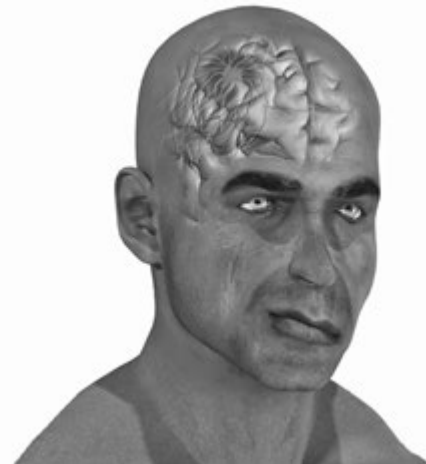


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**This course is applicable for PT, PTA, OT, OTA, AT.** This course meets the continuing education requirements for physical therapists in the States of AK, AL, CO CT, DE, DC, ID, IN, MA, MO, MT, NH, NC, OR, RI, SC, UT, VT, VA, WA, WI and WY. IL PT provider #216000074. This course meets the Colorado Physical Therapy Board of Examiners criteria for 15 hours, 15 Category-1 PDA points. This course meets the standards set forth in section 1399.96 of the California Code of Regulation and is approved for 15.0 hrs, 1.50 CEU's for physical therapy continuing competency license renewal requirements in the State of California. This course meets the ceu requirements specified in the Utah Physical Therapy Practice Act Rule. The New York State Education Department, Office of the Professions has approved NAS as a continuing education sponsor for physical therapists and assistants licensed in New York. **This activity is provided by the Texas Board of Physical Therapy Examiners Accredited Provider # 1907038TX** and meets continuing competence requirements for physical therapist and physical therapists assistant licensure renewal in Texas for 15 ccu's. **North American Seminars, Inc. is an AOTA provider for continuing education, provider #4487.** AOTA approval hours are 15. The AOTA does not endorse specific course content, products or clinical procedures. The AK, AR, DE, DC, IL, IN, KY, LA, MD, MN, MS, MO, MT, OH, OR, OK, PA, RI, SC, TN, TX, VT and VA occupational therapy regulatory boards accept courses presented by AOTA providers to meet the needs of OT continuing educational requirements. Additionally, this course meets the ceu requirements for OT's licensed in AL, AZ, CA, CO, CT, FL, GA, HI, ID, KS, ME, MA, MI, NE, NJ, ND, UT, WA, WV, WI and WY. Meets the NBCOT requirements. **BOC provider # P2047,** 15 hrs, category A, call for evidence-based approval status. Meets the NBCOT requirements. **Call 800-300-5512 for specific state approval numbers as they are continually updated.**

