



Program Date: Online (On-Going)

Title of Program: Part III Cox Certification Course: Interdisciplinary Care and Integration (originally presented October 2010) and 10 recorded webinar presentations on various topics

Author(s) & Moderator: James M. Cox, DC, DACBR (19 hrs); Ram Gudavalli, PhD (30 mins.); James Browning, DC (1 hr); Rudy Kachmann, MD (1.5 hrs); James Dozier, MD (30 mins); George Joachim DC (30 mins)

Total CE hours: 22.5 hours (not including time taken for quizzes)

PROGRAM DESCRIPTION:

- Part III discusses the available care options for spine pain patients: manipulation, surgery, pain control, rehabilitation/exercise, modalities, patient education. Its central theme is how Cox® Technic integrates with these options.
- Miscellaneous topics presented via live webinars are recorded and prepared for viewing online: patient cases and treatment, neuroanatomy, disc degeneration and regeneration.

PROGRAM GOALS/OBJECTIVES:

- At the end of the course,
 - the attendee will be more confident in application of Cox® Technic protocols after using the force transducer in hands-on practice.
 - the attendee will have tips on how to approach local medical organizations to share what he/she can do for non-surgery required spine patients.
 - the attendee will know how to manage the pregnant patient with low back and leg pain.
 - the attendee will understand more clearly the mind/body connection to healing and wellness.
 - the attendee will name at least two successfully used neurosurgical techniques in use today.
 - the attendee will name the two types of patients for whom Cox® protocols are appropriate.
 - the attendee will have a list of at least 20 of the latest published spinal research articles that affect care of the patient.
 - the attendee will be able to define the Pelvic Pain and Organic Dysfunction (PPOD) syndrome and how to treat it.
 - the attendee will define the Failed Back Surgery Syndrome (FBSS) patient and how to treat that patient.
 - the attendee will discuss the outcomes of the cervical spine biomechanics impacted by Cox® Technic.
 - the attendee will have at least two new spinal rehabilitation skills to share with their patients.
 - The attendee will have a clearer understanding of how flexion distraction is integrated into the back pain and neck pain practice.
 - The attendee will have a more defined understanding of the neuroanatomy of the spine and how pain is created and potentially relieved with spinal manipulation.
 - The attendee will have a grasp of the latest developments in the world of disc nutrition, degeneration and potential regeneration with medical, nutritional and conservative means.
 - The attendee will better examine a patient with cervical spine pain with accuracy and confidence in performing the examination tests to the patient as research shows best to do.
 - The attendee will have a clearer direction when evaluating a patient who may be headed to back surgery and refer (or continue care) confidently.
 - The attendee will see clinical examples of conditions like cervical myelopathy, meningioma, GOIC syndrome, transverse myelitis, disc extrusion, etc.

PROGRAM TOPICS:

- Medical Colleague Presentations - Neurosurgeons and Spine Specialists present their needs.
- Spinal Literature Highlights - Dr. Cox will share some of the latest literature findings and their impact on clinical practice.
- Clinical Rounds - Dr. Cox brings patients from his clinic to the course for discussion of their conditions, diagnosis, insurance involvement, treatment plan, outcomes, etc.
- Cox® Protocols - Dr. Cox will demonstrate hands-on application of Cox® protocols.

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- Cox® Research - Dr. Gudavalli will share the latest F/D research outcomes and studies.
- Neurosurgeon's Support of Non-Surgical Means of Spinal Care and Approach to Wellness - Dr. Rudy Kachmann
- Pregnant & Pelvic Pain and Organic Dysfunction Pain Patients - methods and outcomes
- Surgical Patients and Failed Back Surgery Syndrome Patients
- Decompression Talking Points
- Cervical Spine Examination
- Patient Cases 1: Cord edema, transverse myelitis, spondylolisthesis – history, imaging, exam, treatment, outcomes
- Patient Cases 2: scoliosis, post vertebroplasty/kyphoplasty, combined cervical and thoracic disc herniations in one patient
- Patient Cases 3: scoliosis, disc herniation/extrusion, compression fracture, osteoporosis
- Neuroanatomy of the Spine: Part 1
- Neuroanatomy of the Spine: Part 2 – neuroischemia, chemical radicular responses, etc.
- Neuroanatomy of the Spine: Part 3 – chemical and mechanical DRG and nerve irritation, etc.
- Patient Cases 4: Current Research Fall 2013 and cases – peripheral neuropathy, GOIC syndrome, meningioma, Bertolotti's syndrome, post surgical continued pain
- Disc degeneration and regeneration: state of current research literature
- When to Refer for Back Surgery: Consideration and Cases based on evidence based algorithms of care and latest research outcomes studies

