

CONTENTS

**Abstracts of Scientific Papers
1979 Annual Meeting
American Society of Anesthesiologists**

ANESTHETIC ACTION

Pancuronium Reduces Halothane Requirement in Man.	S1
<i>A. R. Forbes, N. H. Cohen, and E. I. Eger, II</i>	
Anesthetic Depth Transition by EEG Analysis.	S2
<i>J. Luque, D. L. Sherrill, R. H. Jones, G. D. Swanson, and R. W. Virtue</i>	
The Electroencephalogram under Fentanyl-N ₂ O Anesthesia.	S3
<i>Sanford L. Klein and Virginia L. Klein</i>	
EEG during Rapidly Changing Halothane or Enflurane.	S4
<i>N. Ty Smith, I. J. Rampil, F. J. Sasse, B. H. Hoff, and D. C. Flemming</i>	
Does Thiopental or N ₂ O Disrupt the EEG during Enflurane?	S5
<i>N. Ty Smith, B. H. Hoff, I. J. Rampil, F. J. Sasse, and D. C. Flemming</i>	
The Human EEG during Thiopental or Althesin Induction.	S6
<i>N. Ty Smith and A. B. Baker</i>	
Electro-acupuncture Modification of Halothane MAC in the Dog.	S7
<i>C-K. Tseng, N. L. Pace, D. R. Westenskow, K. C. Wong, and R. A. Blatnick</i>	
Anticonvulsant Effect of Halothane and Enflurane.	S8
<i>L. Triner, Y. Vulliemoz, M. Verosky, and S. Y. Woo</i>	
Regional Brain Function during Halothane Anesthesia.	S9
<i>R. A. Hawkins, J. Fornadley, B. Helm, A. M. Mans, and J. F. Biebuyck</i>	
Local Cerebral Blood Flow and Metabolism during Halothane and Enflurane.	S10
<i>K. F. Ray, R. W. Kohlenberger, and H. M. Shapiro</i>	
Effects of Ketamine on Serotonin Biosynthesis.	S11
<i>Louis L. Martin and David J. Smith</i>	
Temperature Correction of G.L.C. Determined Blood Enflurane.	S12
<i>Jordan D. Miller and Friederike M. Randall</i>	

Partition Coefficients of Lidocaine in Phospholipid Liposomes.	S13
<i>James R. Trudell, Carib Nelson, and Charles J. Mastrangelo</i>	
Anesthetics Decrease Surface Potential of Protein.	S14
<i>I. Ueda, T. Mashimo, and D. D. Shieh</i>	
Pressure Reversal of Anesthesia Requires Water.	S15
<i>H. Kamaya and I. Ueda</i>	
Interaction of Intraocular SF ₆ and Air with Nitrous Oxide.	S16
<i>T. W. Stinson and J. V. Donlon</i>	
The Breeding of Mice Resistant to and Susceptible to Nitrous Oxide Anesthesia.	S17
<i>Donald D. Koblin, David E. Dong, Joan E. Deady, and Edmond I. Eger, II</i>	
The Visual Evoked Response—Index of Anesthetic Potency?	S18
<i>R. R. Uhl, K. C. Squires, D. L. Bruce, and A. Starr</i>	
Effects of Halothane on Heat Evoked Spinal Neurons.	S19
<i>A. Namiki, J. G. Collins, L. M. Kitahata, H. Kikuchi, E. Tilley, and J. G. Thalhammer</i>	
Hypothermia Plus Thiopental: Synergistic EEG Suppression.	S20
<i>Arthur L. Quasha, Frank W. Sharbrough, Thomas A. Schweller, and John H. Tinker</i>	
Effects of Pentobarbital on cAMP in Guinea Pig Brain.	S21
<i>G. E. DeBoer and T. W. Rall</i>	
Human Research and Noninvasive Measurement of Ventricular Performance: An Echocardiographic Evaluation of Etomidate and Thiopental.	S22
<i>S. Firestone, C. S. Kleinman, C. C. Jaffe, K. Taunt, S. Schneiderman, N. S. Talner, and P. G. Barash</i>	
Enflurane Concentration: Influence of Semiclosed System.	S23
<i>E. Goldman, T. de Campo, and J. A. Aldrete</i>	
Enflurane and Renal Function after Transplantation.	S24
<i>E. Goldman, M. C. Goldman, D. Sherrill, and J. A. Aldrete</i>	
A New Inhalation Anesthetic: Metabolism and Hemodynamics.	S25
<i>J. H. Tinker, Leslie P. McCarty, and Russell A. VanDyke</i>	
A New Method for Testing the Response to an Inhalation Agent.	S26
<i>I. J. Rampil, F. J. Sasse, N. Ty Smith, B. H. Hoff, B. F. Rusy, and D. C. Flemming</i>	
Sevoflurane Anesthesia and Biotransformation in Man.	S27
<i>D. A. Holaday and F. R. Smith</i>	

Rigidity and Hypercarbia on Fentanyl-Oxygen Induction.	S28
<i>M. Kim Comstock, Franklin L. Scamman, James G. Carter, John R. Moyers, and Wendell C. Stevens</i>	
Fentanyl Pharmacokinetics in Man.	S29
<i>D. A. McClain and C. C. Hug, Jr.</i>	
Morphine Anesthesia in Patients with Liver Failure.	S30
<i>C. C. Hug, Jr., J. A. Aldrete, J. F. Sampson, and M. R. Murphy</i>	
Receptor Mediation of Opiate Effects on Temperature.	S31
<i>C. Rosow, J. Miller, and J. Cochin</i>	
Common Bile Duct Responses to Anesthetic Agents in Dogs.	S32
<i>P. L. Zylanoff, P. Mark-Savage, R. W. Martucci, S. Manley, and J. H. Eisele, Jr.</i>	
Clinical Study of the Optical Isomers of Ketamine.	S33
<i>P. F. White, J. Ham, W. L. Way, and A. J. Trevor</i>	
A Possible Mechanism of Ketamine-induced Analgesia.	S34
<i>A. Donald Finck and S. H. Ngai</i>	
Cardiovascular Effects of Drip Ketamine.	S35
<i>R. D. Wilson, J. V. Richey, J. E. Forestner, M. H. Hendrickson, T. J. Herrin, and P. F. Norman</i>	
Ketamine Analgesia: Mediation by Biogenic Amine and Endogenous Opiate Processes.	S36
<i>Gary M. Pekoe and David J. Smith</i>	
Physostigmine Reversal of Diazepam Sedation.	S37
<i>J. G. Garber, A. J. Ominsky, and F. K. Orkin</i>	
Diazepam Alters Cortical Evoked Potentials.	S38
<i>B. L. Grundy, R. H. Brown, and P. S. Greenberg</i>	
The Effect of Lorazepam on Intracranial Pressure and CO ₂ Retention in Cats with Intracranial Hypertension.	S39
<i>R. L. Gagnon, M. L. Marsh, M. Ingvar, L. F. Marshall, and H. M. Shapiro</i>	
Intracranial Pressure Effects on Brainstem Potentials.	S40
<i>P. Raudzens, R. Scharber, and R. Erspamer</i>	
Steady-state Pharmacokinetics of Midazolam Maleate.	S41
<i>F. H. Sarnquist, W. D. Mathers, and T. F. Blaschke</i>	

Cerebral Circulatory and Metabolic Responses to Intravenously Administered Lorazepam.	S42
<i>M. Rockoff, M. Ingvar, R. Gagnon, K. Ray, K. V. H. Naughton, L. F. Marshall, and H. M. Shapiro</i>	
RO-21-3981, a Benzodiazepine, and GABA Metabolism in Rat Brain Synaptosomes.	S43
<i>S. C. Cheng and E. A. Brunner</i>	
Lipid Peroxidation in Brain: Effects of Sedatives.	S44
<i>D. S. Smith, S. Rehncrona, and B. K. Siesjö</i>	
Pentobarbital Alteration of Cyclic AMP Metabolism.	S45
<i>M. L. Cohn and M. Cohn</i>	
Cerebral Metabolic Effects of Naloxone.	S46
<i>Alan A. Artru, Petter A. Steen, and John D. Michenfelder</i>	
EEG Arousal by Doxapram, Naloxone, and Physostigmine.	S47
<i>R. C. Roy and E. H. Stullken, Jr.</i>	
A Possible Mechanism for Anesthetic Depression of Lung Macrophages.	S48
<i>C. W. Graham, W. D. Welch, and J. Zaccari</i>	
Murine Memory and Halothane, Ethanol, Diazepam and Scopolamine.	S49
<i>M. Amirdivani, J. Chalon, and Herman Turndorf</i>	
Prevention of Post-extubation Laryngospasm after Tonsillectomy.	S50
<i>Arun V. Bidwai, Charles Rogers, and Theodore H. Stanley</i>	
Fentanyl vs. Enflurane in Outpatient Anesthesia.	S51
<i>Lily H. Chen and M. L. Berman</i>	
Mechanisms for Ketamine Analgesia and Hallucinosis.	S52
<i>H. S. Havdala, R. L. Borison, and B. I. Diamond</i>	
Halothane and CNS Modulation of Circulation.	S53
<i>F. P. Bousquet, III, D. E. Humphrey, and J. Hedley-Whyte</i>	
Effects of Enflurane and Halothane on CSF Dynamics in the Rat.	S54
<i>E. S. Mann, S. L. Cookson, and J. D. Mann</i>	
Arrest of Cell Cleavage by Halothane: Mechanism of Action.	S55
<i>R. E. Hinkley</i>	
Effects of Induction Agents and Nonvolatile Anesthetics on Chemotaxis of Polymorphonuclear Leukocytes (PMN).	S56
<i>A. Mathieu, D. Mathieu, and N. Hyslop</i>	

