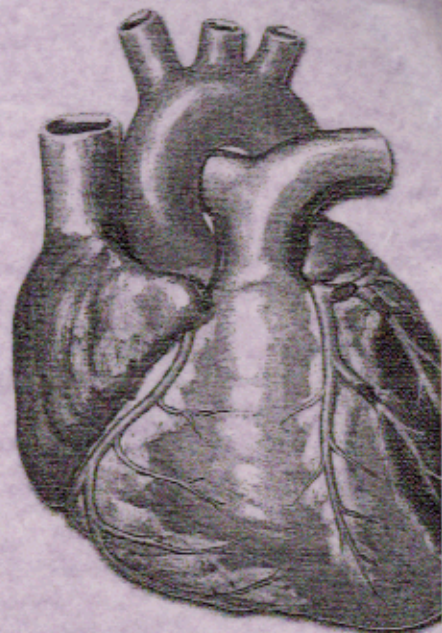
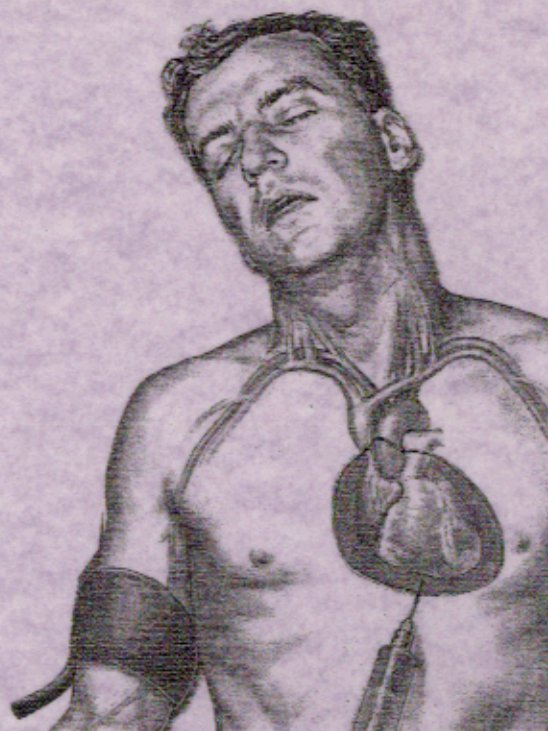


# Netter's Cardiology



Marschall S. Runge  
Magnus Ohman



**I. INTRODUCTION**

Section Editor: E. Magnus Ohman

- Chapter 1: The History and Physical Examination** .....2  
Marschall S. Runge and E. Magnus Ohman
- Chapter 2: Coronary Atherosclerosis** .....18  
Cam Patterson and Marschall S. Runge
- Chapter 3: Electrocardiography** .....29  
Leonard S. Gettes
- Chapter 4: Noninvasive Cardiac Imaging** .....42  
Christopher D. Chiles, Steven W. Falen, and Park W. Willis IV
- Chapter 5: Diagnostic Coronary Angiography** .....53  
George A. Stouffer
- Chapter 6: Use of Diagnostic Testing** .....64  
Anthony Mathur and Peter Mills

**II. CORONARY HEART DISEASE**

Section Editor: Christoph Bode

- Chapter 7: Chronic Coronary Artery Disease** .....74  
Venu Menon
- Chapter 8: Acute Coronary Syndromes** .....84  
Steven R. Steinhubl
- Chapter 9: Acute Myocardial Infarction** .....93  
Christoph Bode and Markus Frey
- Chapter 10: Percutaneous Coronary Intervention** .....103  
Bruce R. Brodie and Tift Mann
- Chapter 11: Coronary Artery Bypass Surgery** .....112  
Brett C. Sheridan and Michael R. Mill

**III. MYOCARDIAL DISEASES AND CARDIOMYOPATHY**

Section Editor: Richard A. Walsh

- Chapter 12: Dilated Cardiomyopathy** .....120  
Kirkwood F. Adams, Jr and Stephanie H. Dunlap
- Chapter 13: Hypertrophic Cardiomyopathy** .....128  
Parag Kale and Richard A. Walsh

