INTRODUCTION TO
NEUROGENIC
COMMUNICATION
DISORDERS
SECOND EDITION

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Special thanks to all of my patients, colleagues, and associates who gave their time and permission to present their clinical experiences, expertise, and personal stories in this book through the videos and written anecdotes. All personal identifying information in these components of this book has been removed or changed to protect the identities of the individuals involved.

—M. HUNTER MANASCO
O the blest eyes, the happy hearts,
That see, that know the guiding thread so fine,
Along the mighty labyrinth.
—Walt Whitman, Song of the Universal

Only that day dawns to which we are awake,
There is more day to dawn. The sun is but a
morning star.
—Henry David Thoreau, Walden
BRIEF CONTENTS

Preface xiii
Contributors xv
Reviewers xvi
Features of this Text xix

CHAPTER 1 Introduction 3
CHAPTER 2 Basic Brain Anatomy 19
CHAPTER 3 Acute Etiologies of Neurogenic Communication Disorders 67
CHAPTER 4 The Aphasias 93
CHAPTER 5 Right Hemisphere Disorders 145
CHAPTER 6 Motor Speech Disorders: Apraxia of Speech and Evaluation of Motor Speech Disorders 183
CHAPTER 7 Motor Speech Disorders: The Dysarthrias 211
CHAPTER 8 Traumatic Brain Injury 255
CHAPTER 9 Dementia 295
CHAPTER 10 Counseling 341

Glossary 373
Index 391
# Table of Contents

<table>
<thead>
<tr>
<th>Preface</th>
<th>xiii</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contributors</td>
<td>xv</td>
</tr>
<tr>
<td>Reviewers</td>
<td>xvi</td>
</tr>
<tr>
<td>Features of this Text</td>
<td>xix</td>
</tr>
</tbody>
</table>

## CHAPTER 1 Introduction

<table>
<thead>
<tr>
<th>Neurogenic Communication Disorders</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Treatment Environment</td>
<td>3</td>
</tr>
<tr>
<td>Cognition, Language, and Speech</td>
<td>6</td>
</tr>
<tr>
<td>Cognition</td>
<td>6</td>
</tr>
<tr>
<td>Language</td>
<td>9</td>
</tr>
<tr>
<td>Speech</td>
<td>9</td>
</tr>
<tr>
<td>Interactions</td>
<td>10</td>
</tr>
<tr>
<td>Changes in Speech, Language, and Cognition with Healthy Aging</td>
<td>10</td>
</tr>
<tr>
<td>Changes in Speech with Healthy Aging</td>
<td>10</td>
</tr>
<tr>
<td>Changes in Cognition with Healthy Aging</td>
<td>11</td>
</tr>
<tr>
<td>Changes in Language with Healthy Aging</td>
<td>11</td>
</tr>
<tr>
<td>Evidence-Based Practice</td>
<td>12</td>
</tr>
<tr>
<td>Main Points</td>
<td>13</td>
</tr>
<tr>
<td>Review Questions</td>
<td>15</td>
</tr>
<tr>
<td>References</td>
<td>16</td>
</tr>
</tbody>
</table>

## CHAPTER 2 Basic Brain Anatomy

<table>
<thead>
<tr>
<th>The Central Nervous System</th>
<th>19</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Brain</td>
<td>20</td>
</tr>
<tr>
<td>The Spinal Cord</td>
<td>45</td>
</tr>
<tr>
<td>Blood Supply to the Brain</td>
<td>48</td>
</tr>
</tbody>
</table>