Halothane Alterations in Viral RNA-Protein Synthesis.	S57
<i>E. Bedows, P. R. Knight, M. L. Nahrwold, and P. J. Cohen</i>	
CIRCULATION	
Protection from Myocardial Ischemia: Role of Anesthetics.	S58
<i>John H. Tinker and Carlos E. Harrison</i>	
Wedge Pressure as a Predictor of Ischemia during CABG.	S59
<i>R. W. Lieberman, A. J. Schwartz, D. R. Jobes, A. J. Ominsky, and R. W. Andrews</i>	
Usefulness of Swan-Ganz Catheters in Left Main Coronary Disease.	S60
<i>H. C. Slocum, Jr., and M. Linnan</i>	
Myocardial Reinfarction Following Local Anesthesia.	S61
<i>Carl L. Backer, John H. Tinker, and Dennis M. Robertson</i>	
Narrowed Coronary Arteries, Halothane, and Paradox.	S62
<i>E. Lowenstein, P. Föex, C. M. Francis, W. L. Davies, S. Yusuf, and W. A. Ryder</i>	
Greater Coronary Vascular Reserve with Halothane.	S63
<i>Edward D. Verrier, Gerald Edelist, P. Macke Consigny, Scott Robinson, and Julien I. E. Hoffman</i>	
Violation of RPP Exercise Threshold in Coronary Patients.	S64
<i>J. G. Reeves, P. N. Samuelson, W. A. Lell, M. Linnan, H. G. McDaniel, N. T. Kouchoukos, and Lloyd R. Smith</i>	
Factors Affecting Endocardial Circulation.	S65
<i>F. C. Fan, S. Kim, S. Simchon, R. Y. Z. Chen, G. B. Schuessler, and S. Chien</i>	
Afterload Reduction and Preload Augmentation.	S66
<i>J. G. Stone, J. R. Calabro, M. A. DePetrillo, P. F. Hoar, and H. H. Bendixen</i>	
Intranasal Administration of Nitroglycerin.	S67
<i>A. B. Hill, C. J. Bowley, M. L. Nahrwold, P. R. Knight, A. R. Tait, M. D. Taylor, M. M. Kirsh, and J. K. Denlinger</i>	
Systolic Time Intervals. Dose Response to Nitroglycerin.	S68
<i>Paul J. Dauchot</i>	
Hemodynamic Effects of Intravenous Nitroglycerin in Patients with Coronary Artery Disease.	S69
<i>Leo D. Landry, Daniel M. Philbin, Clifton W. Emerson, Thomas R. Verlee, and Frederick H. Levine</i>	
Pulmonary and Systemic Circulations and Vasodilator Drugs.	S70
<i>I. Johansen and J. L. Benumof</i>	

Nitroprusside-induced Hypotension: Role of Heart Rate in Determining Hemodynamic Effects and Tachyphylaxis.	S71
<i>Nabil R. Fahmy, James T. Roberts, and Demetrios G. Lappas</i>	
Tachyphylaxis to Nitroprusside: Role of the Renin–Angiotensin System and Catecholamines in Its Development.	S72
<i>N. R. Fahmy, N. Sunder, J. Moss, E. Slater, and D. G. Lappas</i>	
Blood Flow Alteration Induced by Saralasin or SNP.	S73
<i>Thomas J. Delaney and Edward D. Miller, Jr.</i>	
Propranolol Abates Nitroprusside-induced Renin Release.	S74
<i>H. J. Khambatta, J. G. Stone, and E. Khan</i>	
Platelet Inhibition by Nitroprusside and Nitroglycerin.	S75
<i>F. B. Allen, J. I. Gerson, and F. R. Davey</i>	
Baroreflex Sensitivity and Induced Hypotension.	S76
<i>R. Y. Z. Chen, R. S. Matteo, and S. Chien</i>	
Methylmethacrylate: A Myocardial Depressant and Peripheral Dilator.	S77
<i>I. Johansen and J. L. Benumof</i>	
Deliberate Hypotension for Scoliosis Fusion.	S78
<i>Betty L. Grundy, Clyde L. Nash, and Richard H. Brown</i>	
Effect of Blood Pressure on Spinal Cord Blood Flow in Dogs.	S79
<i>Nabil R. Fahmy, Benjamin Mossad, and Mohsen Milad</i>	
Spinal Cord Hemodynamics during Deliberate Hypotension.	S80
<i>H. K. Jacobs, J. V. Lieponis, M. J. Barber, M. R. Salem, and W. H. Bunch</i>	
Renal Function and Hemodynamics during Induced Hypotension in Dogs.	S81
<i>R. Behnia, R. C. Osborn, H. W. Linde, and E. A. Brunner</i>	
Hypotensive Drugs and Outcome in Cerebral Aneurysm Surgery.	S82
<i>E. A. M. Frost, K. Tabaddor, and C. U. Arancibia</i>	
Control of Brain Bounce during Microvascular Anastomosis.	S83
<i>D. Lobo and F. Brauer</i>	
Carbohydrate and Lipid Metabolism during Controlled Hypotension.	S84
<i>Nabil R. Fahmy and George E. Battit</i>	
Ventricular Conduction during Halothane Anesthesia.	S85
<i>L. A. Turner, E. J. Zuperku, R. V. Purtock, and J. P. Kampine</i>	

Pancuronium Enhances A-V Conduction in Anesthetized Dogs. <i>John F. Kreul and John L. Atlee</i>	S86
Mechanical Ventilation and Cardiac Conduction. <i>Pall Ammendrup and John L. Atlee</i>	S87
Halothane Effect on Coronary Occlusion Reflexes in the Dog. <i>S. R. Bachhuber, J. L. Seagard, Z. J. Bosnjak, L. W. Borowec, and J. P. Kampine</i>	S88
High Dose Barbiturate Effects of Circulatory Hemodynamics and Myocardial Infarct Size in Dogs with Acute Coronary Occlusion. <i>R. L. Gagnon, T. K. Bryson, and H. M. Shapiro</i>	S89
Incidence of Ischemia during CABG Using Halothane. <i>R. W. Lieberman, D. R. Jobes, A. J. Schwartz, and R. W. Andrews</i>	S90
Acute Normovolemic Hemodilution. <i>D. Rose, R. Forest, and T. Coutsoftides</i>	S91
Anemia, Anesthesia, and Distribution of Myocardial Blood Flow. <i>Bruce H. Graham, Philip L. Wilkinson, and Cynthia Brown</i>	S92
Intraoperative Changes in Hemoglobin Oxygen Affinity in Patients Undergoing Coronary Artery Bypass. <i>B. Graham, P. L. Wilkinson, J. R. Moyers, W. K. Hamilton, K. M. Chatterjee, T. A. Ports, and D. J. Ulliyot</i>	S93
Intramyocardial pH Monitoring in Elective Cardiac Arrest. <i>J. M. Robertson, G. J. Wilson, F. J. Walters, D. J. Steward, and D. C. MacGregor</i>	S94
Myocardial Temperature Monitoring during Aortic Crossclamping. <i>K. S. Ching and D. Hulse</i>	S95
Urine and Serum K ⁺ after K ⁺ Cardioplegia in Man. <i>I. Azar, T. Satyanarayana, and H. Turndorf</i>	S96
Vasoactive Mediators and Human Cardiopulmonary Bypass. <i>W. D. Watkins, J. Moss, D. G. Lappas, L. Levine, and M. B. Peterson</i>	S97
Interaction of Renin–Angiotensin–Catecholamines in Cardiac Surgical Patients. <i>D. G. Lappas, N. R. Fahmy, M. Ohtaka, J. Moss, and E. E. Slater</i>	S98
Prolonged Heparin Activity during Hypothermic Cardiopulmonary Bypass. <i>A. Entress, F. G. Estafanous, and G. C. Hoffman</i>	S99
Fentanyl–Oxygen Anesthesia in Septic Shock. <i>Theodore H. Stanley and Parsad Reddy</i>	S100