Program Outline:

1 hour: Introduction (Cox)

- Low Back Pain Patients
- Radicular Pain
- Nerve Supply and Pressures
- Somatosensory information and effect on immune system
- Pain Modulation through Nervous System

1 hour: Conditions Treated (Cox)

- Synovial Cysts
 - Diagnosis
 - Imaging
 - Treatment
 - Outcome
 - Patient Case
- Pregnancy Related Back Pain
 - Incidence
 - Cause
 - Treatment

1 hour: PPOD: Pelvic Pain and Organic Dysfunction Patient Management (Browning)

- Overview of the mechanically induced PPOD (Pelvic Pain and Organic Dysfunction) syndrome
 - Somatic pelvic pain patterns
 - Disorders of urologic function
 - Disorders of enterologic function
 - Disorders of gynecologic and sexual function
- Underlying mechanisms
 - Lateral vs medial/central disc lesion
 - Lower sacral neuroanatomy and pelvic organic connections
 - Pathophysiology of nerve root compression syndromes
 - Functional effects of sensory and motor fiber facilitation and inhibition
 - Mechanisms of paradoxical urological (pelvic organic) dysfunction
- Clinical recognition of suspected PPOD syndrome patient
- Confirmation of the mechanically induced PPOD syndrome patient
- Case reports

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1.75 hour: Back Surgery

- 4a - (30 mins) Neurosurgery for Back Pain Options & Discussion of Co-Management (Dozier)
- 4b - (45 mins) Post Surgical Patient followed for a year (Cox)
- 4c - (30 mins) Post Surgical Patient Presentation and Discussion (Joachim)

1 hour: Interdisciplinary Practices (Cox)

- Medical College Orthopedics Dept.
- Cox Technic opens door with neurosurgeon to collaborate with a chiropractor in a large medical practice

1.5 hours (2 sections 53 minutes and 37 minutes): Neurosurgical Approach to Wellness and Alternative Care for Spine Pain (Kachmann)

- history of mind-body disease
- physiology of mind-body disease
- mind-body index
- mind-body diseases
- treatment of mind-body diseases
- chiropractic as mainstream medicine
- healthcare savings
- Nocebo/Placebo

1 hour: Cox Technic (Cox)

- Safety
- Physical Therapy and Spinal Manipulation
- Case Presentation: Cervical Spine with Radiculopathy
- Cervical Spine Radicular Pain
 - Response of Facets and Discs
- Demonstration of Treatment Modification:
 - supine protocol for eyes/large abdomens
- Case Presentation: Chronic Lumbar Facet Syndrome
 - Multidisciplinary group that shares with fellow spinal pain specialists
- Case Presentation: synovial cyst in a teenager

1 hour: Closing Examples Exemplifying Co-Management in Clinic and Research (Cox)

- Case Presentation: Cervical Spine Spondylosis
- Case Presentation: Cervical Stenosis
 - patient influence that leads to interaction with local neurosurgeon
- Interdisciplinary Care in a Hospital Setting
- Cervical Spine Research Project with NIH Grant Update (Gudavalli)
 - Closing Comments

1 hour: Examination of the Cervical and Thoracic Spine Pain Patient - test by test (Cox)

- Cox Examination Form
- Test by test
- Expected and possible outcomes of each test
- What the outcomes of each test mean
- Demonstration of each test

1.25 hours: Patient Cases #1: Cord Edema/Transverse Myelitis, Spondylolisthesis... (Cox)

- Imaging, Diagnosis, Treatment Plan, Treatment Demo
 - Cervical spinal cord edema and transverse myelitis.
 - Vitamin B12 therapy, Folate, and Homocysteine in treatment of spinal cord degeneration
 - Test: MMA for Vitamin B12 deficiency
 - L4 true spondylolisthesis with L5 transitional segment (Bertolotti's Syndrome).
 - Stability and Instability
 - L5-S1 sequestered disc with left sided sciatica, no back pain, dysuria and motor weakness.