## CHAPTER 3 Acute Etiologies of Neurogenic Communication Disorders

<table>
<thead>
<tr>
<th>Stroke: Cerebrovascular Accident</th>
<th>67</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ischemic Stroke</td>
<td>69</td>
</tr>
<tr>
<td>Hemorrhagic Stroke</td>
<td>71</td>
</tr>
<tr>
<td>Aneurysm</td>
<td>72</td>
</tr>
<tr>
<td>Traumatic Brain Injury</td>
<td>73</td>
</tr>
<tr>
<td>Brain Tumors</td>
<td>74</td>
</tr>
<tr>
<td>Surgical Trauma</td>
<td>76</td>
</tr>
<tr>
<td>Infection</td>
<td>76</td>
</tr>
<tr>
<td>Encephalitis</td>
<td>76</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>78</td>
</tr>
<tr>
<td>Creutzfeldt-Jakob Disease</td>
<td>79</td>
</tr>
<tr>
<td>Syphilis</td>
<td>79</td>
</tr>
<tr>
<td>Poliomyelitis</td>
<td>81</td>
</tr>
<tr>
<td>Seizures</td>
<td>82</td>
</tr>
<tr>
<td>Partial Seizures</td>
<td>83</td>
</tr>
<tr>
<td>Generalized Seizures</td>
<td>84</td>
</tr>
<tr>
<td>Main Points</td>
<td>86</td>
</tr>
<tr>
<td>Review Questions</td>
<td>89</td>
</tr>
<tr>
<td>References</td>
<td>90</td>
</tr>
</tbody>
</table>

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CHAPTER 6  Motor Speech Disorders: Apraxia of Speech and Evaluation of Motor Speech Disorders 183

Terminology Notes .................................................. 184

Apraxia of Speech .................................................. 184
Motor Speech Programmer: ........................................... 186
Speech Characteristics .............................................. 186
Lesion Sites and Etiologies ........................................ 188

Other Apraxias ...................................................... 189
Concomitant Disorders ............................................. 190
Differentiation from Dysarthria ................................. 191

Motor Speech Evaluation .......................................... 192
Components of the Motor Speech Evaluation .................. 193

Therapy for Apraxia of Speech ................................. 200
Articulatory-Kinematic Approaches ............................ 200
Melodic Intonation Therapy ....................................... 202
Intersystemic Reorganization ..................................... 203
Augmentative and Alternative Strategies ....................... 203

Main Points ........................................................... 204

Review Questions ................................................... 207

References ............................................................. 207
Ataxic Dysarthria ........................................... 230
  Anatomic Basis of Ataxic Dysarthria ................. 230
  Etiologies of Ataxic Dysarthria ......................... 231
  Confirmatory Signs of Ataxic Dysarthria ................ 231
Hypokinetic Dysarthria ................................. 232
  Anatomic Basis of Hypokinetic Dysarthria ............... 233
  Etiologies of Hypokinetic Dysarthria ................. 233
Hyperkinetic Dysarthria .............................. 235
  Anatomic Basis of Hyperkinetic Dysarthria ................. 235
  Etiologies of Hyperkinetic Dysarthria .................. 236
Mixed Dysarthrias ...................................... 237
Management of the Dysarthrias ..................... 239
  Restorative Strategies ............................. 239
  Stretching Exercises ............................ 241
  Medical Management ............................ 242
  Compensatory Strategies ......................... 242
Main Points .............................................. 246
Review Questions ....................................... 251
References ............................................... 252

**CHAPTER 8  Traumatic Brain Injury**  ................................................................. 255

Closed Head Traumatic Brain Injuries ..................... 256
  Acceleration–Deceleration Closed Head Injury ........ 257
  Impact-Based Closed Head Traumatic Brain Injury .... 260

Open Head Traumatic Brain Injury .................... 260

Secondary Mechanisms of Damage in Traumatic Brain Injury .............. 262
  Special Topics in Traumatic Brain Injury .............. 264
    Shaken Baby Syndrome .................................. 264
    Military Traumatic Brain Injury .................... 266
    Sports-Related Traumatic Brain Injury .............. 268

Deficits Following Traumatic Brain Injury .................. 270
  A General Picture of Traumatic Brain Injury ........... 270
  Motor Deficits Following Traumatic Brain Injury ...... 272
  Cognitive Deficits Following Traumatic Brain Injury ... 272
  Language Deficits Following Traumatic Brain Injury .... 275

Assessment of Traumatic Brain Injury .................... 276
  Memory Assessment .................................. 276
  Assessment of Level of Arousal ........................ 277
  Assessment of Orientation .................................. 277
  Assessment of Agitation and Aggression ............... 279
  Assessment of Communication/Language/Cognition ...... 279
  Formal Tests for Traumatic Brain Injury ............... 280