Comparison of Halothane <i>vs.</i> Droperidol–Fentanyl in Traumatic Shock. <i>B. Shin, C. F. Mackenzie, and M. Helrich</i>	S101
Hemodynamic Effects of Anesthetic Doses of Alpha-prodine and Sufentanil in Dogs. <i>Parsad Reddy, Wen-Shin Liu, Theodore H. Stanley, and Richard Johansen</i>	S102
Hemodynamic Effects of Midazolam in Cardiac Patients. <i>R. J. Fragen, S. N. Meyers, V. Barresi, and N. J. Caldwell</i>	S103
Midazolam–N ₂ O Induction in Ischemic Heart Disease Patients. <i>P. N. Samuelson, J. G. Reves, K. Dole, L. R. Smith, and M. Linnan</i>	S104
Adrenergic Response to Morphine and Valium Anesthesia. <i>Paul F. Hoar, Norman T. Nelson, Dennis T. Mangano, Robert F. Hickey, and Cedric R. Bainton</i>	S105
Active Stiffness of Left Ventricle during Anesthesia. <i>S. Shimosato and O. Kemmotsu</i>	S106
Sensitivity of the Left Ventricle to Outflow Resistance. <i>J. F. Schauble, R. H. Wender, R. M. Carroll, G. F. Maruschak, and P. L. Elliott</i>	S107
Effect of Bypass on Myocardial Compliance and Performance. <i>D. T. Mangano, D. C. Van Dyke, and R. J. Ellis</i>	S108
Halothane/Dobutamine: Myocardial Beta-adrenoreceptors. <i>K. Bernstein, Y. Gangat, Y. Vulliemoz, M. Verosky, and L. Triner</i>	S109
Hemodynamic Effects of Dobutamine in Cardiac Surgical Patients. <i>Robert C. Schneider, Walter C. Sheets, Anastasios Triantafillou, and Demetrios G. Lappas</i>	S110
Dobutamine Response in Patients Taking Propranolol. <i>R. H. Jarman, J. L. Brooks, Jr., J. A. Kaplan, and C. C. Hug, Jr.</i>	S111
Intraoperative Cardiovascular State and Cardiac Subsets. <i>Paul J. Dauchot</i>	S112
Influence of Dietary Sodium on Renin Release during Anesthesia. <i>P. Hickey, E. E. Slater, N. R. Fahmy, and D. G. Lappas</i>	S113
Left Ventricular Mechanoreceptor Reflex Function. <i>J. A. Estrin, R. W. Emery, D. M. Nicoloff, C. R. Swayze, J. J. Buckley, and I. J. Fox</i>	S114
Interaction of Volatile Anesthetics and Anticholinergics. <i>S. K. Samra and P. J. Cohen</i>	S115

Dual Effect of Ketamine on the Peripheral Vasculature.	S116
<i>J. C. Liao, Douglas E. Koehntop, and Joseph J. Buckley</i>	
Intravenous Calcium Chloride and the Coagulation—Fibrinolytic System.	S117
<i>Nabil R. Fahmy and Demetrios G. Lappas</i>	
Chronic Hypokalemia on Epinephrine-induced Dysrhythmias during Halothane, Enflurane or Methoxyflurane with N ₂ O Anesthesia.	S118
<i>K-C. Wong, C-K. Tseng, B. A. Puerto, and A. X. Puerto</i>	
Potassium Repletion in Hypokalemic Dogs Aided by Glucose and Insulin.	S119
<i>R. Kawamura, K-C. Wong, C-K. Tseng, A. Ohmura, and R. K. Johansen</i>	
High Electrode Impedance as a Cause of EKG Distortion.	S120
<i>J. H. Karis, L. W. Burton, J. P. Karis, and F. F. Klein</i>	
Renin, Catecholamine, and Vasopressin Response to the "Stress" of Anesthesia and Surgery.	S121
<i>D. M. Philbin, C. W. Emerson, C. H. Coggins, J. M. Moss, E. Slater, and R. C. Schneider</i>	
Hemodynamic Effects of Anesthesia and Surgery in Renal Hypertensive Patients Receiving Large Doses of β -Receptor Antagonists.	S122
<i>C. Prys-Roberts</i>	
Renal Blood Flow Autoregulation during Anesthesia.	S123
<i>A. A. Birch and W. H. Boyce</i>	
Distribution of Blood Flow with Anesthetics.	S124
<i>E. D. Miller, Jr., J. R. Kistner, and R. M. Epstein</i>	
Central Hemodynamic Changes during Aortic Reconstructive Surgery—Effects of Adrenergic Blockade and Temporary Shunt.	S125
<i>D. Thomson, P. Neglén, and B. Eklöf</i>	
Effect of the Pericardium on Ventricular Function in Man.	S126
<i>D. T. Mangano</i>	
Hyperthermic Alteration of Sympathetic Activity.	S127
<i>Y. D. Kim, D. E. Lees, C. R. Lake, J. M. Bull, V. Weise, I. J. Kopin, and T. E. Macnamara</i>	
Effects of Aminophylline on Pulmonary Vascular Resistance.	S128
<i>F. deBros, W. M. Daggett, and M. B. Laver</i>	
Cardiac Adenylate Cyclase: Droperidol/Halothane Effect.	S129
<i>Y. Gangat, K. Bernstein, Y. Vulliemoz, M. Verosky, and L. Triner</i>	

Propranolol and the Dissociation Curve. <i>Clayton Petty and Thomas Bageant</i>	S130
Propranolol Reduces Nitroprusside Dose and Cyanide Levels. <i>Robert F. Bedford, Frederic A. Berry, Jr., and David E. Longnecker</i>	S131
Plastic Absorption Adsorption of Nitroglycerin Solution. <i>J. K. Ingram and J. D. Miller</i>	S132
Antibiotic Concentrations in Serum, Muscle and Bone: A Comparison of Hypotensive and Normotensive Anesthesia. <i>Nabil R. Fahmy, D. G. Patel, R. C. Moellering, Jr., K. Thrasher, and W. H. Harris</i>	S133
Heat Dosage vs. Distribution during Rewarming on C-P Bypass. <i>Carl R. Noback and John H. Tinker</i>	S134
Potassium Changes Following Vascular Clamp Release during Renal Transplantation. <i>C. A. Hirshman, D. Leon, M. Brackebusch, and H. Casson</i>	S135
Comparing Anesthetic Techniques during Aortic Cross Clamp. <i>R. R. Bartkowski, S. J. Aukburg, D. E. Greenhow, P. L. Klineberg, H. Rosenberg, R. Andrews, and B. Roberts</i>	S136
Cardiovascular Effects of Dimethyl Tubocurarine in Patients with Aortic Valvular Disease during Morphine-Diazepam-Oxygen Anesthesia. <i>James R. Zaidan, Joel A. Kaplan, and Rhea M. Sumpter</i>	S137
Comparison of the Cardiovascular Effects of Morphine-N ₂ O and Fentanyl-N ₂ O Balanced Anesthesia before and after Pancuronium in Man <i>George Bennett and Theodore H. Stanley</i>	S138
Fentanyl-Oxygen Anesthesia for Coronary Artery Surgery: Plasma Catecholamine and Cortisol Responses. <i>Theodore H. Stanley, Lawrence Berman, Orville Green, David H. Robertson, and Michael Roizen</i>	S139
Effects of Morphine on Cardiac Output and Regional Blood Flow Distribution in Conscious Dogs. <i>Lawrence L. Priano and Stephen F. Vatner</i>	S140
Anesthetic Dose That Blocks Adrenergic Response to Incision. <i>M. F. Roizen and R. W. Horrigan</i>	S141
Influence of Anesthetic on Microvascular Responses to Hemorrhage. <i>David E. Longnecker and Donald C. Ross</i>	S142

Electromechanical Monitor for Assessment of Hypotension: Halothane <i>vs.</i> Blood Loss.	S143
<i>A. C. Pinchak</i>	
Anesthetics <i>vs.</i> Global Myocardial Ischemic Deterioration.	S144
<i>Joseph T. Walls, John H. Tinker, and Carlos E. Harrison</i>	
Effects of Fentanyl on Adrenergic Nerves in Coronary Artery.	S145
<i>D. K. Rorie, G. M. Tyce, and S. M. Muldoon</i>	
Sarcoplasmic Reticulum: Enflurane Effect on Ca ⁺⁺ Dynamics.	S146
<i>T. J. Conahan, III, and T. J. J. Blanck</i>	
Permeability and Vascularity of the Developing Brain: Cerebellum <i>vs.</i> Cerebral Cortex.	S147
<i>C. E. Johanson and K. C. Wong</i>	
Low-cost Microcomputer Generation of Physiologic Profile.	S148
<i>J. M. Schulz and A. C. Pinchak</i>	
Clinical Application of Miniature Accelerometers.	S149
<i>A. C. Pinchak</i>	
CRITICAL CARE	
Benefit of Elective ICU Admission for Certain Operations.	S150
<i>R. Teplick, D. J. Cullen, and J. P. Gilbert</i>	
Predicting Postoperative Ventilatory Need in Myasthenia.	S151
<i>S. R. Leventhal, F. K. Orkin, and R. A. Hirsh</i>	
Mechanism of Action of Epinephrine during Resuscitation.	S152
<i>C. W. Otto, R. W. Yakaitis, and C. D. Blitt</i>	
Time and Therapy Affect Energy Needs for Defibrillation.	S153
<i>Ronald W. Yakaitis and Gordon Ewy</i>	
Dobutamine: Hemodynamic Effects in Patients Treated with and without Propranolol.	S154
<i>Tadikonda L. K. Rao, Adel A. El-Etr, Kanteerava Balasaraswathi, and Henry Sullivan</i>	
Decreased Dopamine-Beta-hydroxylase Activity in Septic Shock.	S155
<i>A. Harari, E. Martin, A. M. Bouvier, O. Gateau, E. Comoy, and C. Bohuon</i>	
Oxygenation as an Indicator of Lung Fluid Accumulation.	S156
<i>J. C. Gabel, R. E. Drake, and J. F. Arens</i>	

