by a low gear motor as previously described. The following anesthetics were used: procaine, 1 and 2 per cent; lidocaine, 1 and 2 per cent; chloroprocaine, 2 per cent; piperocaine, 1.5 per cent; hexylcaine, 2 per cent; tetracaine, 0.1 per cent and dibucaine, 0.07 per cent. Five milliters were instilled over an approximately 8-hour period. Some animals were killed and the sciatic nerves removed at the end of the instilling procedures; the remaining animals were killed after 24 hours. Partial anesthesia of the hind legs was observed at the end of the 8-hour period and was gone, in most instances, at the end of 24 hours. The nerves were examined after preparation by usual histologic techniques. All local anesthetics tested produced a mild infiltration of neutrophils with a varying number of lymphocytes and macrophages enmeshed in a network of fibrin in perineural connective tissue and adjacent muscle. The nerve fibers showed prominence of axis cylinders and mild vacuolization of myelin with some loss of neurokeratin. In no instance did the nerve show fragmentation of axons, changes in the Schwann cells, leukocytic infiltration or hemorrhages. We believe that the prominence of axons is a significant change produced by anesthetics. These changes are considered as mild, as axons were never as prominent as observed after epineural injection of alcohol or trauma. Increase in the size of the myelin spaces is also a significant abnormality but was mild and nothing comparable to the instilling of 10 per cent sodium chloride, epineural injection of alcohol or trauma.

The Influence of Premedicating Drugs on Vasomotor Stability During Spinal Anesthesia. MIGUEL SANTIAGO, M.D., TILLMAN M. MOORE, JR., M.D., AND ROBERT B. DODD, M.D. *Department of Surgery and Division of Anesthesiology, Washington University, St. Louis, Mo.* Narcotics and barbiturates impair the body's ability to compensate for the stress placed on the peripheral vascular bed by tilting. Spinal anesthesia appears to expose the patient to a type of vasomotor stress not unlike that induced by tilting. This investigation seeks to determine the effect of morphine, meperidine and barbiturates on vasomotor stability following the induction of spinal anesthesia. A total of 1,233 spinal anesthesias were given between July 1956 and June 1958. Records of 400 of these anesthesias were excluded to eliminate the following variables: anesthesia administered by other than a member of the Division of Anesthesiology, which introduces variation in management; anesthesia administered for operations entailing blood loss of a significant amount in the first hour, thus biasing the data toward hypotension; anesthesia administered for operations requiring unusual positioning of patients, which adds the factor of undue positional stress; administration of supplemental or complemental inhalation anesthesia, thus implying that the spinal anesthesia was either ineffective or inadequate; and, administration of no premedication or a combination of hypnotic and narcotic, which introduces more than one variable in the latter case. Following the criteria of Dripps and Deming (*Surg. Gynec. & Obst. 83: 312, 1946*), a fall in systolic blood pressure of 25 per cent or greater from preanesthetic levels during the first hour of anesthesia was considered significant. The incidence of hypotension following spinal anesthesia was determined for each decade of age. The age distribution of patient's receiving morphine, meperidine or a barbiturate was homogeneous both graphically and by chi-square testing. Neither a parasympatholytic drug administered with the premedication nor small intravenous doses of barbiturates for sedation during surgery affected the incidence of hypotension. *Results:* (1) In patients less than 50 years of age undergoing spinal anesthesia, the mean frequency of hypotension was 24.2 per cent with morphine, meperidine or a barbiturate as a premedicating drug. (2) However, among patients over 50 years of age, those given premedication of either morphine or a barbiturate had a significantly lower incidence of hypotension than those given meperidine. (3) Persons over 50 given meperidine as premedication had a significantly greater frequency of hypotension than those under 50 given the same drug. (4) The incidence of significant hypotension in all patients undergoing spinal anesthesia was 31 per cent. (5) Over the age of 50 the frequency of hypotension increased the older the patient regardless of the premedication.