Therapy for Traumatic Brain Injury ...................... 280
  Therapy for Decreased Level of Arousal .................... 280
  Therapy for Attention Deficits ......................... 281
  Therapy for Problem-Solving Deficits .................... 282
  Therapy for Memory Deficits .......................... 282
  Therapy for Orientation Deficits .......................... 285

Main Points .............................................. 285
Review Questions ....................................... 290
References ............................................... 291
My goal for this book is to create an informal text that presents the included material in a way that is accessible to student readers while also displaying how exciting, interesting, and truly human this material is. If not pushed, most students fall easily into interpreting all material in a textbook as purely academic, merely facts on a page, nonemotional, and therefore not connected to real life. For the student of health science moving toward a helping profession, this is an ineffective position at best and a dangerous perception at worst. In our time of desensitization to violence, decreased face-to-face interactions, and seemingly general hardening of emotions, it is with increasing effort that the student of health science must be reminded to see and be pushed to be attentive to the human reality of the information presented in textbooks and classrooms.

The information, conditions, and diseases discussed in this book are not simply academic problems—they are also nonacademic and emotional. It is one thing to read about and recognize intellectually that there is no effective treatment for Alzheimer’s disease. It is quite another to know this as you view a video of a man with this disease and hear his wife explain her attempts to stall her husband’s steady deterioration in cognition and describe the effects of this disease on their lives. This furthering of students’ early knowledge by emphasizing the relevant effects on humanity creates more enthusiastic and more knowledgeable students who become more enthusiastic and knowledgeable professionals.

The use of clinical anecdotes in teaching health sciences had been out of style for some time, though the medical and psychological sciences have historically relied on this teaching method with good reason. I have found that by presenting academic facts and clinical reality, I can permanently burn into students’ minds more relevant knowledge using a single 5-minute anecdote than an hour-long lecture. Hence, throughout this text I take the liberty of inserting the first person I to recount interesting facts, events, or anecdotes or refer readers to video clips posted online. My hope is that these additions to the text work to illustrate, inform, humanize, and reinforce the primary material for students.

Toward this goal, this second edition includes more content as well as personal and clinical anecdotes. Sections have been added on: the Fregoli delusion, Guillain-Barré syndrome, visual field deficits, locked-in syndrome, crossed aphasia, as well as recent research on chronic traumatic encephalopathy in athletes and more. This edition also comes packaged...
with far more illustrative video footage available online. The videos pull this book together as a whole. One can watch a single video and have the threads of knowledge running through multiple chapters of this book pulled together and tied into a holistic and functional understanding of the material, whereas before these threads may have remained disparate and unconnected. New videos have been added that focus on dementia with Lewy bodies, cervical dystonia, early-onset Parkinson’s disease, the cognitive effects of Parkinson’s disease, the off/on effects of levodopa, as well as the effects of aphasia, stroke, apraxia of speech, and degenerative diseases on activities of daily living. The second edition now includes a new, full-color design to help illustrate key concepts.

I would like to remind my student readers that healthcare professionals are individuals who deal in humanity. This work can be performed humanely or inhumanely. Almost everyone has a story about themselves or a loved one being grossly misused, abused, or neglected somehow in a healthcare setting by a healthcare professional. Similarly, anyone who has spent time receiving health care also has opposite stories of being treated with extreme kindness by their healthcare workers. So, I ask my student readers openly:

*Which of these is the more effective approach to patient care?*
*Which of these experiences will you work to create in the lives of others?*

Is it surprising to think that *deliberate* kindness to others must be encouraged as a learned behavior among students and healthcare professionals? Need we look far into the past, or even beyond the present, or our own personal experiences to find instances of total abandonment of this ideal?

I encourage my students to recall a quote by the physician William Osler each time they are about to enter a hospital room or deal with a client or patient:

*Ask not what disease the person has, but rather what person the disease has.*
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Introduction to Neurogenic Communication Disorders, Second Edition incorporates a number of engaging pedagogical features to aid in the student’s understanding and retention of the material.

Throughout the text, key points are explained and important information is highlighted to ensure comprehension and to aid the study of critical material. Clinical anecdotes, a full-color, engaging layout, and high-quality art coalesce in this accessible resource to enable easy reading and support the retention of important concepts. Each chapter includes boldfaced **Key Terms** and shaded definition boxes for student reference and review.

