# Contents

**Preface** vii  
**List of contributors** viii  

## Part I–General principles

1. **Introduction and perspective** 1  
   Louis R Caplan  
2. **Pathology, anatomy, and pathophysiology of stroke** 19  
   Louis R Caplan and David S Liebeskind  
3. **Diagnosis and the clinical encounter** 55  
   Louis R Caplan and Fernando Barinagarrementeria  
4. **Imaging and laboratory diagnosis** 78  
   Louis R Caplan, Bruce Campbell, and Stephen Davis  
5. **Genetics of stroke** 129  
   Stéphanie Debette and Louis R Caplan  
6. **Treatment** 145  
   Louis R Caplan and Jeffrey Saver  

## Part II–Stroke syndromes

7. **Large artery occlusive disease of the anterior circulation** 217  
   Louis R Caplan and Lawrence Wechsler  
8. **Large vessel occlusive disease of the posterior circulation** 252  
   Louis R Caplan and Jong S Kim  
9. **Penetrating and branch artery disease** 287  
   Louis R Caplan, Geoffrey Donnan, and Marie Dagonnier  
10. **Brain embolism** 312  
    Louis R Caplan and Pierre Amarenco  
11. **Hypoxic–ischemic encephalopathy, cardiac arrest, and cardiac encephalopathy** 364  
    Louis R Caplan and Michael DeGeorgia  
12. **Non-atherosclerotic vasculopathies** 386  
    Louis R Caplan and José Biller  
13. **Subarachnoid hemorrhage, aneurysms, and vascular malformations** 439  
    Tudor Jovin and Louis R Caplan  
14. **Intracerebral hemorrhage** 477  
    Louis R Caplan and Carlos S Kase  
15. **Stroke in children and young adults** 511  
    Gabrielle deVeber, Aneesh B Singhal, and Louis R Caplan  
16. **Spinal cord vascular disease** 534  
    Louis R Caplan and Ayrton R Massaro  
17. **Cerebral venous thrombosis** 544  
    Louis R Caplan and Marie-Germaine Bousser  

## Part III–Prevention, complications, and recovery—rehabilitation

18. **Stroke prevention** 567  
   Louis R Caplan and Philip B Gorelick  
19. **Complications in stroke patients** 594  
   Louis R Caplan and Sandeep Kumar  
20. **Recovery, rehabilitation, and repair** 608  
    Steven C Cramer and Louis R Caplan  

**Index** 627  

*Colour plates are to be found between pp. 342 and 343.*