

# Limb Loss/Amputee Rehabilitation:

## Evidence-Based Strategies Across the Continuum of Care

Inger Brueckner, MS, PT



### Faculty

Inger Brueckner is the principle physical therapist treating limb loss at Presbyterian/St. Luke's Medical Center. Her experience spans many age groups, causes and levels of limb loss and amputee working in a multidisciplinary team dedicated to the advancement of function in this population. With a master's in PT, Inger has worked primarily as an outpatient therapists and hospital-based outpatient center. She co-authored an article on pre-prosthetic training and has presented at national and international conferences and presented a poster of a study at APTA CSM. She also worked in the vestibular rehabilitation since 1995, specifically pediatric vestibular rehabilitation. These disparate populations have several commonalities that help encourage a grounded, functional approach that address the patient as a whole person and is more flexible with approaches to better serve their needs. She developed and directed the Rocky Mountain Hospital for Children's acute concussion program: PACER. Both programs were devolved jointly in a team of specialists respecting and encouraging one another to find better solutions for these deserving populations and to share approaches. This background has allowed her to have a grounded, functional approach to patient care that accesses current research and techniques that carry over to many different populations. Disclosure - Financial: Ms. Brueckner receives an honorarium from ERI for teaching. Non-financial: No non-financial relationships to disclose.

### About this Live Webinar

This course offers a comprehensive perspective for management of the limb loss patient. Clinical expertise can be difficult to obtain since this population is a small proportion of the rehabilitation caseload. Current research, expert opinions from PT, OT, orthopedic and plastic surgeons, PM&R, prosthetists, as well as patient experiences will be presented. The class addresses the medical issues and common complications that place limbs at risk. Attendees will learn to make educated clinical decisions to improve function. This dynamic course addresses limb loss due to diabetes, vascular disease, trauma, cancer, sepsis and congenital issues. Current guidelines recommend therapy interactions start pre-operatively and continue through the lifespan of the patient. New technology, surgical techniques and futures directions are included in discussion. Many of the techniques described in the course can be applied to patient populations with limbs at risk and the multi-trauma patient. The course is primarily lecture with multiple video clips taken throughout the continuum of care. There will be case-based analysis and critical problem solving intermixed with labs, lectures and demonstrations. Access to videos of demonstrated techniques will be included.

### Objectives

- Modify an individual rehab program using current evidence-based techniques for common comorbidities, taking into account lifetime needs of this population.
- Apply two evidence-based assessments to evaluate a patient's functional impairments related to movement and posture.
- Determine an appropriate treatment intervention for common complications of phantom pain, residual limb pain, low back pain, and skin breakdown.
- Apply three interventions to facilitate mobility and ADL independence post upper extremity loss, using the case study provided.
- Apply three interventions to facilitate mobility and ADL independence post lower extremity loss, using the case study provided.
- Identify the role of OT, PT, and other members of the multidisciplinary team across the spectrum of rehabilitation for the patient with limb loss.

### Patient Population & Audience

This course is designed for: PTs, PTAs, OTs, OTAs, and ATCs who are working with patients who have limb loss. This course is relevant across the lifespan for all persons with limb loss or limb difference.

Help your patients achieve better outcomes.

## Schedule – Day 1 5:10pm-9:30pm EST (US)

- 5:10–5:30 Webinar Registration/Zoom Course Opens**
- 5:30–6:15** Introduction limb loss and limb difference: Scope of the problem, evidence based treatment, multidisciplinary team approach, clinical practice guidelines, insurance coverage, pre-operative evaluation
- 6:15–7:30** Patient perspectives, specific concerns for diabetes, peripheral neuropathy, vascular dysfunction, trauma, tumor and infection. Surgical considerations of nerve, bone, muscle and skin. Psychological, impacts, social support and caregiver education
- 7:30–7:45** Break
- 7:45–8:30** Intra-operative video of surgical techniques, rotationplasty, Ertl technique, limb lengthening, and revision surgery
- 8:30–9:30** Acute post-op overview; positioning, compression, wheelchair/seating, mirror therapy, OT/OTA role in lower limb loss, initial upper extremity interventions, sound limb protection

## Schedule – Day 2 5:10pm-9:30pm EST (US)

- 5:10–5:30 Webinar Registration/Zoom Course Opens**
- 5:30–6:45** ADLs, adaptive equipment, functional problem solving, home modification, multi-limb loss and upper limb considerations, vehicle modifications for driving
- 6:45–7:00** Break
- 7:00–8:15** Cardiovascular activity using updated guidelines for diabetes, peripheral neuropathy, vascular dysfunction, aquatic therapy, falls and balance training
- 8:15–8:30** Modification consideration of pre-prosthetic activity
- 8:30–9:00** Upper extremity body and myoelectrical powered prosthetics, donning/doffing, ADLs, PT/PTA role in upper limb loss, overuse syndromes, common postural issues
- 8:00–9:30** Prosthetist discussion: effective communication in a multidisciplinary team