Video content is a key element of this valuable resource. Illustrative footage is included with every new print copy of *Introduction to Neurogenic Communication Disorders, Second Edition* or can be purchased separately. The **Video Icon** integrated within the text directs students online to see the accompanying videos.

In every chapter, boxed features further explore critical points and emphasize application of clinical content. These elements enable the student to understand the experience of both the patient and the clinician:

**Author’s Notes** provide engaging insight into key points, making abstract concepts and challenging material easily comprehensible through accessible language and examples.

**Clinical Notes** present illustrative anecdotes from the author’s real-world experience. These illuminating case vignettes give students a window into how clinical conditions affect real people and will impact their future practice.
Each chapter ends with useful learning and teaching tools to support student understanding, study, and review. **Main Points** are included to summarize key learning objectives and emphasize crucial concepts. **Review Questions** are designed to help students assess what they have learned and engage thoughtful consideration of the content. Finally, **References** provide a bibliography for important resources for further learning and study.

Qualified professors can also receive the full suite of **Instructor Support Resources**, including Slides in PowerPoint format, Test Bank, and Answer Key for Review Questions. To gain access to these valuable teaching materials, contact your Health Professions representative through go.jblearning.com/Manasco2e.

**Main Points**

- Apraxia of speech is the inability to create and sequence (i.e., program) the neural impulses necessary to create appropriate motor movements for speech.
- Apraxia of speech is the result of disruption of the motor speech programmer, which is a network of structures that contribute to the construction of motor plans for speech.
- Apraxia of speech is divided into two categories:
  - Developmental apraxia of speech, which is the result of an unknown congenital etiology
  - Acquired apraxia of speech, which is the result of damage to the brain
- Apraxia of speech is characterized by articulation errors, limited motor cortex, basal ganglia, and cerebellum are involved in the generation of speech.
- Apraxia of speech involves inability in the effective manipulation of the orofacial structures (i.e., lips, tongue, and mandible) to produce speech sounds.
- Apraxia of speech is usually highly affected by the decreased rate of speech commonly adopted to avoid errors and attempts at self-repairing speech errors.
- The prosody of those with apraxia of speech is usually highly limited, such as Broca’s area, the supplementary motor cortex, primary auditory cortex, and the basal ganglia.
- Apraxia of speech involves the construction of motor plans for speech.
- Apraxia of speech is usually highly characterized by the visible groping about of the tongue, lips, and mandible.
- Apraxia of speech involves the motor cortex, basal ganglia, and cerebellum.
- Apraxia of speech involves the generation of speech.
- Apraxia of speech involves the effective manipulation of the orofacial structures (i.e., lips, tongue, and mandible) to produce speech sounds.
- Apraxia of speech involves the limited rate of speech commonly adopted to avoid errors and attempts at self-repairing speech errors.
- The prosody of those with apraxia of speech is usually highly limited, such as Broca’s area, the supplementary motor cortex, primary auditory cortex, and the basal ganglia.

**Review Questions**

1. What is a motor speech disorder?
2. Define apraxia of speech.
3. Why does damage to the motor speech programmer create apraxia of speech?
4. What is a possible lesion site that produces apraxia of speech?
5. What are three disorders that can occur alongside apraxia of speech?
6. How does apraxia of speech affect an individual’s speech?
7. Describe the articulation errors that can occur in apraxia of speech.
8. Name and describe the three other dysarthrias.
9. What are three disorders that can occur alongside apraxia of speech?
10. How might one differentiate between dysarthria and apraxia of speech?
11. Why should a speech-language pathologist complete a motor speech evaluation on all patients?
12. What are two reasons an individual might use augmentative and alternative communication strategies?
13. What does an oral motor evaluation consist of?
14. Why are maximum performance tasks and speech tasks important during a motor speech evaluation?
15. What are three formal tests that can be used to determine the presence of apraxia of speech?
16. What is a distinguishing characteristic of PROMPT therapy?
17. What are two reasons an individual might use augmentative and alternative communication strategies?
18. What is a distinguishing characteristic of PROMPT therapy?
19. What is a distinguishing characteristic of PROMPT therapy?