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1 hour: Patient Cases #2: Scoliosis, Post Vertebroplasty/Kyphoplasty... (Cox)

- Imaging, Diagnosis, Treatment Plan, Treatment Demo
 - Thoracolumbar scoliosis, advanced spondyloarthrosis from L2 to L5 resulting in spinal stenosis.
 - Combined thoracic and cervical spine herniated intervertebral discs in the same patient.
 - Post vertebroplasty and kyphoplasty thoracic spine pain.
 - Advanced cervical spinal disc degeneration, spondyloarthrosis, facet degeneration and spinal stenosis resulting in neck, shoulder, and bilateral arm pain

1 hour: Neuroanatomy of the Spine: Part I (Cox)

- intervertebral disc neurology
- intradicular autonomic nerve supply to the dorsal root ganglion and nerve roots via Kobayashi et al
- the effect of neuroischemia on neural conduction
- possible responses to flexion distraction decompression spinal manipulation
- chemical radicular clinical responses.

1 hour: Neuroanatomy of the Spine: Part 2 (Cox)

- effect of neuroischemia on neural conduction
- possible responses to flexion distraction decompression spinal manipulation
- chemical radicular clinical responses
- generators of low back pain and radiculopathy
- somatic and autonomic generated pain
- referred spine pain

1.5 hours: Neuroanatomy of the Spine: Part 3 (Cox)

- chemical and mechanical nerve and dorsal root ganglion irritation
- afferentation and pyramidal response to autonomic, amygdala and hippocampal influence
- chiropractic influence on spinal tract response

1 hour: Patient Cases #3: Scoliosis, Disc Herniation/Extrusion, Compression Fracture (Cox)

- Imaging, Diagnosis, Treatment Plan, Treatment Demo
 - Osteoporosis and lumbar scoliosis and hyperkyphosis of the thoracic spine with advanced disc degeneration
 - Degenerative dextrorotatory lumbar scoliosis with advanced degenerative disc disease.
 - L5-S1 left paracentral disc herniation with pre and post MRI studies showing disc reduction.
 - Is disc reduction size important for clinical outcome?
 - L4-L5 disc extrusion absorbed under Cox Flexion Distraction Decompression spinal manipulation.
 - Acute thoracic compression fracture

1 hour: Clinical Cases and Current Research Fall 2013 (Cox)

- Imaging, Diagnosis, Treatment Plan, Treatment Demo
 - Peripheral neuropathy with L3-4 spinal stenosis and post surgical 10 years for back pain.
 - Explanation of neuropathic pain, its origin, and treatment
 - The Gemelli Obturator Internus Complex (GOIC Syndrome)
 - Meningioma of the thoracic spine with clinical presentation
 - Bertolotti's Syndrome
 - Post surgical continued pain syndrome (FBSS) with right side foot drop. L3-L5 spinal fusion.

1 hour: Disc Degeneration and Regeneration: State of the Current Research Literature (Cox)

- Intervertebral Disc: Latest Research
 - Degeneration
 - Prevention
 - Pain Relief
 - Regeneration
 - Stem cells
 - Nutrition
 - Distraction decompression
 - Nutrition
 - Structure

1.25 hours: When To Refer for Back Surgery: Considerations & Cases (Cox)

- current research developments in the world of back pain management
- statistics: # of back surgeries, types, outcomes
- referral timing
- sample cases from clinical practice incorporating the research in decision making
- Evidence-based medicine choices
- Epidural steroid injections
- Chiropractic outcomes
- When to order MRI
- Cases:
 - L4-5 HNP with motor weakness
 - 3 disc herniations in 29 year old female (L3, L4, L5)

1 hour: When To Refer for Back Surgery: Considerations & Cases Part 2 (Cox)

- Cases that exemplify the decision-making process are shared:
 - bilateral leg pain
 - degenerative spinal scoliosis
 - myelomalacia – co-management example
 - the differential diagnosis work of for mechanical vs chemical low back pain
 - synovial cyst

1.25 hour: When to Refer for Back Surgery: Considerations & Cases Part 3 (Cox)

- Cases that exemplify the decision-making process are shared:
 - sequestration (nutrition, surgery, post-surgical care)
 - chronic low back pain into hips and legs to feet
 - S1 radiculopathy, disc protrusion, Neurontin not tolerated
 - multi-level disc herniations with severe radiculopathy
 - unremitting hip pain
 - low back pain, bilateral leg pain, weakness
 - degenerative scoliosis
 - treatment demonstration – 3 approaches

Instructional Methods:

- Powerpoint presentations
- Videotaped patient cases and treatment application
- Notes
- Quizzes

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