# TABLE OF CONTENTS

<b>Chapter 14: Restrictive Cardiomyopathy</b> .....	135
Thomas M. Bashore	
<b>Chapter 15: Hereditary Cardiomyopathies</b> .....	151
José Ortiz and Richard A. Walsh	
<b>Chapter 16: Myocarditis</b> .....	159
Paresh K. Patel and Daniel J. Lenihan	
<b>Chapter 17: Management of Congestive Heart Failure</b> .....	167
Carla A. Sueta and Kirkwood F. Adams, Jr	
<b>Chapter 18: Cardiac Transplantation</b> .....	175
Michael R. Mill and Brett C. Sheridan	
<b>IV. CARDIAC RHYTHM ABNORMALITIES</b>	
Section Editors: William E. Sanders, Jr and Richard G. Sheahan	
<b>Chapter 19: Atrial Fibrillation</b> .....	184
Richard G. Sheahan and Marschall S. Runge	
<b>Chapter 20: Ventricular Tachycardia</b> .....	196
Richard G. Sheahan	
<b>Chapter 21: Bradyarrhythmias</b> .....	205
Bryon E. Rubery and William E. Sanders, Jr	
<b>Chapter 22: Cardiac Syncope</b> .....	214
Richard G. Sheahan	
<b>Chapter 23: Sudden Cardiac Death</b> .....	221
Jeff P. Steinhoff, Sanjeev Shah, and Richard G. Sheahan	
<b>Chapter 24: Medical Treatment of Tachyarrhythmias</b> .....	230
William E. Sanders, Jr and Ali Akbary	
<b>Chapter 25: Radiofrequency Catheter Ablation of Supraventricular and Ventricular Arrhythmias</b> .....	238
Nitish Badhwar, William E. Sanders, Jr, and Melvin M. Scheinman	
<b>Chapter 26: Cardiac Pacemakers and Defibrillators</b> .....	247
Margaret C. Herbst and William E. Sanders, Jr	
<b>V. VALVULAR HEART DISEASE</b>	
Section Editor: Thomas M. Bashore	
<b>Chapter 27: Aortic Stenosis</b> .....	256
Timothy A. Mixon and Gregory J. Dehmer	

# TABLE OF CONTENTS

<b>Chapter 28: Aortic Insufficiency</b> .....	265
Timothy A. Mixon and Gregory J. Dehmer	
<b>Chapter 29: Mitral Valve Disease</b> .....	274
Thomas R. Griggs	
<b>Chapter 30: Mitral Valve Prolapse</b> .....	283
Lee R. Goldberg and Park W. Willis IV	
<b>Chapter 31: Tricuspid and Pulmonic Valve Disease</b> .....	290
David A. Tate	
<b>Chapter 32: Infective Endocarditis</b> .....	296
Lisa B. Hightow and Meera Kelley	
<b>Chapter 33: Percutaneous Balloon Valvuloplasty</b> .....	308
Thomas M. Bashore	
<b>Chapter 34: Surgical Treatment for Valvular Heart Disease</b> .....	324
Peter J. K. Starek	
<b>VI. PERICARDIAL DISEASES</b>	
Section Editor: George A. Stouffer	
<b>Chapter 35: Pericardial Disease: Clinical Features and Treatment</b> .....	334
Christopher D. Chiles and George A. Stouffer	
<b>Chapter 36: Pericardial Disease: Diagnosis and Hemodynamics</b> .....	346
Thomas M. Bashore	
<b>VII. VASCULAR DISEASES</b>	
Section Editor: Cam Patterson	
<b>Chapter 37: Angiogenesis and Atherosclerosis</b> .....	362
Cam Patterson	
<b>Chapter 38: Diagnostic Techniques in Vascular Disease</b> .....	367
Alan L. Hinderliter and Walter A. Tan	
<b>Chapter 39: Hypertension</b> .....	376
Alan L. Hinderliter and Romulo E. Colindres	
<b>Chapter 40: Renal Artery Stenosis</b> .....	386
George A. Stouffer, Christopher R. Kroll, and Walter A. Tan	
<b>Chapter 41: Interventional Approaches for Peripheral Arterial Disease</b> .....	397
Walter A. Tan and Matthew A. Mauro	