# Stroke: Impacting the Under 55 Year Old Population



**Presented by  
 Laura Wiggs, PT, NCS, CBIS**

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## Day One

- |       |       |                                                                                                                                                                                                                                                                                                                                                            |
|-------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7:30  | 8:00  | <b>Registration</b>                                                                                                                                                                                                                                                                                                                                        |
| 8:00  | 8:15  | <b>Review Basic Anatomy and Circulation of Brain</b>                                                                                                                                                                                                                                                                                                       |
|       |       | <ul style="list-style-type: none"> <li>• Incidence of stroke, most common causes</li> <li>• Lobes and function</li> <li>• Circulation and function</li> </ul>                                                                                                                                                                                              |
| 8:15  | 8:45  | <b>Stroke Behaviors and Cognitive Deficits</b>                                                                                                                                                                                                                                                                                                             |
|       |       | <ul style="list-style-type: none"> <li>• Impulsivity, decreased initiation, executive dysfunction</li> <li>• Strategies for working with patients exhibiting these behaviors</li> <li>• Memory deficits, attention deficits</li> <li>• Cognitive processing speed</li> <li>• Strategies for working with patients exhibiting cognitive deficits</li> </ul> |
| 8:45  | 9:00  | <b>Language Deficits and Vision Deficits</b>                                                                                                                                                                                                                                                                                                               |
|       |       | <ul style="list-style-type: none"> <li>• Strategies for working with patients with language deficits</li> <li>• Identifying possible visual deficits</li> <li>• Impact of visual deficits on function</li> <li>• Strategies for visual deficits</li> </ul>                                                                                                 |
| 9:00  | 9:30  | <b>Comorbidities: Impact on Outcome and Treatment Planning</b>                                                                                                                                                                                                                                                                                             |
|       |       | <ul style="list-style-type: none"> <li>• Most common: HTN and DM</li> <li>• Hemotological disorders</li> <li>• Dementias, neuropathies</li> <li>• HIV, brain tumors, dementias</li> <li>• Substance abuse, other comorbidities</li> </ul>                                                                                                                  |
| 9:30  | 9:45  | <b>Lab: Case For Small Group Problem Solving on Expected Outcomes Based on NeuroAnatomy Involved and Comorbidities.</b>                                                                                                                                                                                                                                    |
| 9:45  | 10:00 | <b>What is a Transdisciplinary Approach?</b>                                                                                                                                                                                                                                                                                                               |
|       |       | <ul style="list-style-type: none"> <li>• Why this is important to outcomes</li> <li>• Review of the literature</li> <li>• Ideas about how to develop a transdisciplinary team in your setting</li> </ul>                                                                                                                                                   |
| 10:00 | 10:15 | <b>Break</b>                                                                                                                                                                                                                                                                                                                                               |
| 10:15 | 11:00 | <b>Neuroplasticity</b>                                                                                                                                                                                                                                                                                                                                     |
|       |       | <ul style="list-style-type: none"> <li>• Review current literature</li> </ul>                                                                                                                                                                                                                                                                              |
| 11:00 | 12:00 | <b>Motor Learning</b>                                                                                                                                                                                                                                                                                                                                      |
|       |       | <ul style="list-style-type: none"> <li>• Basic Principles</li> <li>• Applying motor learning for best outcomes</li> </ul>                                                                                                                                                                                                                                  |
| 12:00 | 1:00  | <b>Lunch (on your own)</b>                                                                                                                                                                                                                                                                                                                                 |
| 1:00  | 3:00  | <b>Hypertonicity</b>                                                                                                                                                                                                                                                                                                                                       |
|       |       | <ul style="list-style-type: none"> <li>• Defining spasticity, dystonia, and spastic dystonia</li> <li>• Assessment of hypertonicity</li> <li>• Medical management of hypertonicity: neurotoxin, ITB, and oral medications. Upates on the latest research</li> <li>• Case presentations, therapy interventions</li> </ul>                                   |

## Day One continued

- |      |      |                                                                                                                                                                                                                                |
|------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3:00 | 3:15 | <b>Break</b>                                                                                                                                                                                                                   |
| 3:15 | 4:00 | <b>Movement Analysis</b>                                                                                                                                                                                                       |
|      |      | <ul style="list-style-type: none"> <li>• Key movements</li> <li>• How to interpret</li> </ul>                                                                                                                                  |
| 4:00 | 4:45 | <b>Movement Analysis (Lab)</b>                                                                                                                                                                                                 |
| 4:45 | 6:15 | <b>Fatigue in the Stroke Population</b>                                                                                                                                                                                        |
|      |      | <ul style="list-style-type: none"> <li>• Causes</li> <li>• Normal aging changes that are exacerbated by a stroke</li> <li>• Evidence based research</li> <li>• Strategies for managing fatigue across the continuum</li> </ul> |

## Day Two

- |       |       |                                                                                                                                                                                                                                                                                                                                  |
|-------|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7:45  | 9:15  | <b>Management of the Hemiplegic Shoulder</b>                                                                                                                                                                                                                                                                                     |
|       |       | <ul style="list-style-type: none"> <li>• Identification of the pain generator</li> <li>• Treatment strategies for managing subluxation, adhesive capsulitis, and referred pain</li> <li>• Orthotics for the upper extremity</li> </ul>                                                                                           |
| 9:15  | 10:30 | <b>Lab for Hemiplegic Shoulder Treatment techniques</b>                                                                                                                                                                                                                                                                          |
| 10:30 | 10:45 | <b>Break</b>                                                                                                                                                                                                                                                                                                                     |
| 10:45 | 11:15 | <b>Gait from Bedside to Community Ambulator (Lect)</b>                                                                                                                                                                                                                                                                           |
|       |       | <ul style="list-style-type: none"> <li>• Review of current evidence based research</li> <li>• Treatment techniques to improve gait</li> <li>• Orthotics</li> </ul>                                                                                                                                                               |
| 11:15 | 12:30 | <b>Lab: Gait</b>                                                                                                                                                                                                                                                                                                                 |
| 12:30 | 1:00  | <b>Lunch (on your own)</b>                                                                                                                                                                                                                                                                                                       |
| 1:00  | 1:30  | <b>Successful Home Program Development Across the Continuum</b>                                                                                                                                                                                                                                                                  |
|       |       | <ul style="list-style-type: none"> <li>• Consider all deficits</li> <li>• The importance of a team approach</li> <li>• How to get support system involvement</li> <li>• Key education for prevention of an additional stroke</li> <li>• Productive activity is part of a home program</li> <li>• Community activities</li> </ul> |
| 1:30  | 1:45  | <b>Break</b>                                                                                                                                                                                                                                                                                                                     |
| 1:45  | 2:45  | <b>Lab Developing Home Programs</b>                                                                                                                                                                                                                                                                                              |
|       |       | <ul style="list-style-type: none"> <li>• Exercise prescription</li> </ul>                                                                                                                                                                                                                                                        |
| 2:45  | 3:00  | <b>Conclusion</b>                                                                                                                                                                                                                                                                                                                |