## Schedule – Day 3 5:10pm-9:30pm EST (US)

- 5:10–5:30 Webinar Registration/Zoom Course Opens**
- 5:30–7:30** Prosthetic fabrication, suspension systems, components including microprocessor knees, initial delivery, wear schedule, donning/doffing, fit with sock ply changes, sit<>stand transfers, floor transfers and fall training, skin care and preparation
- 7:30–7:45** Break
- 7:45–9:00** Gait training, assistive device selection, gait deviations, stairs, ramps, turning, bilateral transfemoral, hip disarticulation and multi-limb considerations, outcome measures
- 9:00–9:30** Group discussion of invited gait video review of possible interventions

## Schedule – Day 4 5:10pm-9:00pm EST (US)

- 5:10–5:30 Webinar Registration/Zoom Course Opens**
- 5:30–6:30** Running and adaptive sport activity for all levels, planning for travel
- 6:30–6:45** Break
- 6:45–8:15** **Complications: management techniques for skin disruptions, neuromas, weight management/endurance phantom pain, residual limb pain, low back pain**
- 8:15–9:00** **Advancements in prosthetic and surgery, targeted muscle re-innervations, pattern recognition, osseointegration and future trends**

"After taking this course I now feel more prepared and confident to work with patients with limb loss."

- E Montoya, PT

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### Credits

This course meets the criteria for 14 contact hours (1.4) CEUs, Intermediate Level.



Education Resources Inc. is an AOTA Approved Provider of professional development. Course approval ID#04131. This Distance Learning-Interactive course is offered at 14 contact hours 1.4 CEUs. (Intermediate level, OT Service Delivery). AOTA does not endorse specific course content, products or clinical procedures.

NBCOT professional development provider – 14 PDUs.

Approved provider of the **FL** Board of Occupational Therapy-CE Broker 16.5 - hours. This course meets the approval of the **TX** Board of OT Examiners.

Most Physical Therapy State Boards accept webinars as a live offering. Please check with your state board to confirm. Application has been made to the **FL** Physical Therapy Association for 16.5 continuing education contact hours. Approved by **MD** Board of Physical Therapy. Approved by the **NJ** Board of Physical Therapy Examiners. Application has been made to the **MN** Board of Physical Therapy and **OK** Board of Medical Licensure and Supervision for Physical Therapy.

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The following state boards of physical therapy either do not require course pre-approval or do not require CEUs for re-licensure: **AL, CO, CT, IA, MA, ME, MT, NE, ND, NH, SD, WA**.

12 hours of this course qualify towards the discipline-specific hours for the 20-hour requirement for **NDTA** re-certification. They do NOT qualify towards the 8-hour NDTA Instructor requirement for re-certification.

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### Webinar Dates and Times

April 5, 12, 19 and 26

5:10 pm EST • 4:10 pm CST • 3:10 pm MST • 2:10 pm PST (US)

Registration is for both Sessions. Zoom log-in Instructions and Course Materials will be emailed/added to your ERI account 5-7 Days prior to the first date of the Webinar.

Inger Brueckner invites you to share a patient problem description or a short video of amputee gait to discuss as a group. It should be a 30-60 second video of gait or any function to be reviewed with the class. An email address will be provided in the confirmation to send the case study and/or video.



\$369 fee. **LIMITED ENROLLMENT.** Cancellation will be accepted until 14 days prior to the start date of the course, minus a \$75 Administration Fee. There will be NO REFUNDS after this 14 day deadline. Registration will be accepted after deadline on a space available basis. We encourage you to register online!

**WEBINAR: Amputee Rehabilitation: Evidence-Based Strategies Across the Continuum of Care/Inger Brueckner**

April 5, 12, 19 and 26

**Course Registration Form**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Work Phone: \_\_\_\_\_

Cell Phone: \_\_\_\_\_

Needed in the event of an emergency scheduling change

Email: \_\_\_\_\_

Please clearly print your email address for course confirmation

Employer: \_\_\_\_\_

Discipline: \_\_\_\_\_ Specialty: \_\_\_\_\_

How did you learn of this course? \_\_\_\_\_

Education Resources reserves the right to cancel any course due to insufficient registration or extenuating circumstances. We are not responsible for any expenses incurred by participants if the course must be cancelled.

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