Axillary Arterial Catheterization.	S157
<i>C. W. Bryan-Brown, P. D. Lumb, K. S. Kathirithamby, B. Shapiro, and S. Azer</i>	
Safety of Brachial vs. Radial Arterial Catheters.	S158
<i>M. K. Comstock, T. Ellis, J. G. Carter, C. Wright, and W. C. Stevens</i>	
Evaluation of External Jugular Vein for Swan-Ganz Catheter Insertion.	S159
<i>Adel R. Abadir, Kwong Ann Ung, and Rafique Chaudhry</i>	
Carotid Artery Puncture with Internal Jugular Cannulation Using the Seldinger Technique: Incidence, Recognition, Treatment, and Prevention.	S160
<i>A. J. Schwartz, D. R. Jobes, D. Eric Greenhow, L. W. Stephenson, and N. Ellison</i>	
Thrombocytopenia Induced by Swan-Ganz Catheters.	S161
<i>K. A. Richman, Y. L. Kim, and B. E. Marshall</i>	
Pulmonary Artery Monitoring during Cardiac Surgery.	S162
<i>D. T. Mangano</i>	
Coronary Dilators Increasing O ₂ Demand and Myocardial Ischemia.	S163
<i>I. Kissin</i>	
Hemodynamic Changes Due to Normovolemic Anemia in Coronary Disease Patients.	S164
<i>Tadikonda L. K. Rao, Adel A. El-Etr, and Alvaro Montoya</i>	
Optimal Filling Pressures Following Cardiopulmonary Bypass.	S165
<i>D. T. Mangano, D. C. Van Dyke, and R. J. Ellis</i>	
The Intra-aortic Balloon Pump and Renal Function in Man.	S166
<i>M. Hilberman, G. Derby, R. Spencer, B. D. Myers, and E. B. Stinson</i>	
Monitoring Anticoagulation and Reversal—Effect on Blood Loss.	S167
<i>D. R. Jobes, A. J. Schwartz, N. Ellison, R. Andrews, R. Ruffini, and J. Ruffini</i>	
Neostigmine-Atropine after Coronary Surgery.	S168
<i>J. L. Brooks, Jr., R. H. Jarman, and J. A. Kaplan</i>	
The Effects of 50% Oxygen on Resolution of Experimental Lung Injury.	S169
<i>F. W. Cheney, T. W. Huang, and R. Gronka</i>	
Effect of 80% Oxygen on the Healing of Lung Injury.	S170
<i>D. C. Tyler, D. J. Pavlin, and F. W. Cheney</i>	
Effect of Lung Injury on Pulmonary Oxygen Toxicity.	S171
<i>D. J. Pavlin, D. C. Tyler, and F. W. Cheney</i>	

Effects of an Acute Increase in $[Ca^{++}]$ on Pulmonary Vasculature. <i>D. G. Lappas, T. Verlee, R. Schneider, L. J. Drop, and M. B. Laver</i>	S172
Pulmonary Capillary Permeability in Cardiogenic Shock. <i>W. H. Massion, G. Blumel, and P. Downs</i>	S173
The Evaluation of Dog Lung Capillary Permeability Characteristics. <i>R. E. Drake and J. C. Gabel</i>	S174
Mechanism of Pulmonary Edema in Burn Wound Sepsis. <i>Thomas H. Adair and Daniel L. Traber</i>	S175
Extravascular Thermal Volume as an Estimate of Lung Water. <i>T. W. Feeley, F. H. Mihm, D. Guthaner, and M. H. Rosenthal</i>	S176
Bradykinin and Lung Lymph Protein and Fluid Flow. <i>L. M. Pang, S. A. Stalcup, H. O'Brodovich, J. S. Lipset, and R. B. Mellins</i>	S177
Failure of Steroids to Improve Hemorrhagic Pulmonary Edema. <i>E. Goldman, T. de Campo, and J. A. Aldrete</i>	S178
Physiologic Effects of Steroids in Foodstuff Aspiration. <i>J. W. Wynne, F. J. DeMarco, and C. I. Hood</i>	S179
Cimetidine for Prophylaxis of Aspiration Pneumonitis: Comparison of Intramuscular and Oral Dosage Schedules. <i>L. A. Weber and C. A. Hirshman</i>	S180
Evaluation of Respiratory Tract Injury in Acute Burns. <i>J. A. Walker, D. H. Parks, R. G. Kiker, and R. P. Mlcak</i>	S181
Low Rate Intermittent Mandatory Ventilation (IMV) in the Neonate. <i>J. G. Shutack, W. W. Fox, T. H. Shaffer, J. G. Schwartz, and A. S. Moonjian</i>	S182
PEEP Induced $P_{paw} - P_{ta}$ Gradient: Function of Absolute P_{ta} . <i>I. Johansen and J. L. Benumof</i>	S183
PEEP Induced $P_{pad} - P_{ta}$ Gradient. <i>E. A. Meathe, J. L. Benumof, R. E. Berryhill, G. F. Maruschak, and I. Johansen</i>	S184
The Effects of PEEP on Lung Fluid and Protein Exchange during Lung Vascular Injury. <i>H. van der Zee, T. S. Hakim, A. B. Malik, and B. C. Lee</i>	S185
Long Term PEEP Therapy and Lung Water in Oleic Acid ARF. <i>T. de Campo, E. Goldman, G. D. Swanson, and J. A. Aldrete</i>	S186

The Effect of Long Term CMV and PEEP on Renal Function in Dogs.	S187
<i>Arnold J. Berry, Ralph T. Geer, Carol Marshall, and Bryan E. Marshall</i>	
Reverse I:E Ratio, CPAP and CPPV: Is There a Difference?	S188
<i>Lawrence S. Berman, John B. Downs, Anton Van Eeden, and Daphne Delhagen</i>	
High Frequency Positive Pressure Ventilation for Prolonged Respiratory Support.	S189
<i>G. C. Carlon, C. Ray, Jr., R. C. Kahn, and W. S. Howland</i>	
Mode of Ventilation and Pulmonary Barotrauma.	S190
<i>Mali Mathru, Tadikonda L. K. Rao, Bahman Venus, and Wade Jones</i>	
Improvement in Oxygenation with Massive Weight Loss.	S191
<i>R. W. Vaughan, R. C. Cork, and D. Hollander</i>	
Nutrition for the Patient with Respiratory Failure.	S192
<i>J. Askanazi, S. H. Rosenbaum, J. Nordenstrom, D. H. Elwyn, Y. A. Carpentier, and J. M. Kinney</i>	
Tracheal Wall Pressure Caused by Endotracheal Tube Tip.	S193
<i>J. L. Benumof, R. E. Berryhill, G. F. Maruschak, G. T. Ozaki, and E. A. Meathe</i>	
Cardiovascular Effects of Extubation.	S194
<i>E. C. Wohlner, L. J. Usubiaga, R. M. Jacoby, and G. E. Hill</i>	
Cardiovascular Responses to Extubation.	S195
<i>R. Richard Edde</i>	
Muscle Water and Electrolytes in Injury and Infection.	S196
<i>J. Askanazi, A. I. Hyman, D. H. Elwyn, F. E. Gump, P. Fürst, and J. M. Kinney</i>	
Extrapolated Values of Hb and HbCO for Shunt Calculation.	S197
<i>R. D. Cane, B. A. Shapiro, and R. A. Harrison</i>	
Blood Withdrawal Rate Effect on Venous Oxygen Saturation.	S198
<i>F. Mihm, T. W. Feeley, M. Rosenthal, and T. A. Raffin</i>	
Nitroglycerin and Nitroprusside Induced Changes in Cerebral Hemodynamics.	S199
<i>M. C. Rogers and R. J. Traystman</i>	
The Effect of Diazoxide on Intracranial Pressure in Cats with Intracranial Mass Lesions.	S200
<i>R. L. Gagnon and H. M. Shapiro</i>	
IV Lidocaine for Prevention of Intracranial Hypertension.	S201
<i>M. Donegan, R. F. Bedford, and R. Dacey</i>	