## About the Educator

**Laura Wiggs, PT, NCS, CBIS** graduated from Texas Christian University with a Bachelor of Science degree in Kinesiological Studies. She earned a Bachelor of Science degree in physical therapy from UTMB in 1991. In 2000, she earned her certification as a neurological clinical specialist. She is also a Certified Brain Injury Specialist by the Academy of Certified Brain Injury Specialist.

Laura has specialized in the treatment of individuals with brain injury and stroke for the past 27 years. She has treated individuals throughout the continuum of brain injury and stroke from the neuro intensive care unit to community based re-entry. She has published numerous articles on the topic of hypertonia, and has presented both nationally and internationally on this topic. In addition, she has presented at numerous national and international conferences on topics in brain injury.

Laura is a guest lecturer for the UTMB PT program, and is on faculty with the Harris Health System PT Neurological residency program.

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## Why You Should Attend This Course

This is a two day advanced course focusing on identification and management of the barriers to achieving good outcomes in the under 55 year old population. In the United States, the incidence of stroke in individuals under the age of 55 continues to increase and billable length-of-stay continues to decrease across the continuum for stroke survivors. This course will help therapists identify the key issues that need to be treated in order to facilitate the “younger ” stroke survivor back to active participation in their community.

This course will provide review of basic but critical issues in the stroke population such as area of the brain involved and the cognitive, visual, language, and behavioral sequelae. There will be identification and management of comorbidities. The importance of a transdisciplinary team approach across the continuum will be discussed throughout the course.

This class provides clinicians with the information they need to know about motor learning, managing fatigue, treatment of the hemiplegic shoulder, and management of hypertonicity to achieve improved outcomes. These are frequently the most complicated issues in stroke rehab and are the most frequent barriers to the stroke survivors progress in therapy and participation in their community. Laura’s sixteen years of experience in the post acute setting provides a clinical perspective on how to treat/manage these issues for the best outcomes. There will be lab sessions for the hemiplegic shoulder, movement analysis, and gait, as well as case studies on neuroanatomy, comorbidities, and home program development.

There will be review of the current evidence based practice, and how to incorporate this evidence into the best treatment strategies for improving the community participation of the stroke survivor. This course puts together a template for problem solving the more complex young stroke population and the issues they face in order to integrate back into their community.

## Course Objectives

### Upon completion of this course participants will be able to:

- Identify neuroanatomical lesions and subsequent deficits.
- Identify cognitive, behavioral, vision, and language deficits post stroke.
- Develop strategies for assessing and treating cognitive, behavioral, vision, and language deficits for improved outcomes throughout the continuum.
- Identify the impact of comorbidities on outcome and therapy planning.
- Define a transdisciplinary approach and describe ways to develop this in your treatment setting.
- Define motor learning and identify how to achieve better outcomes by using a motor learning approach.
- Define spasticity, dystonia, and spastic dystonia, and identify the best medical and therapy interventions for management.
- Identify key movements to analyze, interpretation of the movement observed, and how to set up treatment strategies for improved outcomes.
- Identify causes of fatigue in the stroke population and treatment strategies to diminish the impact of fatigue on function.
- Identify the pain generators that contribute to hemiplegic shoulder pain, and perform basic treatment techniques for management.
- Discuss the most current evidence based information on upper and lower extremity orthotics for the stroke population.
- Identify keys to achieving community ambulation and community integration.
- Develop home programs for continued progress not just maintenance.

Wiggs

## Stroke : Under 55 Year Old Population

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All cancellations must be submitted with written notice and received 14 days prior to the course date. Refunds and transfers minus the deposit fee of \$75.00 are provided until 14 business days prior to the course date. No refunds or transfers will be issued if notice is received after 14 days prior to the course date. North American Seminars, Inc. reserves the right to cancel any course and will not be responsible for any charges incurred by the registrant due to cancellation. A full course tuition refund will be issued if NAS cancels the course. NAS reserves the right to change a course date, location or instructor. No refund will be issued if course is in progress and is interrupted by an Act of War or God or issue beyond our control. NAS, Inc. will not be responsible for any participant expenses other than a course tuition refund for course cancellations.