surgical team in larger hospitals. 2. In smaller hospitals, even the unsupervised nurse anesthetist is preferable to the untrained physician. 3. There are not enough medically trained anesthetists to staff a fourth of the hospitals. 4. The current campaign is of questionable character on several counts, and it does nothing to promote public respect for the medical anesthesiologist.'

J. C. M. C.


"More than 200 compounds that exhibit vasopressor activity have been synthesized and studied since 1900. The chosen few employed in therapeutic at the present time are, with few exceptions, related chemically to epi- nephrine. . . . In general, the actions exhibited in the body by epinephrine resemble those obtained from stimulation of adrenergic nerves. . . . The exact fate of epinephrine in the body is unknown. . . . Both systolic and diastolic pressures rise rapidly to a peak which is proportional to the dose administered, then fall to a level somewhat below normal. . . . The chief vascular action of epinephrine is exerted on the smaller arterioles, although capillaries, veins and larger arteries also respond to the drug. Various vascular beds react differently. The vessels of the skin and mucosa are constricted; those of skeletal muscles are dilated; the splanchnic bed is contracted; the cerebral and retinal vessels are constricted, as are the glomerular arterioles; the pulmonary vessels tend to contract but are less responsive that the other vessels. In man, the response of the coronary arteries to epinephrine is predominantly one of dilatation. This problem is by no means settled because of conflicting evidence in dogs and because epinephrine can induce attacks of pain of cardiac origin. . . ."

"Epinephrine causes immediate and effective relaxation of bronchial muscles. It does not stimulate the respiratory center as do certain other sympathomimetic amines. When given intravenously, a period of apnea may follow ('epinephrine apnea') owing to the reflex inhibition of respiration caused by increased pressure on the carotid sinus and cardio-aortic area. . . . Epinephrine is a metabolic stimulant, increasing oxygen consumption. It increases the basal metabolic rate, and causes hyperglycemia and glycosuria. The musculature of the gastrointestinal tract is relaxed by epinephrine and that of the pyloric and ileo-cecal sphincters, as a rule, is contracted. The sphincters may react in a variable manner. The splenic capsule is contracted by epinephrine. The human uterus is usually contracted to a slight degree by epinephrine. Epinephrine has very little stimulating effect on the central nervous system and thus is not useful as an anaesthetic. Restlessness, apprehension, headache and tremor, however, may occur in some individuals after therapeutic doses. . . . Ephedrine is an alkaloid occurring in various plants belonging to the genus Ephedra. A Chinese herb containing ephedrine and called Ma Huang was employed empirically by native Chinese physicians for over 5000 years. . . . Chen and Schmidt began to study the pharmacologic actions of ephedrine in 1923. Since then many investigators have contributed to the vast literature on this drug, but have not yet definitely established its mechanism of action. . . . The fate of ephedrine in the body is unknown. . . . The cardiovascular actions of ephedrine are similar to those described for epinephrine. . . .
"The respiratory effects of ephedrine are twofold. It causes dilatation of the bronchioles by its action on the smooth muscle and it stimulates the respiratory center directly. Other central effects are stimulation of the central vasomotor centers, cortical and subcortical centers. The latter effect accounts for the insomnia, nervousness, tremor and motor restlessness occurring from overdoses of ephedrine. Spinal reflexes are increased. Other actions on smooth muscle are mydriasis caused by the action of ephedrine on the iris, relaxation of the musculature of the gastrointestinal tract and inhibition of peristalsis. The tone of the vesical sphincter is definitely increased and it may go into spasm. The isolated uterus usually is stimulated by ephedrine. The spleen contracts. The metabolic effects of ephedrine are similar to those described for epinephrine, but to a lesser degree. Graham and Willinsky used ephedrine to prevent and treat hypotension during spinal anesthesia in 1926. . . .

"Neosynephrin is a sympathomimetic amine with one hydroxy group at the meta position on the benzene ring. . . . The pharmacologic actions of neosynephrin are similar to those of epinephrine. . . . Neosynephrin is much more stable and produces more lasting responses than does epinephrine. . . . Nothing is known about the fate and excretion of this compound. . . . Dodd and Prescott, in 1943, reported that methedrine was an effective vasopressor agent. . . . Oliver and Schafer, in 1895, showed that an extract from the posterior pituitary gland exerted a vasopressor effect in animals and that it lasted longer than the effect produced by epinephrine. . . . Melville and Stehle, in 1931, reported the effects of combining pitressin and ephedrine. They demonstrated a symbiotic effect on the cardiovascular system of dogs. . . . Roman-Vega and Adriani and Heringman and Adriani have studied the vasopressor activity of naphthyl . . . found it to be a satisfactory vasopressor for the control of hypotension resulting from spinal anesthesia. . . . Vasopressor drugs have a definite but limited value in clinical anesthesia. They are most useful in combating the hypotension associated with spinal anesthesia." 3 references.

J. C. M. C.


"A new synthetic analgesic, originally prepared by German chemists and known as drug 10820, was made available to this country following World War II. The original report was published by the U. S. Department of Commerce. The Council on Pharmacy and Chemistry of the American Medical Association has given this compound the nonproprietary name of methadon. . . . In April 1946 clinical trials of the drug were instituted at the University of Minnesota Hospitals. Up to the present time methadon has been given to a total of 400 patients for relief of all types of pain. . . . The drug has characteristics of both morphine and meperidine. . . . Oral use of the elixir is almost as effective as the hypodermic injection. . . . Ten mg. of methadon is as effective in relieving pain as 15 mg. of morphine or 150 mg. of meperidine. . . . Adequate or complete relief of pain occurred in 81 per cent of 400 patients. . . . Less sedation and euphoria occur with methadon than with morphine. . . . Side effects occurred in 13 per cent of patients. . . . Tolerance to the drug may develop. . . . Addiction has not been definitely established." 11 references.

J. C. M. C.