the illness, with the exception of cases with sympathectomy, a considerable decrease of the output of acetylated para-aminobenzoic acid in the urine, formed as a result of Novocaine splitting, was observed. (*Vorotyntseva, E. N.: Effect of Novocaine Block Upon Activity of Enzymes Catalysing Metabolism of Novocaine in Patients with Endarteritis Obliterans, Byull. Eksper. Biol. i Med. 44: 53, 1957.*)

HYPNOTIC DRUGS A method is described for screening and evaluating hypnotic drugs in mice. Intrahepatic administration of pentobarbital gives more rapid hypnosis than the intraperitoneal route. Consistent data were obtained regarding onset, depth and duration of anesthesia. The fall in body temperature and relaxation of the skeletal musculature associated with barbiturate anesthesia were selected for end-point measurements. (*Fairchild, M. D., Russell, F. E., and Emery, J. A.: Preliminary Report of a New Method for Evaluating Hypnotic Drugs, Am. J. M. Sc. 237: 74 (Jan.) 1959.*)

BARBITURATE WITHDRAWAL The administration of 100 mg. of Nembutal four times a day in healthy adults produced electroencephalographic changes which returned to normal level during chronic administration of the drug, as did the behavior pattern of the subjects. Unlike withdrawal from larger doses of barbiturates this dose schedule was not followed by psychotic or convulsive manifestations in any of these subjects; however, some developed paroxysmal electroencephalographic changes associated with withdrawal. (*Essig, C. F., and Fraser, H. F.: Electroencephalographic Changes in Man During Use and Withdrawal of Barbiturates in Moderate Dosage, Electroencephalog. & Clin. Neurophysiol. 10: 649 (Nov.) 1958.*)

LEVALLORPHAN The metabolic fate of levallorphan was studied in the rat, mouse, guinea pig, rabbit and dog, as well as in surviving liver slices from these species. Two metabolites of levallorphan have been demonstrated, including three-hydroxymorphinan and another structurally unidentifiable metabolite. Despite the identification of these metabolites, less than 8 per cent of a given dose of levallorphan can be recovered as either the metabolites or unaffected levallorphan. Most of the drug disappears in an undetectable fashion within the first hour. (*Mannering, G. J., and Schanker, L. S.: Metabolic Fate of Levo-3-Hydroxy-N-Allylmorphinan (Levallorphan), J. Pharmacol. & Exper. Therap. 124: 296 (Dec.) 1958.*)

ANALGESIA FROM NALORPHINE In a controlled clinical comparison of morphine and nalorphine in 60 patients experiencing postoperative pain, nalorphine was found to be approximately one fourth as effective as morphine in relieving pain. (*Okun, R., and others: Analgesic Potency of Normorphine in Patients with Postoperative Pain, J. Pharmacol. & Exper. Therap. 124: 260 (Nov.) 1958.*)

ANILERIDINE In 2,500 administrations to more than 600 patients, the following conclusions emerged: It is a potent analgesic agent with high activity and relatively mild side-effects when given orally. It is useful both as a premedicant for surgical anesthesia (in doses averaging 50 mg. orally or subcutaneously) and as a postoperative sedative and analgesic (in 25–75 mg. doses). Its

effects resemble those of morphine and meperidine, but euphoria is uncommon, and no evidence of addiction or of withdrawal symptoms has appeared. It has a prompt onset of action and a long duration of analgesia. Major excretion is by way of the kidneys. The effects of anileridine are reversible by nalorphine. Side-reactions, such as general depression and respiratory and circulatory depression, are considerably milder than those produced by morphine and somewhat milder than those of meperidine. *(Therien, R. C., and others: Anileridine Hydrochloride—Its Clinical Use as Analgesic and Sedative, J.A.M.A. 168: 2098 (Dec. 20) 1958.)*

MORPHINE ADDICTION The excretion of 17-ketosteroids in 9 healthy male subjects throughout cycles of morphine addiction has been studied. Single doses of 45 or more milligrams of morphine were followed by a decreased excretion of 17-ketosteroids. Addiction to morphine, lasting as long as 144 days, caused a significant fall in the excretion of 17-ketosteroids. A striking rise in urinary 17-ketosteroids, with levels usually exceeding those of the predrug period, occurred the second to fourth day of withdrawal. The maximal increase coincided with the most severe symptoms of abstinence. *(Eiseman, A. J., and others: Urinary 17-Ketosteroid Excretion During a Cycle of Addiction to Morphine, J. Pharmacol. & Exper. Therap. 124: 305 (Dec.) 1958.)*

NEURON BARRIER Eight different compounds derived from phenylboronic acid were injected intraperitoneally into rats and uptake measured in brain and transplanted subcutaneous glioma tissue. The ratio of tumor/brain levels served as an index of localization of drug in tumour. Most compounds exerted moderate to severe central nervous system depressant effects. Introduction of a methyl or chloro radicle into the benzene ring enhanced penetration into brain, while a carboxyl or a carbamido radicle inhibited its entrance into brain, but increased localization in tumour tissue. Similar techniques may find application in studying action mechanisms of anesthetic drugs. *(Soloway, A. H.: Correlation of Drug Penetration of Brain and Chemical Structure, Science 127: 1572 (Dec. 19) 1958.)*

METHYLENE BLUE NEUROPATHY One cubic centimeter of 1 per cent aqueous methylene blue solution was diluted in 25 cc. of spinal fluid and injected into the lumbar subarachnoid space. Shortly thereafter there was discomfort, followed by paraplegia which cleared in several weeks, but a residual perineal anesthesia and bladder dysfunction persisted. *(Evans, J. P.: Warning Against Intrathecal Use of Methylene Blue, J.A.M.A. 169: 526 (Jan. 31) 1959.)*

PROTEIN METABOLISM The rate of restoration of proteins of the brain of rats was investigated in normal state and under amytal sleep by means of tagged glycine-C^{14}. It was established that with hypodermic injection in normal rats of radioactive glycine the rate of inclusion of amino-acid in the protein of the cerebral hemispheres and cerebellum is double the rate in protein of the midbrain and spinal cord. Under narcotic sleep induced by hypodermic injection in the animals of a solution of sodium amytal (10 mg. per 100 Gm. of weight) the entry of tagged glycine into the protein of the brain is reduced by 42 per cent on the average. *(Vladimirov, G. E., and Urinson, A. P.: Metabolism of Glycine in Cerebral Tissue of Rats in Normal State and in Amytal Sleep, Biokhimiya 22: 709 1957.)*

OXYGEN TOXICITY Review of presently known facts concerning oxygen toxicity indicates that it would seem inadvisable to breathe pure oxygen at 1 atmosphere pressure for longer than eight to twelve hours. At tensions less than 425 mm. Hg, oxygen can be breathed indefinitely. *(Mullinax, P. F., and Beischer, D. E.: Oxygen Toxicity in Aviation Medicine, J. Aviation Med. 29: 660 (Sept.) 1958.)*

OXYGEN TOXICITY Pulmonary alterations consisting of capillary congestion and proliferation may be observed with oxygen inhalation for as little as two days. Diffuse fibrosis has been encountered after continuous inhalation for approximately two weeks. The concentrations of oxygen in the alveoli ob-