Contents

Preface	•	xiii
SECTION 1	IMPORTANCE OF STROKE AND STROKE PREVENTION	1
Chapter 1	Epidemiology of Stroke Prevention and Urgency of Treatment Introduction / 2 Incidence and Prevalence / 3 Burden of Stroke / 5 Types of Stroke/Classification / 7 Stroke Pathology / 9 Stroke Prevention / 10 Urgency of Treatment / 13	2
Chapter 2	Potential for Stroke Prevention Introduction / 22 Rationale for Stroke Prevention, Traditional Approaches to Prevention, and Economic Considerations / 23 Concept of Continuum of Risk and Global or Overall Risk / 28 Difference in Risk When Traditional Risk Factors Are or Are Not Present / 29 Ranking the Importance of Stroke Risk Factors: Population Attributable Risk / 30 A Global Stroke Prevention Agenda / 33 Future Stroke Prevention / 33	22
SECTION 2	PREVENTING STROKE	39
Chapter 3	Nutrition, Diabetes, and Stroke Prevention Introduction / 40 Importance of Diet / 40 Vitamins and Antioxidants / 45 Conclusion / 48	40
Chapter 4	Smoking Cessation Smoking—Dogmas, Misconceptions, and Emerging Clinical Realities / 50 Smoking and the Epidemiology of Cerebrovascular Disease / 53	50

	Smoking and the Pathophysiology of Cerebrovascular Disease / 54 Secondhand Smoke and Cerebrovascular Disease / 55 Cerebrovascular Events—Their Impact on the Smoker / 57 Smoking Cessation and the Prevention of Stroke / 57 The Cost-Effectiveness of Smoking Cessation / 58 Smoking Cessation and the Stroke Patient / 58 Enhancing Smoking Cessation Success / 59 Pharmacotherapy for Smoking Cessation / 60 Conclusion / 66	
Chapter 5	Exercise Rationale / 75 The Pre-exercise Evaluation / 78 Exercise Programming / 80	75
Chapter 6	Hypertension Introduction / 84 Achieving Control of Blood Pressure / 85 Resistant Hypertension / 85 Consumption of Substances That Aggravate Hypertension / 86 Secondary Hypertension / 87 Renovascular Hypertension / 89 Primary Aldosteronism / 90 Hypertension in Patients of African Origin / 92 Physiologically Based Individualized Therapy Based on Renin/Aldosterone Phenotyping / 92 Blockade of Aldosterone / 94 Treating Hypertension in Acute Stroke / 95	84
Chapter 7	Antiplatelet Therapy Thienopyridines / 102 Aspirin Plus Clopidogrel in Secondary Prevention of Stroke or TIA / 112 Selection of Oral Antiplatelet Therapy / 113	98
Chapter 8	Anticoagulation Utilization of VKA Antagonists in Elderly Patients / 121 Pharmacogenetic Dosing of Warfarin / 122 Starting Anticoagulation After Stroke / 123 Stopping Warfarin Before a Procedure / 124 New Oral Anticoagulants / 124	119
Chapter 9	Lipid-Lowering Therapy Introduction / 131 Reduction of Stroke Risk by Lipid-Lowering Therapy / 131	131

	Combination Therapy With Statins / 132 Drug Interactions With Statins / 133 Adverse Effects of Statins and How to Avoid Them / 133 Conclusion / 136	
Chapter 10	Management and Prevention of Intracranial Atherosclerotic Disease Introduction / 139 Clinical Patterns of Intracranial Stenosis / 140 Mechanisms, and Lesion and Angiographic patterns of ICAD / 143 Risk Factor Management / 146 Conclusion / 149	139
Chapter 11	Appropriate Endarterectomy and Stenting for Carotid Stenosis Introduction / 152 Symptomatic Carotid Stenosis / 152 Asymptomatic Carotid Stenosis / 154 Conclusion / 159	152
Chapter 12	Finding the Cause of the TIA or Stroke: The Key to Appropriate Therapy Introduction / 161 Stroke Mimics ("Just a Stroke") / 164 Stroke Subtypes / 165 The Aorta as a Source of Embolic Ischemia Causing Stroke / 166 Intracranial Hemorrhage / 166 Hypertensive Intracerebral Hemorrhage / 166 Subarachnoid Hemorrhage / 167 Amyloid (Congophilic) Angiopathy / 167 Cortical Vein Thrombosis / 168 Vascular Malformations / 168 Cerebral Ischemia / 168 Arterial Dissection / 169 Cardioembolic Stroke / 171 Lacunar Infarction / 173 Conclusion / 173	161
Chapter 13	Thoughts on the Hazards of Relying on Publications: Cautions Needed Before Applying Published Results to Evidence-Based Medicine Surgical Intervention in Symptomatic Patients With Carotid Stenosis / 178 Surgical Intervention in Asymptomatic Subjects With Carotid Stenosis / 180	175

	Platelet-Inhibiting Drug Trials / 184	
Chapter 14	Prospects for Prevention of Dementia by Prevention of Stroke Introduction / 191 Definition of Key Terms and a Shift in Thinking About Cognitive Impairment / 192 Magnitude of the Public Health Impact of Vascular Cognitive Impairment and Alzheimer Disease / 193 Stroke and Cardiovascular Risk Factors and Linkage to Vascular Cognitive Impairment and Alzheimer Disease / 194 Prevention of Dementia and Cognitive Decline: Practical and Research Considerations / 199 Summary / 201	191
Chapter 15	Minimizing Adverse Effects of Cardiovascular Drugs Introduction / 205 Antihypertensive Drugs / 206 Adverse Effects by Drug Class / 206 Blinded N of 1 Crossover Trial / 210 Conclusion / 211	205
SECTION 3	WHEN THE STROKE WASN'T PREVENTED	213
Chapter 16	Treatment of Acute Stroke: Medical and Interventional Therapy Introduction / 214 Ischemic Stroke / 216 Hemorrhagic Stroke / 249 Organization of Stroke Care—What It Can Accomplish / 251	214
Chapter 17	Surgical Management of Acute Stroke Ischemic Stroke / 263 Hemorrhagic Stroke / 266	263
Chapter 18	Stroke Rehabilitation Introduction / 271 Brain Reorganization and Recovery From Stroke / 271 Organized Stroke Care—Interdisciplinary Care/Team / 272 Selected Rehabilitation Issues / 274 Spasticity Poststroke / 277 Visual-Spatial Perceptual Deficits / 278 Vascular Cognitive Impairment / 280	271

Aphasia / 282 Dysphagia / 284 Poststroke Depression (PSD) / 286 Summary / 288

Index 295