

# ***Surgery of the Chest***

**FIFTH EDITION**

**Volume II**

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**Volume II**

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## PREFACE

It is remarkable to review the many advances made in the field of cardiac and thoracic surgery since the fourth edition of this text was published in 1983. Extraordinary progress has been achieved, especially increased accuracy in diagnostic capabilities, improved myocardial protection, newer antibiotics, additional inotropic agents, and many improvements in specialized equipment. Moreover, the role of computers in cardiothoracic surgery has emerged to a new state of application. Other advances that deserve special emphasis include the role of invasive cardiology with balloon dilatation and percutaneous coronary angioplasty, the widespread and successful use of thrombolytic agents for acute myocardial infarction and pulmonary embolism, and the emerging significance of diet and medications in the prophylaxis of atherosclerosis.

In this edition, *Surgery of the Chest* has maintained its emphasis on the integration of the fundamental medical sciences, including pathology, physiology, biochemistry, pharmacology, immunology, and genetics, and their relationship to the diagnosis and management of cardiothoracic disorders. In fact, inclusion of these subjects is required in daily surgical practice by the discriminating student, resident, and cardiothoracic surgeon.

New chapters have been added, including "Computer Applications in Cardiac Surgery" by Peter K. Smith, "Thoracic Disorders in the Immunocompromised Host" by H. Kim Lyerly and John A. Bartlett, "Role of Magnetic Resonance Imaging in Cardiovascular Diagnosis" by Robert J. Herfkens, and "Dietary and Pharmacologic Management of Atherosclerosis" by Fredrick L. Dunn and Pamela B. Morris. A number of new authors have been added in this edition including Allen B. Kaiser on "Use of Antibiotics in Cardiac and Thoracic Surgery," J. G. Reves and associates on "Anesthesia and Supportive Care for Cardiothoracic Surgery," Bradley M. Rodgers for "Management of Infants and Children Undergoing Thoracic Surgery," and Peter C. Pairolero on "Surgical Management of Neoplasms of the Chest Wall." For the subject of "Special Diagnostic and Therapeutic Procedures in Cardiac Surgery," Thomas M. Bashore and Charles J. Davidson have contributed "Cardiac Catheterization, Angiocardiography, and Balloon Valvuloplasty"; Richard S. Stack has edited "Percutaneous Transluminal Coronary Angioplasty"; Robert M. Califf has prepared "Fibrinolytic Therapy in the Management of Acute Myocardial Infarction"; and Peter K. Smith and Joseph A. Kisslo have introduced a new and important field: "Ultrasound Applications in Cardiac Surgery: Echocardiography." Robert B. Peyton and O. Wayne Isom have contributed "Aortic Grafts and Prostheses" and "Occlusive Disease of Branches of the Aorta"; J. William Gaynor has edited "Patent Ductus Arteriosus, Coarctation of the Aorta, Aortopulmonary Window, and Anomalies of the Aortic Arch"; Lawrence H. Cohn has written the section on "Thoracic Aortic Aneurysms and Aortic Dissection"; and Ross M. Ungerleider has contributed "Congenital Aortic Stenosis" and "Tetralogy of Fallot." Eli Milgalter and Hillel Laks have prepared "Congenital Malformations of the Mitral Valve," and Roberto Di Donato and Aldo R. Castaneda have prepared "Anatomic Correction of Transposition of the Great Arteries at the Arterial Level." "Acquired Aortic Valve Disease" has been authored by Marshall L. Jacobs and W. Gerald Austen, and "Pathology of Coronary Atherosclerosis" by William C. Roberts. Robert B. Karp has contributed "Acquired Disease of the Tricuspid Valve," and William I. Norwood and John D. Murphy have authored the "Hypoplastic Left Heart Syndrome." Thomas A. D'Amico has written "Kawasaki's Disease," Peter Van Trigt has authored "Tumors of the Heart," and Bruce A. Reitz has contributed the section on "Heart and Lung Transplantation." William A. Gay, Jr., and John B. O'Connell prepared the chapter on "Cardiac Transplantation."

In the fifth edition the importance of illustrations has continued with a number of new additions. These new illustrations completely update the text with the most recent



illustrations of procedures of proven value. Moreover, the bibliography has been completely updated with the most current listings. The *selected references* have accordingly been expanded and updated, permitting the reader to gain deeper insight into the meaning of the most outstanding publications in the field by reviewing a summary of their contents.