Diazepam Fails to Protect Brain Tissue in Hypoxic Stress. <i>L. Berntman, F. A. Welsh, J. J. BianRosa, and J. R. Harp</i>	S202
Serum Potassium Levels during Prolonged Hypothermia. <i>A. Koht, L. J. Cerullo, P. C. Land, and H. W. Linde</i>	S203
Zero Order Pharmacokinetics of High Dose Thiopental. <i>F. G. Mihm, D. R. Stanski, and M. H. Rosenthal</i>	S204
Transfusion of Platelets Through Microaggregate Filters. <i>E. L. Snyder, P. Grum, M. Cooper-Smith, and R. James</i>	S205
Hypokalemia after Trauma and Component Transfusion Therapy. <i>B. Shin, C. F. Mackenzie, S. Friedman, and P. R. Sohmer</i>	S206
Does Heparin Affect Potassium Values? <i>Anne B. Hill, Michael L. Nahrwold, David Noonan, and Paula Northrope</i>	S207
Changes in Myocardial Blood Flow after CMV and PEEP in Dogs. <i>R. T. Geer, A. J. Berry, C. Marshall, and B. E. Marshall</i>	S208
Continuous Monitoring of Myocardial \dot{V}_{O_2} . <i>F. deBros, E. G. Butchart, M. B. Laver, W. G. Austen, and M. T. McEnany</i>	S209
Estimation of Left Atrial Mean from Right Heart Measurements. <i>M. L. Yelderman and W. New</i>	S210

LOCAL ANESTHETICS AND PAIN

Comparison of Bupivacaine (Marcaine) with Tetracaine (Pontocaine) for Spinal Block for Intra-abdominal Pelvic Surgery. <i>Daniel C. Moore</i>	S211
Vulnerability of Sensory Pathways to Local Anesthetics. <i>A. Galindo and T. Witcher</i>	S212
Mixtures of Local Anesthetics: Bupivacaine-Chloroprocaine. <i>A. Galindo and T. Witcher</i>	S213
Nerve Block Duration with Bupivacaine-Dextran. <i>B. Curtiss and J. E. Scurlock</i>	S214
The Duration of Action of Nerve Blocks Produced by Local Anesthetic: Dextran Mixtures. <i>F. P. Buckley and B. R. Fink</i>	S215

Blockade of Sensory and Motor Pathways by Lidocaine, Bupivacaine and Etidocaine.	S216
<i>A. Galindo and T. Witcher</i>	
Effect of Local Anesthetic Drugs on Fast and Slow Nerve Fibers.	S217
<i>A. J. Gissen, B. Covino, and J. Gregus</i>	
Critical Blocking Length as Related to Conduction Velocity.	S218
<i>A. Galindo and T. Witcher</i>	
Lidocaine and Benzocaine: Different Actions?	S219
<i>J. J. Kendig and N. Erickson</i>	
Hypoosmotic Neural Swelling and Electrolyte Depletion as Potentiators of Local Anesthetic Block.	S220
<i>B. Raymond Fink, D. F. Calkins, and J. Barsa</i>	
The Contribution of Hypoosmolarity to Spinal Anesthesia.	S221
<i>J. Barsa, B. R. Fink, J. Lamb, F. Freund, T. Murphy, and D. Calkins</i>	
Pharmacokinetics of 2-Chloroprocaine in E ₁ ^a E ₁ ^a .	S222
<i>E. K. Zsigmond, O. N. Hisvark, P. Chandra, and S. P. Kothary</i>	
Treatment of Acute Herpes Zoster Neuralgia by Epidural Injection or Stellate Ganglion Block.	S223
<i>J. Bauman</i>	
The Influence of Height on Epidural Spread in Young and Old Patients.	S224
<i>N. E. Sharrock</i>	
Ultrasonic Localization of the Lumbar Epidural Space.	S225
<i>R. C. Cork, J. J. Kryc, and R. W. Vaughan</i>	
Effect of Epidural Steroids on Nerves and Meninges.	S226
<i>Thomas J. Delaney, Harold Carron, John C. Rowlingson, Albert Butler, and John A. Jane</i>	
Neural Effects of Epidural Anesthetics.	S227
<i>J. F. Cusick, S. E. Abram, and J. B. Myklebust</i>	
Plasma Renin Activity, Extradural Analgesia and Surgery.	S228
<i>D. R. Bevan, S. Lightman, and W. S. Peart</i>	
Heterogeneous Local Brain Metabolic Events during Lidocaine Seizures.	S229
<i>M. Ingvar and H. M. Shapiro</i>	

Interaction of Local Anesthetics and Cell Membrane Model. <i>H. Goto, D. Shieh, and K. Arakawa</i>	S230
Continuing Studies of D-Phenylalanine Analgesia in Mice and Humans. <i>R. C. Balagot and S. Ehrenpreis</i>	S231
The Clinical Potential of Tetrodotoxin. <i>J. E. Scurlock and B. Curtiss</i>	S232
Prolonged Post Thoracotomy Analgesia by Cryoprobe Nerve Block. <i>J. Katz, W. L. Nelson, R. Forest, D. L. Bruce, and R. M. Peters</i>	S233
Thoracic Epidural Analgesia in Morbid Obesity. <i>S. Gelman, H. L. Laws, J. Potzick, S. Strong, M. Linnan, and H. Erdemir</i>	S234
Chronic Naltrexone Enhancement of Morphine Action. <i>H. S. Havidala, J. E. Comaty, R. L. Borison, and B. I. Diamond</i>	S235
Endoneurial Pressure: Fluid Transport Mechanisms. <i>R. R. Myers, H. C. Powell, and H. M. Shapiro</i>	S236
The Celiac Ganglia in Man: Normal Anatomic Variations. <i>L. A. Nauss, D. K. Rorie, E. M. Ward, and R. C. Bahn</i>	S237
Bupivacaine Blood Levels Following Scalp Injection. <i>P. S. Colley, J. E. Heavner, and D. C. Bloedow</i>	S238

METABOLISM AND REGULATION

Characterization of Hypoxic Model for Halothane Hepatotoxicity. <i>B. R. Brown, Jr., I. G. Sipes, R. Jee, and A. J. Gandolfi</i>	S239
Enzymatic Defluorination of a Halothane Metabolite. <i>D. D. Denson, J. A. Thurman, and B. A. Hitt</i>	S240
Metabolite Binding to Liver Nuclei during Low Level Exposure to Halothane. <i>H. N. Edmunds, E. N. Cohen, and J. R. Trudell</i>	S241
Bioactivation and Hepatotoxicity of $^2\text{H}/^3\text{H}$ Halothane. <i>I. G. Sipes and A. J. Gandolfi</i>	S242
How Reactive Are the Reductive Metabolites of Halothane? <i>D. D. Denson and D. J. Ford</i>	S243

Halothane-induced Hepatic Necrosis in Hyperthyroid Rats.	S244
<i>M. Wood, M. L. Berman, R. D. Harbison, J. M. Phythyon, and A. J. J. Wood</i>	
Sarcolemmal Calcium in Human Malignant Hyperthermia.	S245
<i>Raphael Gruener and Thomas Blanck</i>	
Malignant Hyperthermia: The Sarcoplasmic Reticulum.	S246
<i>T. J. J. Blanck, R. Gruener, L. Z. Stern, and M. Thompson</i>	
MH Muscle: Effect of Neurotransmitters or ↑ Temperature.	S247
<i>G. A. Gronert and J. H. Milde</i>	
Porcine Malignant Hyperthermia: A Method to Produce Dantrolene Prophylaxis and Therapeusis.	S248
<i>E. H. Flewellen and T. E. Nelson</i>	
Amobarbital Hypothermia: A Prostaglandin Mechanism.	S249
<i>M. Cohn, M. L. Cohn, D. Taube, and P. Bode</i>	
Glucose Control in Normal and Obese Surgical Patients.	S250
<i>C. H. McLeskey, R. E. Woodruff, S. B. Lewis, and J. L. Steffenson</i>	
Effect of Halothane on Uptake and Metabolism of 5-Hydroxytryptamine by Rat Lungs Perfused <i>in Situ</i> .	S251
<i>D. E. Rannels, C. A. Watkins, and J. F. Biebuyck</i>	
Halothane Immunosuppression in Tumor-bearing Mice.	S252
<i>R. E. Lewis, Jr., J. M. Cruse, and J. Hazlewood</i>	
Alteration of Virus Growth by Halogenated Anesthetics.	S253
<i>P. R. Knight, M. L. Nahrwold, P. J. Cohen, and J. A. Gaymer</i>	
Anesthetic Health Hazards in the Dental Operatory.	S254
<i>E. N. Cohen, B. W. Brown, M. Wu, et al.</i>	
Pentane Expiration: A Measure of Halothane-induced Peroxidation.	S255
<i>F. O. O'Neal, D. B. Menzel, and J. H. Karis</i>	
Isoniazid Metabolites and Anesthetic Metabolism.	S256
<i>M. P. Fish and S. A. Rice</i>	
Halothane and Brain Hexokinase Activity.	S257
<i>J. J. Richter and Steven White</i>	
Metabolism of Nitrous Oxide by Human and Rat Intestinal Contents.	S258
<i>J. R. Trudell, K. Hong, J. R. O'Neil, and E. N. Cohen</i>	

