

ADVANCED ONLINE CLINICAL TRAINING IN NEUROMUSCULOSKELETAL MEDICINE (NMSM)

A post-doctoral online education pathway for becoming a
board-certified chiropractic specialist



COURSE SYLLABUS

Current at: 16 April 2022

The Neuromusculoskeletal Medicine Online Clinical Training Program (NMSM) is a post-doctoral online education pathway for becoming a board-certified chiropractic specialist. Completion of the NMSM with required grade point average offers eligibility to sit the International Academy of Neuromusculoskeletal Medicine (IANM) Board Examination, which leads to Diplomate status (DIANM).

The Neuromusculoskeletal Medicine Online Clinical Training Program (NMSM) is comprised of four distinct types of online learning activity:

1. **eLearning Episodes** (case-based video masterclasses that integrate history, examination, diagnosis, management and inter-professional communication)
2. **Diagnostic Drills** (case-based clinical problem-solving activities – emphasising the diagnostic thinking process)
3. **Communication Drills** (case-based professional communication activities – emphasising inter-professional communication skills)
4. **Online Clinical Masterclasses** (recordings of live seminars professionally edited and formatted into case-based online learning programs)

TOTAL EDUCATION HOURS TO DATE

Online Learning Program	Number of Learning Activities	Education Hours Per Title	Total Learning Hours for Program Type
eLearning Episodes	18	3	54
Diagnostic Drills	40	2	80
Communication Drills	49	2	98
Online Clinical Masterclasses	24	3	72
			Total Hours 304

INSTRUCTORS

The NMSM was developed by Dr Anthony Nicholson and Dr Matthew Long. Both doctors are experienced chiropractic specialist physicians and clinical educators.

1. Dr Anthony Nicholson M.Chiro DACNB DIANM

Dr Anthony Nicholson is the CEO of Chiropractic Development International (CDI), a global continuing education organisation for chiropractors that he co-founded in 2002. As a partner of Spine Partners Wahroonga in Sydney Australia, Dr Nicholson is also a full-time chiropractic physician in private practice. An experienced diagnostician, Dr Nicholson is a board-certified chiropractic neurologist (DACNB) and is a Diplomate of the International Academy of Neuromusculoskeletal Medicine (DIANM). In addition, he is an adjunct senior lecturer in Neuromusculoskeletal Diagnosis and Evidence-based Practice at Macquarie University in Sydney and is certified in educational program development and assessment psychometrics.

2. Dr Matthew Long M.Chiro DIANM

Dr Matthew Long is the Director of Research and Development at Chiropractic Development International (CDI). He is a partner at Spine Partners Wahroonga and has been involved in chiropractic education since 1992, both as a past-lecturer at Macquarie University and in ongoing post-graduate training programs. Dr Long is a member of the International Association for the Study of Pain and is a Diplomate of the International Academy of Neuromusculoskeletal Medicine (DIANM). He has a particular interest in multidisciplinary practice and has spoken extensively to wide-ranging medical groups.

ASSESSMENT PROCESS AND ACADEMIC TRANSCRIPT

A rigorous assessment process has been integrated into the NMSM online clinical training program as follows:

1. The completion of each individual learning activity requires the doctor to pass a multiple-choice examination and submit a learning reflection.
2. The score achieved on the first attempt at the examination contributes to a cumulative grade point average (GPA), which is visible in the doctor's online learning profile.
3. Incorrect selections are re-presented and the doctor must achieve a 100% score in order to log the learning activity as complete and receive a certificate of completion.
4. Multiple choice questions are randomised, and a range of other in-built academic integrity protections have been designed to detect patterns of user activity that are suggestive of inappropriate collaboration.
5. A lock-out period is activated after a series of unsuccessful attempts at an examination, which prevents cyclical guessing.
6. An academic transcript is automatically generated as the doctor progresses through the learning programs. A continuing education portfolio (accessible within each doctor's learner profile) contains all certificates of completion and a professionally formatted academic transcript.
7. A cumulative GPA of 80% is required over the course of the 300 hours in order for certification.

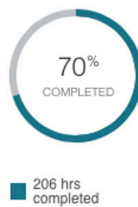
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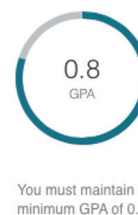
MEMBERSHIP DETAILS

Name: Dr Anthony Nicholson
Registration No: CHI0001305222
Registration Body: Chiropractic Board of Australia
Profile: Your profile is 100% complete
Credits: You currently have 0 credits
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ONLINE COURSES



ACADEMIC PERFORMANCE



CURRICULUM SUMMARY

It is important to note that these online learning programs are case-based rather than topic-based.