It is clear that the fifth edition is the result of much dedicated work by many authorities. The editors wish to express sincere thanks to each of the contributors for their tireless efforts. Special appreciation is due to Mr. Edward H. Wickland, Jr., of the W. B. Saunders Company who has been a prodigious co-worker in achieving the highest standards of excellence in contemporary publishing and whose distinct commitment and goals have been the creation of the very best text possible. Once again the reader will be impressed with the extraordinary talents of the W. B. Saunders Company because they continue their standard of perfection in every detail. Their unfailing attention to every aspect of this work is clearly apparent in this fifth edition and the editors are deeply appreciative.

DAVID C. SABISTON, JR.  
FRANK C. SPENCER

New chapters have been added, including "Computer Applications in Cardiac Surgery," by Peter K. Smith, "Thoracic Disorders in the Immunocompromised Host," by H. Kim Lyerly and John A. Bartlett, "Role of Magnetic Resonance Imaging in Cardiovascular Diagnosis," by Robert J. Herkens, and "Dietary and Pharmacologic Management of Atherosclerosis," by Fredrick L. Dunn and Pamela B. Morris. A number of new authors have been added in this edition including Allen B. Kaiser on "Use of Antibiotics in Cardiac and Thoracic Surgery," J. G. Reeves and associates on "Anesthesia and Supportive Care for Cardiothoracic Surgery," Bradley M. Rodgers for "Management of Infants and Children Undergoing Thoracic Surgery," and Peter C. Fanjul on "Surgical Management of Neoplasms of the Chest Wall." For the subject of "Special Diagnostic and Therapeutic Procedures in Cardiac Surgery," Thomas M. Bashore and Charles J. Davidson have contributed "Cardiac Catheterization, Angiocardiology, and Balloon Valvuloplasty," Richard S. Slack has edited "Percutaneous Transluminal Coronary Angioplasty," Robert M. Callie has prepared "Fibronoptic Therapy in the Management of Acute Myocardial Infarction," and Peter K. Smith and Joseph A. Kissel have introduced a new and important field, "Ultrasound Applications in Cardiac Surgery: Echocardiography," Robert B. Peyton and O. Wayne Ison have contributed "Aortic Grafts and Prostheses," and "Occlusive Disease of Branches of the Aorta," William Gaynor has edited "Patent Ductus Arteriosus: Correction of the Aorta," Aortopulmonary Window, and Anomalies of the Aortic Arch," Lawrence H. Cohn has written the section on "Thoracic Aortic Aneurysms and Aortic Dissection," and Ross M. Ungerleider has contributed "Congenital Aortic Stenosis," and "Tetralogy of Fallot." Eli Milgater and Hillel Laks have prepared "Congenital Malformations of the Mitral Valve," and Roberto Di Donato and Aldo R. Castaneda have prepared "Anatomic Correction of Transposition of the Great Arteries at the Atrial Level," "Acquired Aortic Valve Disease," has been authored by Marshall L. Jacobs and W. Gerald Austen, and "Pathology of Coronary Atherosclerosis," by William C. Roberts, Robert B. Karp, and "Acquired Disease of the Tricuspid Valve," and William I. Norwood has contributed "Hypoplastic Left Heart Syndrome," Thomas A. D'Amico has written "Kawasaki's Disease," Peter Van Tigt has authored "Tumors of the Heart," and Bruce A. Reitz has contributed the section on "Heart and Lung Transplantation," William A. Gay, Jr., and John B. O'Connell prepared the chapter on "Cardiac Transplantation."

In the fifth edition the importance of illustrations has continued with a number of new additions. These new illustrations completely update the text with the most recent



## ACKNOWLEDGMENTS

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The fifth edition of *Surgery of the Chest* once again is comprised of contributions from a number of outstanding authorities in every field of cardiothoracic surgery. The editors owe special thanks to Ms. Carolyn Naylor and Ms. Marjory Fraser of the W. B. Saunders staff. As has been characteristic of their earlier participation, they have been completely cooperative in every request and have insisted on exacting detail in each endeavor. Together with their colleagues in the Production Department of W. B. Saunders, they have maintained the extraordinary quality of this text and have taken it to an even higher standard. In addition, Ms. Margaret Shaw has given special attention to the illustrations and has been certain that their quality and reproduction have been of the most outstanding character. Ms. Maureen Sweeney receives our thanks as the distinctive designer of this edition.

Most of all, the editors acknowledge their gratitude to Ms. Kathryn Slaughter. Through the years she has been a tireless worker who has reviewed every chapter in complete detail and has been of invaluable assistance in making this text outstanding from the point of view of accuracy, style, content, and expression. We have particularly appreciated her enthusiasm for every aspect of this work as well as her committed and enduring loyalty.

DAVID C. SABISTON, JR.  
FRANK C. SPENCER

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