Mouse Sperm Morphology Following Exposure to Anesthetics during Early Spermatogenesis.	S259
<i>P. C. Land, E. L. Owen, and H. W. Linde</i>	
Nitrous Oxide is Teratogenic: Xenon is Not!	S260
<i>G. A. Lane, M. L. Nahrwold, A. R. Tait, M. D. Taylor, A. R. Beaudoin, and P. J. Cohen</i>	
Reproductive Safety of Enflurane in Female Mice.	S261
<i>R. S. Wharton and R. I. Mazze</i>	
Enflurane and Gentamicin in Chronic Renal Failure.	S262
<i>K. J. Fish, T. J. Sievenpiper, S. A. Rice, and R. I. Mazze</i>	
Deuterated Methoxyflurane (d_4 -MOF) Anesthesia.	S263
<i>J. M. Baden, S. A. Rice, D. D. Denson, and R. I. Mazze</i>	
NEUROMUSCULAR TRANSMISSION	
A Rapid, Semi-automated Method for Determining Dibucaine Numbers.	S264
<i>W. P. Arnold</i>	
Determination of <i>d</i> -Tubocurarine by Liquid Chromatography.	S265
<i>F. deBros and A. J. Gissen</i>	
Renal Elimination of ORG-NC45 and Pancuronium.	S266
<i>N. N. Durant, M. C. Houwertjes, and S. Agoston</i>	
Hepatic Elimination of ORG-NC45 and Pancuronium.	S267
<i>N. N. Durant, M. C. Houwertjes, and S. Agoston</i>	
4-Aminopyridine Reversal of Ganglion Block.	S268
<i>N. N. Durant, C. Lee, and R. L. Katz</i>	
Time Dependent Increase in Sensitivity of <i>d</i> Tc during Enflurane Anesthesia.	S269
<i>D. R. Stanski, J. Ham, R. D. Miller, and L. B. Sheiner</i>	
<i>d</i> -Tubocurarine: Pharmacodynamics and Kinetics in Children.	S270
<i>C. O'Keeffe, G. A. Gregory, D. R. Stanski, and R. D. Miller</i>	
Relationship Between Respiratory Muscle Strength and Vital Capacity during Curare-induced Weakness.	S271
<i>T. J. Gal and S. K. Goldberg</i>	
Succinylcholine: Intraocular and Intracranial Pressure.	S272
<i>B. Borman, M. Babinski, L. Bunegin, and R. B. Smith</i>	

Prejunctional Neuromuscular Block <i>in Vivo.</i>	S273
<i>C. Lee, N. N. Durant, A. Heng, and R. L. Katz</i>	
Spinal Cord Transection and Nerve Muscle Transmission.	S274
<i>M. D. Sokoll, J. G. Carter, and S. D. Gergis</i>	
Effects of Verapamil and EGTA on Mammalian Muscle <i>in Vitro.</i>	S275
<i>G. B. Bikhazi, K. C. Thomas, Jr., and F. F. Foldes</i>	
Pretreatment with Non-depolarizing Muscle Relaxants and Dosage of Succinylcholine.	S276
<i>Halappa N. Konchigeri and Kodandarama Reddy Tummuru</i>	
Pharmacology of BW785U: A Short-acting Nondepolarizing Neuromuscular Blocking Agent.	S277
<i>John J. Savarese and William B. Wastila</i>	
Autonomic/Neuromuscular Dose-ratios and Hemodynamic Effects of BW785U, A Short-acting Nondepolarizing Ester Neuromuscular Blocking Agent.	S278
<i>William B. Wastila and John J. Savarese</i>	
BW444U: An Intermediate-duration Nondepolarizing Neuromuscular Blocking Agent with Significant Lack of Cardiovascular and Autonomic Effect.	S279
<i>John J. Savarese and William B. Wastila</i>	
Comparative Cardiovascular and Neuromuscular Effects of ORG-NC45, <i>d</i> -Tubocurarine, Pancuronium and Metocurine.	S280
<i>L. H. D. J. Booij, R. P. Edwards, Y. J. Sohn, and R. D. Miller</i>	
Comparative Hemodynamic Effects of <i>d</i> -Tubocurarine and Metocurine in the Dog.	S281
<i>R. P. Antonio, D. M. Philbin, and J. J. Savarese</i>	
<i>In Vivo</i> Muscle Relaxant–Local Anesthetic Interactions.	S282
<i>K. Morita, S. Matsuo, H. Nagashima, B. Kanarek, D. Duncalf, and F. F. Foldes</i>	
A Marked Potentiating Effect in Man of Combined Pancuronium and Metocurine or Pancuronium and <i>d</i> -Tubocurarine Neuromuscular Blockade.	S283
<i>P. W. Lebowitz, F. M. Ramsey, J. J. Savarese, and H. H. Ali</i>	
Curare Neuromuscular Blockade during Hypothermia in Man.	S284
<i>J. Ham, D. R. Stanski, R. D. Miller, and P. Newfield</i>	
Mechanism of Neomycin-induced Neuromuscular Block.	S285
<i>C. Lee, N. N. Durant, and R. L. Katz</i>	
Stimulation Parameters and Reversal of <i>d</i> -Tc Block <i>in Vivo.</i>	S286
<i>F. F. Foldes, D. B. S. Rao, A. Deery, H. Nagashima, P. S. Underwood, and D. Duncalf</i>	

Relation of Serum Metocurine Concentration to Neuromuscular Blockade in Man. <i>Richard S. Matteo and Hoshang J. Khambatta</i>	S287
Train of Four Measurement of Potentiation of Curare by Lidocaine. <i>M. G. Zukaitis and G. P. Hoech</i>	S288
<i>In Vitro</i> 4-Aminopyridine-Anticholinesterase Interaction. <i>F. F. Foldes, I. Chaudhry, L. Sokol, and H. Nagashima</i>	S289
OBSTETRIC ANESTHESIA AND PERINATOLOGY	
Antacid Pulmonary Aspiration. <i>C. P. Gibbs, R. E. Hempling, J. W. Wynne, and C. I. Hood</i>	S290
Nitroglycerin and the Uterine Vasculature in Gravid Ewes. <i>A. S. Wheeler, F. M. James, III, F. C. Greiss, Jr., P. J. Meis, J. R. Rose, J. I. Fishburne, and D. M. Dewan</i>	S291
Relief of Stress with Meperidine in Pregnant Baboons and Sheep. <i>Hisayo O. Morishima, Kaori Sakuma, Hilda Pedersen, Inge Dyrenfurth, and Mieczyslaw Finster</i>	S292
Pressure Passive Cerebral Blood Flow in the Non-asphyxiated Fetus. <i>M. P. Pash, B. G. Pickering, W. A. Tweed, and R. J. Palahniuk</i>	S293
Effects of Ketamine on Regional Cerebral Blood Flow in the Asphyxiated Fetus. <i>B. G. Pickering, M. J. Pash, and R. J. Palahniuk</i>	S294
Regional Cerebral Blood Flow during Neonatal Asphyxia. <i>M. J. Hernández and R. A. Hawkins</i>	S295
Applications of the Transcutaneous Oxygen Electrode in Neonatal Intensive Care. <i>E. R. Roaf, R. Slavin, M. Epstein, and A. Cohen</i>	S296
Preeclampsia—Relationship of CVP and Epidural Analgesia. <i>T. H. Joyce, III, K. S. Debnath, and E. A. Baker</i>	S297
Epidural Dose Responses in Pregnant and Nonpregnant Patients. <i>N. E. Sharrock and J. Greenidge</i>	S298
Spread of Epidural Analgesia in Early Pregnancy. <i>L. Fagraeus, B. J. Urban, A. M. Groce, and P. R. Bromage</i>	S299
The Effect of Lateral Position and Volume on the Spread of Epidural Anesthesia in the Parturient. <i>E. M. Hew, A. F. D. Cole, S. H. Rolbin, and S. J. Virgint</i>	S300

