



Astym[®] Therapy Two Day Certification Course

Online Coursework

Introduction (0.50 hr):

- Introduction to Astym Therapy and what to expect with the online learning and onsite course.
- Overview of the foundational research on Astym therapy, including a brief review of evidence regarding the degenerative nature of tendinopathy, and the investigations into how cellular mediators and growth factors may enhance healing.

Physiology (1.25 hr):

- A review of the research on the pathophysiology of common musculoskeletal disorders; analyzing the research to understand theories on the lack of effectiveness of traditional treatments for tendinopathy.
- Discussion of the research on the formation, structure, and characteristics of scar tissue, and how Astym therapy research builds upon the existing research on the pathophysiology of scar tissue and tendinopathy.
- Examination of the basic science research on Astym therapy showing how Astym protocols improve tendon repair, increase limb function, and normalize movement patterns in animal models.
- Further review of how Astym protocols result in a significant increase in both fibroblast activation and fibroblast number, as well as the production of fibronectin, which together with interstitial collagens may interact to form a fibrillar component of the extracellular matrix.
- Discussion of how this preparatory line of basic science research provides insight into the cellular impact of Astym treatment and informs the protocols to be used clinically.

Astym Therapy Research (1.0 hr):

- Discussion and analysis of the peer-reviewed research on Astym therapy (guided by the Research Overview document -attached), including systematic review, randomized controlled clinical trials, basic science studies, observational studies and data, and case studies/series.

Upper Extremity Anatomy (1.50 hr):

- Review of the anatomical literature, pertaining to the areas of the body in the upper extremity that may be treated with Astym therapy.
- Anatomical knowledge is important because to be the most effective, the protocols and application of Astym instruments need to be made in proper alignment with the muscles, tendons, and ligaments in each area. The more accurately you understand anatomy, the more successful your application of Astym therapy will be.

Lower Extremity Anatomy (1.50 hr):

- Review of the anatomical literature, pertaining to the areas of the body in the lower extremity that may be treated with Astym therapy. Anatomical knowledge is important because to be the most effective, the protocols and application of Astym instruments need to be made in proper alignment with the muscles, tendons, and ligaments in each area. The more accurately you understand anatomy, the more successful your application of Astym therapy will be.

Lower Kinetic Chain Biomechanics (1.0 hr):

- Analysis of peer-reviewed research on movement patterns, qualitative and quantitative analysis of movement, the geometry of motion, forces and torques on the body, normal gait mechanics, identification of abnormal patterns, and the resultant effects on soft tissue and bones. How does the understanding of these concepts present in the literature, and how is that understanding translated into clinical practice?
- Normative data on ROM and biomechanical factors are explored.
- Discussion on various precipitating and perpetuating factors that can lead to degeneration of tissue

Astym Website Presentation (0.50 hr):

- Presentation of the support resources available to Astym Certified clinicians through the astym.com website; ongoing clinical support, including anatomy review, physiology review, protocol review, research updates, treatment checklists, indications and contra-indications and more; advanced and continuing education opportunities on specific conditions, patient populations, and advanced research; professionally designed marketing resources.

Demonstration of Astym Treatment (0.25 hr):

- Presentation of theoretic patient example, and video demonstration of full Astym treatment and patient-friendly verbal explanation of treatment process and goals
- Discussion and presentation of appropriate exercises for the patient example.

Astym Treatment Review (0.5 hr):

- How does the physiologic response, as shown in basic science research, translate to the practical application of Astym therapy in the clinical or training room settings?
- Presentation of physiologic indications and cellular response, dosing of treatments and clinical benefits of utilizing Astym therapy

Indications, Precautions, and Contraindications (1.5 hr):

- Detailed presentation of basic science research on physiologic responses to topical pressures and Astym therapy-specific research on physiologic response; contraindications to Astym treatment.
- Overview of common cautions associated with certain co-morbidities, patient types, pharmaceuticals, disease, and injury, as shown in the medical literature. Instruction on how to utilize the medical literature to discern how to avoid complications and unfavorable results. Specific precautions to Astym treatment; situations that might require medical clearance or adjustments in the plan of care.
- Analysis of the study and findings in research on the neuro-musculoskeletal conditions where Astym therapy can be utilized.

Application of the Astym Treatment (0.5 hr):

- Presentation of the technical and mechanical aspects of the treatment protocols, including appropriate patient and clinician positioning, pros and cons of various emollients, description of the instruments (including the specific design and purpose of each), regions covered during each treatment session, and dosing of treatment concepts.
- Key points for success with Astym therapy.