The online learning journey takes the form of a virtual residency in which the clinician learns through a series of clinical presentations rather than a didactic process that is structured by clinical topic. New knowledge and skills are therefore ‘chunked’ together in a form in which they can be immediately applied in a clinical setting.

1 - eLEARNING EPISODES

eLearning Episodes are online video-based clinical masterclasses. Each one is a case-based learning activity in diagnostic reasoning, clinical problem-solving and professional communication. Each activity takes the advanced learner through a real patient case via streaming video.

As clinical questions arise in the process of solving the case, the latest evidence is introduced and immediately applied in a clinical setting. The result is a documentary format with embedded learning.

Each eLearning Episode is a **three (3) hour learning activity** consisting of:

- Streamed multimedia video
- Downloadable PDF worksheet
- Online assessment quiz
- Featured journal articles and recommended reading
- Self-directed learning component

CDI recognizes that learning in a clinical environment does not generally occur in a linear way, but rather is the product of diverse patient presentations that build knowledge and experience in increments over time.

For this reason, each e-Learning Episode is based upon real case presentations presented according to the **5C Model** © that CDI has developed:

1. Case

The clinical scenario is presented and learners are invited to start the clinical reasoning process.

2. Challenge

Questions are posed to challenge the learner's current knowledge, clinical reasoning and diagnostic decision-making. Learners are asked to apply current competencies to solve the case.

3. Clarity

We drill down on the key subject area to enhance learners' clinical clarity. A diagnosis is offered where applicable, the clinical reasoning is presented and learners are provided with associated reference readings. Each episode feature relevant journal articles. Learners are given the opportunity to reflect on the new knowledge and concepts and how the episode enhanced learners' understanding of what they do.

4. Competence

New knowledge is integrated back into the context of the clinical scenario to ensure knowledge is organized and practically relevant. Learners are given the opportunity to reflect on how new knowledge and clinical distinctions can be applied in practice.

5. Communication

An example strategy for professionally communicating the key concepts to another healthcare professional is provided. The process of contextualizing knowledge for another audience serves to further consolidate the concepts in learners' mind as well as developing the core skill of professional communication.

2 - DIAGNOSTIC DRILLS

Each Diagnostic Drill is a **two (2) hour online learning activity** designed to challenge the advanced learner across the scope of specialist-level neuromusculoskeletal practice. The specific focus of this learning activity is on the clinical thinking process required to reach the most accurate diagnosis.

Learners are presented with a clinical case and are then guided through a series of problem-solving tasks. This ensures that new clinical information is progressively introduced whilst simultaneously being applied in a simulated clinical interaction. A quiz consisting of multiple-

choice questions must be successfully passed in order to complete the learning activity and gain the credit hour.

3 - COMMUNICATION DRILLS

Each Communication Drill is a **two (2) hour online learning activity** designed to enhance inter-professional communication skills. A hallmark of the specialist-level clinician is the ability to effectively communicate his or her diagnostic thinking to other clinicians. The advanced learner is therefore presented with a clinical scenario that requires skillful engagement with inter-professional communication in order to manage a clinical situation effectively. The learner is then prompted to draft a written communication segment, after which a polished example is provided along with explanatory notes as to the strategic points involved.

Abstracts of relevant journal articles are also included and must be reviewed. The learner is then required to successfully pass an online quiz consisting of multiple choice quiz questions in order to complete the learning activity. The quiz is based upon the professional communication principles, clinical aspects of the scenario and journal article abstracts included.

4 – CLINICAL MASTERCLASSES

Each Clinical Masterclass is a video recording of a live seminar that has been professionally edited and structured into a **three (3) hour learning activity**. Each video presents a case-based problem-solving session that challenges the advanced learner to draw upon the latest evidence in order to accurately diagnose and effectively manage neuromusculoskeletal conditions.

eLEARNING EPISODES – TITLE LIST

1. Adjust Locally, Think Globally
2. Blurry Vision: A Pain in the Neck
3. Making Sense of Headache
4. Thinking Laterally With the Disc Patient
5. A Neurological Approach to Scoliosis
6. The Neck and a Sense of Well-Being
7. Occult Cervical Root Lesions - Don't Miss the Clues
8. Fibromyalgia, The Brain and Chronic Pain
9. Lateral Epicondylalgia - Thinking Beyond the Elbow
10. The Sacroiliac Joint - A Diagnostic Approach
11. The Dizzy Child - A Diagnostic Algorithm
12. Osteoporotic Compression Fractures - Recognising the Clues
13. Acute Torticollis in the Adult
14. Rotator Cuff Tears - Diagnosis and Decision Making
15. The Acute Locked Back - Differential Diagnosis
16. Diagnosing Lateral Hip Pain and the Bursitis Myth
17. Pregnancy-Related Lower Back Pain
18. Lumbar MRI - Essentials of Interpretation

