jected acetycholine and to electrical stimulation of the sciatic nerve. The agents used were cyclopropane, ether, ethylene, sodium ethyl (1-methylbutyl) thiobarbiturate (Sodium Pentothal), and tribromethanol with amy- 

lence hydrate (Avertin Fluid)....

"From the observations recorded in this investigation, it can only be said that (1) the contraction of the gastrocnemius muscle which is elicited by intraarterially injected acetycholine or electrical stimulation of the nerve is less pronounced in dogs anesthetized with ether, tribromethanol, and sodium pentothal than in dogs anesthetized with cyclopropane or ethylene, (2) prostigmine potentiates the contraction response in the dog anesthetized with cyclopropane and ether, and (3) the difference in contraction during anesthesia with the various agents is not altered by sectioning the nerve supply to the muscle. It seems likely, therefore, that the interference with the contraction is located in the humoral mechanism of transmission of nerve impulses, and that ether, tribromethanol, and sodium ethyl (1-methylbutyl) thiobarbiturate (Sodium Pentothal) can be said to have a curariform action. Of these three, ether causes the greatest interference; tribromethanol and sodium pentothal do so only in very high blood concentrations. The clinical difficulties encountered with the concomitant use of ether and curare are thus accounted for." 13 references.

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"Duration-time of surgical operations is frequently a factor which ought not to be disregarded. Just as the aged person, forced to bed by an immobilizing accident, may develop hypostatic congestion of the lungs and anoxia in a few days' time, so the individual lying on an operating table with his respiratory and circulatory functions and metabolism depressed by an inhalational anaesthetic or by spinal block analgesia may develop pneumonia, but in a much shorter time. Whether he does so or not depends upon a number of factors, including the type and duration of the procedure, the anaesthetic agent and its mode of administration, the depth of anaesthesia, and the extent to which physiological processes are deranged. With advances in surgery the time factor is to a certain extent ignored, partly because of the faith which anaesthetists have engendered and fostered in the less toxic agents and newer methods now employed. Under the present abnormal conditions, also, there is growing up a group of younger surgeons in wholetime hospital service who, untrammelled by the rush of competitive surgery, develop what might be called an easy-going tempo. The same might be said of some of the younger generation of anaesthetists who tend to over-elaborate their part and so extend unnecessarily the time during which the patient is under the anaesthetic.

"In the first place then, reference must be made to avoidable delays, particularly the tiresome minutiae which sometimes prolong the interval between the commencement of the anaesthetic and the making of the first incision. . . . One feels that the inexperienced anaesthetist is often tempted to save time but only wastes it by premature attempts at passing a tube. . . . To spend time passing endotracheal tubes in cases where such a method is not essential, is unjustifiable and helps to bring into disrepute one of the most valuable methods of anaesthetic administration available today. . . . The struggling and breath-holding accompanied by anoxaemia which sometimes occur during a
lengthy second stage, may produce deleterious effects such as raised intracranial tension and its sequelae, especially in hypertensive patients. . . . Prolonged anoxaemia must be avoided in all cases. . . .

"The opinion of the majority of surgeons and anaesthetists would probably hold that the problem is not simply one of the time taken to perform the operation, but the period during which the patient is subjected to the influence of depressant drugs. The premedication, the anaesthetic proper and the post-anaesthetic medication given in the first seventy-two hours, are all concerned together. . . . The factor of post-medication is important in so far as it effects a prolongation of the deranged physiology produced during operation. The nature of the operation may be significant, not only for the abnormal conditions which it creates at the time, but also for the more immediate after-effects on the patient, and the extent to which sedative and analgesic drugs may be required. . . . For a lengthy operation, the technique of closed anaesthesia with CO₂ absorption, not only fulfils the requirements of the surgeon, but also helps greatly to mitigate the derangement of respiratory and circulatory function which frequently occurs during long operations and persists in the post-operative period. But even the skilful use of the closed method will not save the patient from the toxic effects of a potent anaesthetic agent distributed throughout the tissues for a long time. If prolonged muscular relaxation is demanded, it should be achieved by nerve block (spinal or regional) whilst the patient is kept just below the level of consciousness by the administration of nitrous oxide or cyclopropane along with a sufficiently high concentration of oxygen to combat anoxia. Intravenous pentothal sodium is an alternative to gas or cyclopropane, but its dosage throughout a long operation should be minimal and uniformly controlled and adequate oxygenation maintained. The anaesthetist's work does not end at the close of the operation. He must take measures to hasten the elimination of the anaesthetic drug and take an interest and share in the directing of post-medication. Thus will he help still further to modify the time factor by preventing unnecessary prolongation of the effects of the drugs he has administered." 14 references.

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"Although morphine sulfate has been used therapeutically for about 140 years, too little attention has been given to the use of this valuable and time tested drug by the intravenous route. . . . The intravenous route of administration is especially recommended for patients suffering severe pain because of the rapidity with which the analgesia is produced. . . . In general, the administration of morphine to small children is best avoided because of the instability of their respiratory centers. . . . The effect of the drug after intravenous administration, in spite of being more pronounced at first, probably will last almost as long as the effect after subcutaneous administration. . . . No more of the drug should be injected than the amount necessary to obtain the result one wants. . . . In cases in which the dose of intravenous morphine cannot be gauged by the relief of pain, the patient is asked to notify the physician if such symptoms as dizziness, weakness, drowsiness, warmth, numbness, tingling, neuralgic pain, or backache occur. If one of these symptoms occurs, the injection is stopped. As a rule, ½ to ¾ gr. (8 to 10 mg.) of mor-