Therapeutic Loading (0.75 hr):

- Examining research findings on functional and therapeutic loading; discussion of how these findings support the practice of loading the tissue in the recovery process and why it is so critical.
- Further, more specific examination of research findings on different types of tissue load, how exercises are chosen, and guidelines for the prescription of corrective exercise.
- Discussion regarding the goals of tissue loading, loading variables, and how patients will respond differently to progressive loading.
- Presentation of two case studies and discussion on individualized exercise prescription

Putting It All Together (0.75 hr):

- Utilizing the newly acquired understanding of research and practical skills in a clinical setting.

- Key methods for the evaluation process, baseline testing, patient education, exercise prescription, home instructions, and documentation requirements, specific for Astym treatment
- Presentation of case study, with examples given for subsequent visits, the progression of care, treatment expectations, problem-solving and conclusion of care

Specific Hand Therapy and Treatment Tips (0.5 hr):

- Clinical tips for a variety of diagnoses, specific to the hand and wrist areas. Presentation and demonstration of individual Astym therapy protocols for treatment of DeQuervain's tenosynovitis, Trigger finger, and 1st CMC joint pain.

Saturday

8:00 – 8:20: Course Introduction and Astym Therapy Review – Lecture (0.5 hr.)

- Presentation of teaching philosophy, course objectives, over-view of course activities
- Introduction of Instructors
- Review of issued paperwork: description of lecture and various lab guides, as well as associated clinical materials
- Review of resources available on the Astym website
- Review of key principles regarding the physiologic response to Astym treatment and how this translates to the clinical setting

8:20 – 8:35: Summary of Contraindications, Precautions and Indications – Lecture (0.25 hr.)

- Extensive list of the impact of co-morbidities presented in the Online Course are re-grouped in a manner to facilitate decision-making process in the clinic

8:35 – 9:05: Application – Lecture and Interactive Portion (0.5 hr.)

- Presentation of the technical and mechanical aspects of the treatment, including: description of the Instruments and their specific purpose(s), progression of the various Instruments, technical vocabulary of stroke patterns and types, concept of Treatment Edge, Treatment Angle, Speed, Pressure, and Tissue Tension, recommendations regarding scope of areas treated, the frequency and duration of each session
- Presentation of additional key points for success with Astym therapy
- Guided practice of specific hand-holds of each Instrument, and with each specific type of stroke

9:05 – 9:15: Application – Demo (0.15 hr.)

- Live demonstration of: hygienic application and use of emollient, patient positioning, and specific stroke patterns

9:15 – 9:45: Application – Lab (0.5 hr.)

- Guided instruction for each type of Astym therapy basic stroke pattern
- Participants perform and experience all basic stroke patterns.
- Focused feedback from Instructors regarding: instrument hand holds, pressure, speed and angle of strokes

- Participants perform basic stroke patterns individually on an Instructor, with 1:1 corrective feedback given

9:45 – 9:55: Break

9:55 – 11:45: Clinical Application: Elbow, Wrist, Hand – Lecture and Demonstration (0.75 hr.)

Lecture Portion:

- Detailed presentation of the relevant upper extremity anatomy, distal to the Deltoid muscle, through and including the hand
- Presentation of the anatomy as it relates to specific conditions appropriate for Astym therapy
- Clinical tests to be performed in conjunction with Astym therapy
- Presentation of individual Astym therapy strokes superimposed on anatomical drawings

Demonstration Portion:

- Video demonstration of the Astym therapy - *Elbow, Wrist and Hand Sequence*, with an emphasis on: Instrument hand holds, speed and angle of strokes, anatomic specificity

11:45 – 12:00: Q&A's on Astym Therapy and Application (0.25 hr)

- Interactive question and answer session

12:00 – 12:30: Lunch

12:30 – 1:30: Elbow, Wrist and Hand Practical Exam (1.0 hr.)

- Each participant performs the full *Elbow, Wrist and Hand Sequence* on a second participant, for corrective feedback regarding protocol progression, application, speed and pressure, sequence, proper handholds and timing. This activity includes a graded practical exam.

1:30 – 1:40: Break

1:40 – 3:40: Clinical Application: Shoulder/Shoulder Girdle– Lecture, Demonstration (2.0 hr.)

Lecture Portion:

- Detailed presentation of the relevant anatomy of the shoulder, shoulder girdle, cervical and thoracic spine, and intercostal regions

- Presentation of the anatomy as it relates to specific conditions appropriate for Astym therapy
- Clinical tests to be performed in conjunction with Astym therapy
- Presentation of individual Astym therapy strokes superimposed on anatomical drawings

Demonstration Portion:

- Video demonstration of the Astym therapy – *Shoulder and Shoulder Girdle Sequence*, with an emphasis on: Instrument hand holds, speed and angle of strokes, and anatomic specificity

Lab Portion:

- Guided instruction for treatment of each section and each region of the *Shoulder and Shoulder Girdle Sequence*
- Participants perform and experience treatment according to the *Shoulder and Shoulder Girdle Sequence*
- Focused feedback from instructors regarding: patient positioning, instrument hand holds, speed and angle of strokes, treatment pressure, anatomic specificity, problem solving strategies, and time management

3:40 – 3:50: Break

3:50 – 4:50: Shoulder and Shoulder Girdle: Practical Exam (1.0 hr.)