Dextrose Affects Gravitational Spread of Epidural Anesthesia.	S301
<i>Young R. Park and Douglas W. Eastwood</i>	
Epidural Anesthesia for Cesarean Section in Diabetics.	S302
<i>S. Datta, W. U. Brown, Jr., G. W. Ostheimer, J. B. Weiss, and M. H. Alper</i>	
Continuous Infusion Epidural Block for Analgesia in Labor.	S303
<i>N. B. Kenepp and B. B. Gutsche</i>	
Prophylaxis of Epidural "Wet Tap" Headache.	S304
<i>B. E. Smith</i>	
Bacteriologic Comparison of Epidural/Caudal Techniques.	S305
<i>E. Abouleish, T. Orig, and A. J. Amortegui</i>	
Enflurane and Halothane: Effects of Placental Transfer.	S306
<i>T. Abboud, E. Henriksen, S. H. Kim, T. C. Chen, G. Levinson, and S. M. Shnider</i>	
Placental Transfer of Ephedrine.	S307
<i>M. G. Ward, S. C. Hughes, S. M. Shnider, G. Levinson, R. G. Wright, L. D. Gruenke, and J. C. Craig</i>	
Nitroglycerine Effect in the Hypertensive Pregnant Ewe.	S308
<i>J. B. Craft, Jr., E. G. Co, M. L. Yonekura, and R. M. Gilman</i>	
Intravenous Injection of Bupivacaine in the Pregnant Ewe.	S309
<i>J. B. Craft, Jr., E. G. Co, M. L. Yonekura, M. F. Roizen, P. Mazel, R. M. Gilman, and J. L. Johnson</i>	
Local Anesthetics in Cesarean Section Epidural Analgesia.	S310
<i>Francis M. James, III, D. M. Dewan, H. M. Floyd, A. S. Wheeler, L. Rhyne, W. M. Grant, and R. T. Westmoreland</i>	
Differential Pulmonary Toxicity of Antacids.	S311
<i>T. D. Bogard, R. G. Fennell, B. B. Gutsche, and B. E. Marshall</i>	
Nitroglycerin: Plasma Levels and Effects in Pregnant Ewes.	S312
<i>M. deRosayro, M. L. Nahrwold, A. B. Hill, A. R. Tait, M. D. Taylor, and M. M. Kirsh</i>	
PEDIATRIC ANESTHESIA	
Is Halothane Really Safe in Infancy?	S313
<i>James H. Diaz and Charles H. Lockhart</i>	
Enflurane vs. Halothane for Urodynamic Studies.	S314
<i>K. G. Lieding, G. M. Steude, S. A. Koff, M. L. Sololomon, and G. A. Lane</i>	

Cardiovascular Performance in Children during Induction: An Echocardiographic Comparison of Enflurane and Halothane.	S315
<i>P. G. Barash, J. D. Katz, S. Firestone, S. Hui, K. Taunt, C. Jaffe, N. S. Talner, and C. S. Kleinman</i>	
ICP and Cardiovascular Function in Pediatric Head Trauma.	S316
<i>C. M. O'Keeffe, D. A. Bruce, and J. J. Downes</i>	
Halothane Adsorption by Soda Lime.	S317
<i>W. K. Grodin and R. A. Epstein</i>	
Effects of Fentanyl on Pulmonary Compliances in Children.	S318
<i>J. Marty and J. M. Desmonts</i>	
Intraoperative Transcutaneous P_{O_2} Monitoring in Infants.	S319
<i>J. T. Messner, P. C. Loux, and L. B. Grossman</i>	
Thermodilution Cardiac Output Determinations in Small Infants: Some Problems and Their Solutions.	S320
<i>D. A. Zideman, M. A. Rimmer, W. G. Williams, and D. J. Steward</i>	
Heparin Activity during Pediatric Open-heart Surgery.	S321
<i>Jerry A. Cohen, Henry L. Bethea, and William J. Rush</i>	
Glucose Utilization during C.P.B. in Paediatric Patients.	S322
<i>Joan C. Bevan and J. K. Rosales</i>	
Age-related Changes in Coronary Blood Flow and Resistance in Chronically Instrumented Sheep.	S323
<i>S. Robinson, G. A. Gregory, D. Fischer, J. I. E. Hoffman, and A. M. Rudolph</i>	
The Effects of Tolazoline on Intravascular Pressures and Cardiac Output and Its Distribution during Hypoxemia.	S324
<i>G. A. Gregory, G. Lister, and M. Heymann</i>	
Effect of Halothane on Baroreceptor Response in Newborn and Adult Rabbits.	S325
<i>R. Ware, S. Robinson, and G. A. Gregory</i>	
Alteration of Forced Duction Testing by Succinylcholine.	S326
<i>Nancy K. France, Thomas D. France, James D. Woodburn, and Daniel P. Burbank</i>	
Analysis of Infant Myoneural Function during Anesthesia.	S327
<i>Robert S. Crumrine, R. J. Izant, and Edmund H. Yodlowski</i>	
Lung Function in Chronic Respiratory Failure in Infancy.	S328
<i>N. V. Loeber and J. J. Downes</i>	

Reversal of Neuromuscular Effects of Pancuronium in the Neonatal Intensive Care Unit.	S329
<i>Nishan G. Goudsouzian, Robert K. Crone, and I. David Todres</i>	
Physical Ventilatory Weaning Parameters in Neonates and Infants.	S330
<i>K. G. Belani, I. J. Gilmour, R. C. McComb, and T. R. Thompson</i>	
Rectal Methohexitol Premedication in Children: A Dose Comparison Study.	S331
<i>Letty M. P. Liu, Nishan G. Goudsouzian, and Philip Liu</i>	

RESEARCH IN EDUCATION AND EPIDEMIOLOGY

Computer Management of an Anesthesia Bibliography.	S332
<i>D. Bjoraker</i>	
Microprocessor Automation of Anesthesia Records.	S333
<i>R. Whitesell, J. Jablonski, and L. Burgos</i>	
Application of Computer Technology to Intra-operative Patient Monitoring.	S334
<i>M. M. Mitchell, E. A. Meathe, G. T. Ozaki, and L. J. Saidman</i>	
Cryoprobe Leakage of Nitrous Oxide into Operating Room Air.	S335
<i>R. P. Wray</i>	
Occupational Exposure, Education and Sampling Methods.	S336
<i>C. E. Whitcher and L. V. M. Siukola</i>	
Pharmacokinetics of Theophylline: A Two-compartment Instructional Model.	S337
<i>P. G. Boysen, J. D. Robinson, F. J. DeMarco, Jr., and J. P. Krischer</i>	
Causes of Death of Anesthesiologists, 1930–1946.	S338
<i>H. W. Linde, P. S. Mesnick, and N. J. Smith</i>	
Resident Evaluation of Staff Teaching.	S339
<i>J. H. Lecky, F. L. Murphy, D. E. Greenhow, and E. B. Hutchins</i>	
Anesthesiologists' Knowledge of Advanced CPR.	S340
<i>A. J. Schwartz, F. K. Orkin, and N. Ellison</i>	
Lessons Learned in an Evolving CPR Training Center.	S341
<i>L. Rumble and B. Brandstater</i>	
Continuous Lumbar Epidural Anesthesia Skill Test.	S342
<i>M. Sivarajan, P. Lane, E. V. Miller, P. Liu, R. Willenkin, G. Herr, P. Winter, C. Hardy, M. Mulroy, and G. Bassell</i>	

Common Errors during Resident Performance of Continuous Lumbar Epidural Analgesia.	S343
<i>P. E. Lane, M. Sivarajan, E. Miller, P. Liu, R. Willenkin, and G. Herr</i>	
A Medical Student Course in Mechanical Ventilation.	S344
<i>Lawrence G. Kushins, E. F. Klein, Jr., Phillip G. Boysen, and Jerome H. Modell</i>	
Pretests: Predictors of Final Examination Performance?	S345
<i>Frances Rhoton, H. F. Cascorbi, and A. J. L. Schneider</i>	
Teaching Central Venous Cannulation of Pediatric Patients.	S346
<i>D. R. Jobes, A. J. Schwartz, and N. Ellison</i>	
Reducing Abuse Potential and Controlled Drug Management.	S347
<i>C. F. Ward</i>	
Multi-hospital Study of Preventable Anesthesia Mishaps.	S348
<i>J. B. Cooper, C. D. Long, R. S. Newbower, and J. H. Philip</i>	
Morbidity and Blood Pressure Variability.	S349
<i>A. J. L. Schneider and C. E. McLaren</i>	
A Twenty-five Year Review of Operating Mortality.	S350
<i>R. C. Kahn, W. S. Howland, and G. C. Carlon</i>	
Simulation Training for Intensive Care Physicians and Nurses.	S351
<i>Thomas J. Poulton and Mary Beth Powell</i>	
Rating the Importance of Clinical Teaching Attributes.	S352
<i>T. J. Conahan, III, R. F. Rubeck, and D. O. Anderson</i>	
Raising Cost Consciousness in Anesthesia.	S353
<i>C. J. Wilkinson, D. DeBoer, A. Adams, L. Wade, P. Lichtenthal, and E. A. Brunner</i>	
Painless Cost Containment.	S354
<i>Diana Quinlan and Jerome H. Modell</i>	
Personal Sampling of Halothane in the Operating Room Air.	S355
<i>A. G. L. Burm and Joh. Spierdijk</i>	
Advanced Cardiac Life Support Modular Teaching.	S356
<i>E. C. McSwain, T. J. Herrin, J. M. Mahan, and R. L. Crosby</i>	
RESPIRATION	
Oxygenation after Tracheal Obstruction on Air and 100% Oxygen.	S357
<i>J. Turk, S. Oxford, J. Gelineau, and R. B. Smith</i>	

