There were major differences between the medications in their effect on blood pressure. Secobarbital produced little change, but both phenothiazines were associated with a relatively high incidence of rises and falls in blood pressure. Most of these were not of clinical significance, but there were two instances of blood pressure rise associated with severe headache and three cases of hypotension requiring and responding to vasopressors 20–25 minutes after medication. Of the phenothiazines, promethazine had a greater tendency to produce hypertension, and promazine a greater tendency to produce hypotension. In summary, all three medication combinations described were clinically satisfactory in the dosages used. Each method appeared to have certain advantages and disadvantages, none of which were sufficiently important to select or abandon any without further study. The major conclusion was that various medications for relief of pain during labor are capable of being studied with objectivity by the technique described.

The Effects of Neurotropic Drugs Upon the Electrical Activity of the Midbrain Tegmentum. BEN F. RUSY, M.D., AND LEROY W. KRUMPERMAN, M.D. *Department of Anesthesiology, Temple University Hospital, Philadelphia, Pennsylvania.* At the present time there are only a few published reports of the effects of drugs on the electrical activity of subcortical structures in human beings. To our knowledge, no investigations of the human midbrain reticular substance have been made. In recent years animal experimentation has demonstrated the importance of the brain stem reticular substance to the wakeful state, and there have been many animal studies which have shown a definite modification of the activity of the reticular substance by neurotropic drugs. Our investigations were carried out at the time of stereoencephalotomy done by Spiegel and Wycis for treatment of parkinsonism. A multilead, bipolar needle electrode is introduced by stereotaxic procedure into the desired area. In order to direct its placement, Pantopaque encephalography is done to locate the commissures, and the electrode is then introduced according to coordinates of Spiegel and Wycis determined by roentgenogram. The section of the midbrain explored was the dorsal part of the tegmentum, an area containing fibre tracts and the cellular elements of the reticular substance. This area is very small, being ventral to the periaqueductal grey, dorsal to the red nucleus, and between the roots of the third cranial nerve and the spinothalamic tract at a frontal level passing through the posterior commissure. It is believed that the electrode must be confined to this area in order to avoid damage to important neighboring structures. After the electrode has been placed, a control electrogram is made from two levels in the area being studied. A scalp electroencephalogram, an electrocardiogram and a pneumogram are also made. Blood pressure is monitored by the cuff method. The patient up to this point usually has received no preoperative or other medication. Local anesthesia is used to insert the electrode. After a satisfactory baseline recording was obtained, the drug to be tested was injected intravenously. Continuous recordings were made until clinical signs of drug effect were seen or until it is certain that sufficient time had elapsed for the drug to act. The drugs so far examined have been atropine, scopolamine, chloropromazine, and reserpine. To date there has been little effect noted upon electrical activity of the area studied; however, only a few experiments with each drug have been performed. Dosages have been rather small but in the range of clinical effectiveness. Sometimes a definite clinical change (drowsiness) has come on after injection and this has not been accompanied by any striking electrical change. However, the activity we have thus far been recording has been background or "spontaneous" activity. We have not yet examined the action of any drug in modifying a function of the reticular substance such as the arousal response. The study will be continued with some modifications.

The Circulatory Effects of Narcotics and Narcotic Antagonists in Man. EPHRAIM S. SIKER, M.D., HENRY M. BRUNN, M.D., JEFFREY S. CRAWFORD, M.B., AND FRANCIS F. FOLDES, M.D. *Department of Anesthesiology, Mercy Hospital, and the Section on Anesthesiology, Department of Surgery, University of Pittsburgh, Pittsburgh, Pennsylvania.* Little