# TABLE OF CONTENTS

**Chapter 42: Surgery for Peripheral Vascular Diseases** .....406  
Robert Mendes, Mark A. Farber, and Blair A. Keagy

## **VIII. CONGENITAL HEART DISEASE** Section Editor: G. William Henry

**Chapter 43: An Approach to Children With Suspected Congenital Heart Disease** .....418  
G. William Henry

**Chapter 44: Echocardiography in Congenital Heart Disease** .....429  
John L. Cotton and G. William Henry

**Chapter 45: Cardiac Catheter Interventions for Congenital Heart Disease** .....443  
Gregory H. Tatum and Elman G. Frantz

**Chapter 46: Surgical Interventions for Congenital Heart Disease** .....456  
Alden M. Parsons, G. William Henry, and Michael R. Mill

**Chapter 47: Arrhythmias in Congenital Heart Disease** .....467  
Scott H. Buck

**Chapter 48: Cardiopulmonary Exercise Testing in Children With Congenital Heart Disease** .....479  
James P. Loehr

**Chapter 49: Kawasaki Disease** .....484  
Blair V. Robinson

**Chapter 50: Congenital Coronary Anomalies** .....491  
S. Adil Husain, Brett C. Sheridan, and Michael R. Mill

## **IX. SYSTEMIC DISEASES AND THE HEART** Section Editor: David R. Clemmons

**Chapter 51: Cardiovascular Disease in Pregnancy** .....498  
Eileen A. Kelly

**Chapter 52: Aging and the Cardiovascular System** .....507  
Walter A. Tan

**Chapter 53: Neuromuscular Diseases and the Heart** .....517  
Ajmal Masood Gilani and Colin D. Hall

**Chapter 54: Cardiovascular Manifestations of Endocrine Diseases** .....528  
David R. Clemmons

# CONTENTS

**Chapter 55: Connective Tissue Diseases and the Heart** .....543  
Yevgeniy Sheyn and Mary Anne Dooley

**Chapter 56: Cardiac Tumors** .....554  
Hanna Kelly and Mark A. Socinski

**Chapter 57: Pulmonary Hypertension and Thromboembolic Disease** .....562  
Timothy C. Nichols and Thomas R. Griggs

**Chapter 58: Substance Abuse and the Heart** .....573  
David A. Tate

**Chapter 59: HIV and the Heart** .....578  
Kristine B. Patterson and Joseph J. Eron

## **X. AFFECTING HEART DISEASE—FUTURE DIRECTIONS** Section Editor: Marschall S. Runge

**Chapter 60: Cardiovascular Epidemiology** .....586  
Georgeta D. Vaidean

**Chapter 61: Cardiovascular Disease in Women and Special Populations** .....594  
Eileen A. Kelly and Sidney C. Smith, Jr

**Chapter 62: Genetics in Cardiovascular Disease** .....601  
Marschall S. Runge

**Chapter 63: Effects of Exercise on Cardiovascular Health** .....609  
Chin K. Kim, Srikanth Ramachandrani, Eileen M. Handberg, Richard S. Schofield,  
Edith E. Bragdon, and David S. Sheps

**Chapter 64: Lipid Abnormalities and Risk Factor Reduction** .....619  
Ross J. Simpson, Jr and Sidney C. Smith, Jr

**Chapter 65: Cardiovascular Effects of Air Pollutants** .....627  
Wayne E. Cascio, Milan J. Hazucha, Philip A. Bromberg, and Robert B. Devlin

**Index** .....633