

BASIC

Clinical Neuroscience

SECOND EDITION

Paul A. Young
Paul H. Young
Daniel L. Tolbert



Wolters Kluwer | Lippincott Williams & Wilkins

thePoint 

TABLE OF CONTENTS

PART I

Organization, Cellular Components, and

Topography of the CNS

1

1. Introduction, Organization, and Cellular Components 1
2. Spinal Cord: Topography and Functional Levels 15
3. Brainstem: Topography and Functional Levels 25
4. Forebrain: Topography and Functional Levels 37

PART II

Motor Systems 47

5. Lower Motor Neurons: Flaccid Paralysis 47
6. The Pyramidal System: Spastic Paralysis 65
7. Spinal Motor Organization and Brainstem Supraspinal Paths: Postcapsular Lesion Recovery and Decerebrate Posturing 79
8. The Basal Ganglia: Dyskinesia 87
9. The Cerebellum: Ataxia 103
10. The Ocular Motor System: Gaze Disorders 121

PART III

Sensory Systems 129

11. The Somatosensory System: Anesthesia and Analgesia 129
12. The Auditory System: Deafness 157
13. The Vestibular System: Vertigo and Nystagmus 167
14. The Visual System: Anopsia 175
15. The Gustatory and Olfactory Systems: Ageusia and Anosmia 193

PART IV

The Cerebral Cortex

and Limbic System 201

16. The Cerebral Cortex: Aphasia, Agnosia, and Apraxia 201
17. The Limbic System: Anterograde Amnesia and Inappropriate Social Behavior 219

PART V

The Autonomic System 229

18. The Hypothalamus: Vegetative and Endocrine Imbalance 229
19. The Autonomic Nervous System: Visceral Abnormalities 235

PART VI

The Brainstem and Cranial Nerves 251

- 20.** Reticular Formation: Modulation and Activation **251**
- 21.** Summary of the Cranial Nerves: Components and Abnormalities **261**

PART VII

Accessory Components 275

- 22.** The Blood Supply of the Central Nervous System: Stroke **275**
- 23.** The Cerebrospinal Fluid System: Hydrocephalus **291**

PART VIII

Development, Aging, and Plasticity 299

- 24.** Development of the Nervous System: Congenital Anomalies **299**

- 25.** Aging of the Nervous System: Dementia **309**
- 26.** Recovery of Function of the Nervous System: Plasticity and Regeneration **313**

PART IX

Where Is the Lesion? 321

- 27.** Principles for Locating Lesions and Clinical Illustrations **321**

Appendices 341

- A.** Answers to Chapter Questions **341**
- B.** Glossary **359**
- C.** Suggested Readings **377**
- D.** Atlas of Myelin-Stained Sections **379**