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| Nota di contenuto       | Intro -- Preface: How to Use This Textbook -- Acknowledgments -- Reviewers -- Chapter 1. Overview of the Nervous System -- Overview -- Major Components -- Organization of the Nervous System -- Organizational Systems -- Cytoarchitecture Organization -- Organization by Function -- Terminology -- Nervous System Cells -- Neurons -- Glial Cells -- Structures and Landmarks -- Lobes -- Frontal Lobes -- Parietal Lobes -- Temporal Lobes -- Occipital Lobes -- Subcortical Structures -- Basal Ganglia -- Thalamus -- Cerebellum -- Brainstem -- Summary -- References -- Chapter 2. Ventricular System: Cranium, Ventricles, and Meninges -- Overview -- Cranium, Cranial Vault, and Its Contents -- Meningeal Layers -- Dura Mater -- Arachnoid Layer and Pia Mater -- Ventricles -- Cerebrospinal Fluid Path and Functions -- Communication Through the Ventricular System -- Disruptions to the Ventricular and Meningeal Systems -- Hydrocephalus -- Meningeal Damage -- Summary -- Additional Resources -- Chapter 3. Neuron Anatomy and Physiology -- Overview -- Classification of Neurons -- Neuronal Communication -- Big Picture Overview -- Membrane Potentials -- Synaptic Transmission -- Action Potentials -- Myelinated Versus Unmyelinated Axons -- Synaptic Transmission -- Types of Neurotransmitters -- Neurotransmitter Recovery and Degradation -- Creating Meaning from Binary Signals -- |

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Sommario/riassunto

Clinical Neuroscience for Communication Disorders: Neuroanatomy and Neurophysiology offers a comprehensive and easy-to-understand introduction to neuroscience for undergraduates and beginning graduate students in the field of communication disorders. Packed with features to aid student understanding, this textbook introduces the neurologic underpinnings of systems involved in communication (speech, language, cognition, and hearing) and swallowing, from the nervous system to the anatomy of the head and neck. A highly readable writing style makes abstract and complex material accessible to students and provides just the right amount of information to challenge yet not overwhelm students. What sets this book apart is the extensive infusion of clinical application. Each chapter begins by tying the content to the everyday clinical applications for speech-language pathologists, audiologists, and related professionals and includes clinical cases to illustrate neural functions. In addition to coverage of the main systems, this text contains chapters devoted to neuroplasticity, communication, and cognition to move beyond basic anatomy to the key principles of contemporary neuroscience and application of the concepts discussed. Additionally, explicit connections are drawn between cranial nerves, the oral mechanism examination, and clinical swallowing assessment. The clinical cases cover a variety of both pediatric and adult scenarios designed to highlight the interconnectedness of neural systems and the complexity of neurologically-based communication disorders. The cases span the breadth of clinical practice -- developmental and acquired disorders, pediatric and adult cases, and disorders of speech, language, cognition, and hearing -- and are cross-referenced with each of the other chapters for improved understanding. --

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