DIAGNOSTIC DRILLS – TITLE LIST

1. Facet, Disc or Sacroiliac Pain - How Can you Tell?
2. Upper Limb Neural Tension Testing
3. Lower Limb Neural Tension Testing
4. Spinal Cord Compression
5. Joint Pain - Could It Be Inflammatory?
6. Classifying Disc Herniation
7. Thoracolumbar Disc Herniation
8. Dizziness
9. Benign Paroxysmal Positional Vertigo (BPPV)
10. Lumbar Spinal Stenosis
11. Coccydynia
12. Temporomandibular Joint Dysfunction
13. Double Crush Syndrome
14. Thoracic Outlet Syndrome
15. Hip Pain in a Child
16. Joint Hypermobility Disorders

17. Important Aspects of Lumbar MRI
18. Inguinal Pain
19. Frozen Shoulder - What's Going On?
20. Piriformis Syndrome
21. Spondylolysis in the Adolescent
22. Spondylolisthesis and its Implications
23. Cervical Injury in a Teenager - A Clinical Thinking Process
24. Making a Functional Neck Diagnosis
25. Nocturnal Leg Cramps - A Diagnostic Algorithm
26. Calf Pain and Swelling - What Are You Thinking?
27. Medial Knee Pain - A Diagnostic Approach
28. Meniscus Tears and Essentials of Reading Knee MRI
29. Lateral Knee Pain and the Iliotibial Band
30. Anterior Knee Pain in an Adolescent
31. Diagnosing Idiopathic Scoliosis and Assessing Risk of Progression
32. Plantar Heel Pain
33. Migraine - More Than Just A Headache
34. Migraine - What to Look For in a Child
35. The Thoracolumbar Junction - A Clinical Thinking Challenge
36. The Chronically Painful Hamstring
37. The Chronically Stiff and Painful Neck
38. Why Does My Shoulder Keep Hurting?
39. How To Diagnose Tension-Type Headache
40. Ankle Sprain - What You Really Need to Know

COMMUNICATION DRILLS – TITLE LIST

1. Diagnosing Lumbar Facet Joint Pain
2. Diagnosing a Lumbar Annular Fissure
3. Diagnosing Sacroiliac Joint Pain
4. Adjustments and Analgesia
5. Managing a Lumbar Disc Protrusion (Without Radiculopathy)
6. Manipulation and Sacroiliac Joint Pain
7. Sciatica - Reasoning an Alternate Diagnosis
8. Diagnosing Cervicogenic Headache
9. Managing Migraine Headache
10. Diagnosing a Cervical Disc Lesion
11. Managing Lumbar Spinal Stenosis
12. Managing Acute Torticollis

13. Diagnosing Costotransverse Pain
14. Diagnosing Tension-Type Headache
15. Diagnosing BPPV
16. Managing Postural Neck Pain
17. Diagnosing Fibromyalgia
18. Managing Adolescent Idiopathic Scoliosis
19. Managing a Degenerative Hip
20. Managing Carpal Tunnel Syndrome
21. Managing Shoulder Pain
22. Managing Spondylolisthesis
23. Managing Scheuermann's Disease
24. Managing Pregnancy-Related Lower Back Pain
25. Diagnosing Thoracic Facet Joint Pain
26. Diagnosing Meralgia Paraesthetica
27. Diagnosing Chronic Cervical Facet Joint Pain
28. Diagnosing Cervicogenic Dizziness
29. Diagnosing Mal de Debarquement Syndrome
30. Managing Tinnitus
31. Diagnosing Medial Knee Pain - Pes Anserine Syndrome
32. Diagnosing Coccydynia
33. Diagnosing Lateral Knee Pain - ITB Syndrome
34. Diagnosing the 'Acute Locked Back' - Meniscoid Extrapment
35. Managing Recurrent Lower Back Pain and Instability
36. Diagnosing a Temporomandibular Disorder
37. Managing Whiplash and Chronic Cervical Pain
38. Diagnosing a Thoracic Cord Lesion
39. Diagnosing a Labral Tear of the Hip
40. Diagnosing Spondylolysis in a Young Athlete
41. Diagnosing Blurry Vision and Neck Pain
42. Diagnosing the Child With Torticollis
43. Diagnosing Abdominal Migraine in a Child
44. Explaining a Lumbar Disc Prognosis (Surgery Not Required)
45. Explaining a Lumbar Disc Prognosis (Surgery Is Required)
46. Diagnosing a Cervical Radiculopathy
47. Diagnosing Cervical Myelopathy
48. Diagnosing Ankylosing Spondylitis (Co-Management Required)
49. Diagnosing Hemicrania Continua