A Four-breath Preoxygenation Technique.	S358
<i>M. I. Gold and S. Muravchick</i>	
Humidification and Body Temperature during Anesthesia in Adults.	S359
<i>Dennis R. Stone, John B. Downs, William L. Paul, and Haven M. Perkins</i>	
Anesthesia Produces Shunt and Low \dot{V}_A/\dot{Q} Areas by Reducing FRC.	S360
<i>R. Dueck, M. L. Rathbun, and E. McTigue</i>	
Components of PEEP-induced Lung-Thorax Volume Increase.	S361
<i>J. A. Katz, S. E. Zinn, G. M. Ozanne, and H. B. Fairley</i>	
Failure of Anesthesia Circuit Bacterial Gas Filters to Reduce Postoperative Pulmonary Infections.	S362
<i>N. L. Pace, C. Webster, B. Epstein, S. Matsumiya, M. Coleman, M. R. Britt, and R. A. Garibaldi</i>	
Ketamine Prevents Bronchospasm in Asthma: Mechanisms Involved.	S363
<i>C. A. Hirshman, H. Downes, A. Farbood, and N. A. Bergman</i>	
A Methylxanthine Aerosol for Bronchospasm during Anesthesia.	S364
<i>C. A. Hirshman, C. Lawyer, H. Downes, and A. Farbood</i>	
Respiratory Resistance during Aortic Clamping.	S365
<i>E. M. Camporesi and H. Wakakuri</i>	
Respiratory Patterns in Profound Nutritional Depletion.	S366
<i>S. H. Rosenbaum, J. Askanazi, A. I. Hyman, P. A. Silverberg, J. Milic-Emili, and J. M. Kinney</i>	
Breathing Patterns during Curare-induced Muscle Weakness.	S367
<i>S. H. Rosenbaum, J. Askanazi, A. I. Hyman, A. Mukherjee, J. Milic-Emili, and J. M. Kinney</i>	
Ventilation of Humans by High Frequency Oscillation.	S368
<i>W. J. Butler, D. J. Bohn, K. Miyasaka, A. C. Bryan, and A. B. Froese</i>	
Flow Distribution in Abnormal Lung as a Function of F_{I_0} .	S369
<i>I. Johansen and J. L. Benumof</i>	
Concentrating Effect of N_2O on Alveolar P_{O_2} in Low \dot{V}_A/\dot{Q} Regions.	S370
<i>R. Dueck and P. D. Wagner</i>	
Model Dependence of the Shape of V/Q Distributions.	S371
<i>R. Teplich, M. T. Snider, and J. P. Gilbert</i>	
Ventilation-Perfusion Effects of Nitroglycerin.	S372
<i>P. S. Colley, F. W. Cheney, and M. P. Hlastala</i>	

Comparison of Naltrexone and Naloxone in Man. <i>T. C. Smith</i>	S373
Anesthetic Uptake Using a New Mass Spectrometer System. <i>I. E. Sodal, G. D. Swanson, A. Micco, and D. Ellis</i>	S374
The Optimal Position of Oxyhemoglobin Dissociation Curve. <i>Ying-Kan Tien</i>	S375
Lung Mechanics in Experimental Pancreatitis. <i>T. Toung, Y. K. Ngeow, T. Kimura, and J. C. Cameron</i>	S376
Mechanism of Re-expansion Edema in Rabbits. <i>D. J. Pavlin, F. W. Cheney, and M. L. Nessly</i>	S377
The Relationship of Human Tracheal Size to Body Habitus. <i>C. F. Mackenzie, B. Shin, N. Whitley, and D. Schellinger</i>	S378
The Effect of Minute Volume on P_{CO_2} Using the Bain Circuit. <i>S. L. Goodloe, B. Wolfson, and E. S. Siker</i>	S379
Microprocessor Control of Ventilation Using Carbon Dioxide Production. <i>W. S. Jordan and D. R. Westenskow</i>	S380
Evaluation of Total Lung/Thorax vs. Static Lung Compliance. <i>C. F. Mackenzie, B. Shin, S. Friedman, and M. Wai</i>	S381
Analysis of Ventilatory Depression by Enflurane. <i>W. M. Wahba</i>	S382
Comparative Respiratory Effects of Midazolam and Diazepam. <i>A. Forster, J.-P. Gardaz, P. M. Suter, and M. Gemperle</i>	S383
Monitoring Lung Mechanics in Neonate Primates. <i>H. P. Wuest, J. H. Eisele, R. W. Leininger, and R. M. Martucci</i>	S384
Pulmonary Shunting with Hyperthermia under Anesthesia. <i>D. E. Lees, Y. D. Kim, and T. E. Macnamara</i>	S385
Flow to Lung Compartments with Differing Time Constants. <i>R. A. Epstein and M. A. F. Epstein</i>	S386
End Tidal Sampling of CO_2 in Infants. <i>A. M. Reznik, M. A. F. Epstein, and R. A. Epstein</i>	S387
Infra-renal Aortic Cross-Clamping: Pulmonary Changes. <i>P. L. Klineberg, S. J. Aukburg, R. R. Barthowski, D. E. Greenhow, H. Rosenberg, R. Andrews, and B. Roberts</i>	S388

The Editorial Board could not verify that the following studies had been submitted or approved by a local Committee on Human Research:

Wedge Pressure as a Predictor of Ischemia during CABG.

R. W. Lieberman, A. J. Schwartz, D. R. Jobes, A. J. Ominsky, and R. W. Andrews

Myocardial Reinfarction Following Local Anesthesia.

Carl L. Backer, John H. Tinker, and Dennis M. Robertson

Hypotensive Drugs and Outcome in Cerebral Aneurysm Surgery.

E. A. M. Frost, K. Tabaddor, and C. U. Arancibia

Incidence of Ischemia during CABG Using Halothane.

R. W. Lieberman, D. R. Jobes, A. J. Schwartz, and R. W. Andrews

Vasoactive Mediators and Human Cardiopulmonary Bypass.

W. D. Watkins, J. Moss, D. G. Lappas, L. Levine, and M. B. Peterson

Sensitivity of the Left Ventricle to Outflow Resistance.

J. F. Schauble, R. H. Wender, R. M. Carroll, G. F. Maruschak, and P. L. Elliott

Prophylaxis of Epidural "Wet Tap" Headache.

B. E. Smith

Teaching Central Venous Cannulation of Pediatric Patients.

D. R. Jobes, A. J. Schwartz, and N. Ellison

Urine and Serum K⁺ after K⁺ Cardioplegia in Man.

I. Azar, T. Satyanarayana, and H. Turndorf

High Electrode Impedance as a Cause of EKG Distortion.

J. H. Karis, L. W. Burton, J. P. Karis, and F. F. Klein

Monitoring Anticoagulation and Reversal—Effect on Blood Loss.

D. R. Jobes, A. J. Schwartz, N. Ellison, R. Andrews, R. Ruffini, and J. Ruffini

Cardiovascular Effects of Extubation.

E. C. Wohlner, L. J. Usobiaga, R. M. Jacoby, and G. E. Hill

Serum Potassium Levels during Prolonged Hypothermia.

A. Koht, L. J. Cerullo, P. C. Land, and H. W. Linde

Zero Order Pharmacokinetics of High Dose Thiopental.

F. G. Mihm, D. R. Stanski, and M. H. Rosenthal

Is Halothane Really Safe in Infancy?

James H. Diaz and Charles H. Lockhart

Enflurane vs. Halothane for Urodynamic Studies.

K. G. Lieding, G. M. Steude, S. A. Koff, M. L. Sololomon, and G. A. Lane

Intraoperative Transcutaneous P_{O_2} Monitoring in Infants.

J. T. Messner, P. C. Loux, and L. B. Grossman

Physical Ventilatory Weaning Parameters in Neonates and Infants.

K. G. Belani, I. J. Gilmour, R. G. McComb, and T. R. Thompson

Treatment of Acute Herpes Zoster Neuralgia by Epidural Injection or Stellate Ganglion Block.

J. Bauman

Potassium Changes Following Vascular Clamp Release during Renal Transplantation.

C. A. Hirshman, D. Leon, M. Brackebusch, and H. Casson

Author Index Follows
Page S388