- Each participant performs the full *Shoulder and Shoulder Girdle Sequence* on a second participant, for corrective feedback regarding protocol progression, application, speed and pressure, sequence, proper handholds and timing. This activity includes a graded practical exam.

4:50 – 5:00: Break

5:00 – 5:10: Treatment of Surgical Incisions & FAQs (0.15 hr.)

- Lecture presentation of stroke techniques specific to treatment of surgical incisions with Q&A
- Video presentation of Astym therapy techniques for the treatment of surgical scars

5:10 – 5:20: Astym Therapy for Specific Diagnoses of the Hand (0.15 hr.)

- Lecture presentation of stroke techniques specific to treatment of hand with Q&A

5:20 – 5:30: Bringing Astym Therapy into Your Clinical Setting – Interactive Discussion (0.15 hr.)

- Interactive discussion of prepared clinical scenarios and questions, related to Astym therapy, addressed to the participants
- Discussion to facilitate successful incorporation of Astym therapy into clinical practice. Concepts includes: Tips for Monday, standard order of treatment, time management strategies, sources for clinical support, recommendations to facilitate tissue recovery

5:30 – 6:00: Written Test and Course Evaluation (0.50 hr.)

- Written exam on Lab and Lecture materials for the Upper Extremity
- Participants fill out course evaluations

Sunday

7:00 – 7:10: Q&A's on Astym Therapy and Application (0.15 hr)

- Interactive question and answer session

7:10 – 9:40: Clinical Application: Foot, Ankle and Knee: Lecture and Demonstration (2.50 hr)

- Detailed presentation of the relevant lower extremity anatomy, distal to the hip joint, and through and including the foot
- Presentation of the anatomy as it relates to specific conditions appropriate for Astym therapy
- Clinical tests to be performed in conjunction with Astym therapy
- Presentation of individual Astym therapy strokes superimposed on anatomical drawings and the review of classic patterns of dysfunction seen in various lower extremity diagnoses
- Lab and interactive instruction on Astym therapy – *Foot, Ankle and Knee Sequence*, with an emphasis on: Patient positioning, instrument hand holds, speed and angle of strokes, anatomic specificity, problem solving strategies, time management
- Guided instruction for treatment of each section and each region of the *Foot, Ankle and Knee Sequence*
- Participants perform and experience treatment according to the *Foot, Ankle and Knee Sequence*

9:40 – 9:45: Break

9:45 – 10:45: Practical Exam: Foot, Ankle, and Knee (1.0 hr)

- Interactive practical lab with feedback and correction of stroke patterns and sequences
- Each participant performs the full *Foot, Ankle, and Knee Sequence* on a second participant, for corrective feedback regarding protocol progression, application, speed and pressure, sequence, proper handholds and timing. This activity includes a graded practical exam.

10:45 – 10:55: Break

10:55 – 12:30: Clinical Application: Hip, Pelvis and Back – Lecture (1.5 hr)

- Detailed presentation of the relevant anatomy of the lateral leg, hip girdle muscles, superficial abdominal muscles, intercostals, groin, lumbar and sacral regions
- Presentation of the anatomy as it relates to specific conditions appropriate for Astym therapy
- Clinical tests to be performed in conjunction with Astym therapy
- Presentation of individual Astym therapy strokes superimposed on anatomical drawings
- Classic pattern of dysfunction seen in hip diagnoses

12:30 – 1:00: Lunch

1:00 – 1:30: Combining Foot, Ankle, Knee with Hip, Pelvis, Back – Demo (0.5 hr)

- Guided demonstration combining *Foot, Ankle and Knee Sequence* with the *Hip, Pelvis, and Back* in preparation for Practical Exam

1:30 – 2:00: Loading the Lower Kinetic Chain (0.5 hr)

- Presentations of and active participation in various loading exercises appropriate for lower quadrant Astym therapy patients

2:00 – 3:00: Break

3:15 – 3:30: Questions, Answers and Written Exam (0.25 hr)

- Written exam on Lab and Lecture materials from Sunday

2:00 – 3:00: Q&A's and Lower Extremity Practical Exam (1.0 hr)

- For the interactive practical exam, each participant performs the full *Foot, Ankle and Knee Sequence* on a second participant, for corrective feedback and grading purposes