ONLINE CLINICAL MASTERCLASSES – TITLE LIST

Pain in the Frame

1. Pain in the Frame: A Conceptual Overview of Pain
2. Pain in the Frame: Chronic Tendon Pain
3. Pain in the Frame: Chronic Shoulder Pain
4. Pain in the Frame: Chronic Lower Back Pain (Part 1)
5. Pain in the Frame: Chronic Lower Back Pain (Part 2)
6. Pain in the Frame: Chronic Neck Pain
7. Pain in the Frame: Chronic Headache

Dizziness, Balance and Posture

1. The Neurology of Balance and Posture - Part 1
2. The Neurology of Balance and Posture - Part 2
3. Vertigo or Dizziness? Part 1
4. Vertigo or Dizziness? Part 2
5. Dizziness and the Cervical Spine - Part 1
6. Dizziness and the Cervical Spine - Part 2
7. The Dizzy Child - Part 1
8. The Dizzy Child - Part 2

Mastering the First Two Consultations (Neuroscience Approach)

1. Understanding the Problem of Pain
2. Guiding Initial Expectations
3. Calibrating Your Investigation
4. Words Can Harm, Words Can Heal
5. Putting it all Together

Advanced Spinal Diagnosis - Lumbopelvic

1. Disc Lesion Without Neural Compression
2. Disc Lesion With Neural Compression
3. Facet Joint Lesions
4. Sacroiliac Joint lesions
5. Spondylolysis and Spondylolisthesis
6. Spinal Stenosis

eLearning Episode 1 - Adjust Locally, Think Globally

Learning Objectives

1. Describe the way in which motor control is hierarchically organized
2. Outline the medial to lateral organization of motor systems in the spine
3. Explain the concept of sensorimotor control – the way in which sensory inputs are transformed into motor outputs for posture and stability
4. Competently discuss the concept of spinal dysfunction using the latest concepts in neuroscience
5. Explain the central nervous system changes that may result from a localized mechanical input associated with joint manipulation

Area of Diagnosis

- Mechanical spinal pain

Content Overview

- Review how motor control is organized hierarchically in the spinal cord, brainstem and higher motor centres
 - Structural, functional and chemical changes in the brain associated with spinal pain and dysfunction
 - Overview of sensorimotor control
 - Moving from older segmental and mechanical models of manual treatment to more contemporary models based upon modern neuroscience
 - Translating contemporary neuroscience into the daily management of uncomplicated mechanical spinal conditions
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eLearning Episode 2 – Blurry Vision, a Pain in the Neck

Learning Objectives

1. Outline 3 major reflexes that arise from the neck for postural stability
2. Explain how cervical dysfunction could impair the control of eye movement and how treating the neck could improve it
3. Perform a basic assessment of sensorimotor control

Area of Diagnosis

- Whiplash associated disorder
- Diagnosing sensorimotor control impairments associated with whiplash injury and idiopathic neck pain (disturbances in balance and eye movement control)

Content Overview

- Review of dizziness and visual disturbance associated with whiplash injury
 - In-depth review of the neurology underpinning balance, posture and gaze stability
 - Review of the research on sensorimotor control impairments associated with whiplash injury
 - The value of functional impairments in sensorimotor control as a predictor of transition to chronic pain after whiplash injury
 - How to assess sensorimotor control in clinic
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eLearning Episode 3 – Making Sense of Headache

Learning Objectives

1. Identify the key features of the headache patient that will predict their response to chiropractic treatment
2. Summarise the major diagnostic criteria for cervicogenic headache and how this condition differs from the major forms of primary headache
3. Describe the mechanism of sensory convergence to explain the relationship between neck and head pain
4. Apply a series of clinical tests that have high value in diagnosing cervicogenic headache
5. Formulate a management approach based upon current evidence for the patient with cervicogenic headache
6. Demonstrate your expertise on the diagnosis and management of cervicogenic headache to a patient's medical practitioners through effective communication

Area of Diagnosis

- Primary and secondary headache
- Diagnostic criteria for cervicogenic headache

Content Overview

- Primary versus secondary headache
 - Headache classification
 - Prevalence of major headache forms
 - Prognostic value of accurately diagnosing primary headache
 - Diagnostic criteria for cervicogenic headache
 - Assessment of the headache patient
 - Management strategies for the headache patient
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eLearning Episode 4 - Thinking Laterally With the Disc Patient

Learning Objectives

1. Apply a validated grading system for nerve root compression
2. Utilise a grading system to inform your clinical decision making regarding treatment options for lumbar radiculopathy
3. Explain the mechanisms underlying a manual treatment approach for lumbar disc herniation with radiculopathy
4. Hypothesise regarding the effect of using the sacroiliac joint inputs to alleviate disc-mediated pain
5. Demonstrate your diagnostic expertise and specialised knowledge in disc lesions through professional communication

Area of Diagnosis

- Lumbar disc pathology

Content Overview

- Classification of disc injury based upon morphology on imaging
 - Evaluating the extent of disc injury – with key concepts such as contained versus uncontained herniations and the grading of nerve root compression on MRI
 - Somatic versus neuropathic leg pain (considering inflammatory versus compressive insult to nerve roots)
 - Predicting the likelihood of recovery with conservative management
 - The role of manual treatment with disc injuries – what are we trying to achieve?
 - Assessment and management of the patient with lumbar disc injury
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eLearning Episode 5 - A Neurological Approach to Scoliosis

Learning Objectives

1. Identify the clinical features of scoliosis that are characteristic of an underlying pathological cause
2. Summarise the current theories on the aetiology of idiopathic scoliosis
3. Evaluate the scoliosis patient for functional neurological impairments that can be used as objective indicators for treatment
4. Explain the basis for a manual treatment approach to scoliosis

Area of Diagnosis

- Differential diagnosis of scoliosis – idiopathic versus pathological forms

Content Overview

- Prevalence of scoliosis
 - Review of pathological causes of scoliosis
 - Clinical features associated with an underlying pathological cause of scoliosis
 - The neurological assessment of the patient with scoliosis
 - Review of the current understanding in relation to causative mechanisms of idiopathic scoliosis
 - Age classification of idiopathic scoliosis and indications for imaging
 - Mensuration of scoliosis
 - Risk stratification of the patient with scoliosis based upon age, gender, curve magnitude
 - Typical versus atypical curve pattern as a predictor of an underlying pathological cause of scoliosis
 - Underlying neurophysiological mechanisms
 - Management considerations adolescent idiopathic scoliosis
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eLearning Episode 6 - The Neck and a Sense of Well-Being

Learning Objectives

1. Describe the neural basis for links between balance control and anxiety
2. Summarise the features of central sensitisation of the nervous system
3. Explain how an adjustment to the spine could produce feelings of well being
4. Communicate effectively with medical professionals the basis for a manual approach to the spine in a complex balance disorder patient

Area of Diagnosis

- Psychological dimension of chronic neck pain and dysfunction

Content Overview

- Neurological basis for the association between balance disorders and anxiety
 - Review of central sensitization of the pain pathways
 - The potential role of chronic neck pain in balance disorders and anxiety
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eLearning Episode 7 – Occult Cervical Root Lesions, Don't Miss the Clues

Learning Objectives

1. Describe the spectrum of clinical presentations associated with lower cervical nerve root conditions
2. Assess the integrity of the lower cervical nerve roots based upon an advanced understanding of neuropathic pain mechanisms
3. Demonstrate advanced clinical reasoning in the differential diagnosis of neck and arm pain
4. Formulate an effective management strategy for lower cervical root lesions and skilfully communicate your expertise to your inter-professional colleagues

Area of Diagnosis

- Cervical radiculopathy – especially the early subtle diagnostic features

Content Overview

- The 3 main mechanisms of nerve root insult – mechanical, vascular and inflammatory
 - The early and often-subtle clinical features of lower cervical nerve root irritation that are important to recognize – symptom behavior and distribution, relief and aggravating positions
 - Distinguishing between somatic referred pain into the upper limb (from joint and disc tissues for example) and neuropathic pain (the nerve root as the actual pain generator)
 - The localizing value of scapula pain distribution in the early stages of cervical nerve root irritation
 - Key points for assessing the patient with suspected cervical nerve root irritation
 - Management considerations for the full spectrum of cervical radiculopathic syndromes
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eLearning Episode 8 - Fibromyalgia, the Brain and Chronic Pain

Learning Objectives

1. Discuss Fibromyalgia as a central pain syndrome rather than a peripheral disorder of joint and muscle
2. Describe the concept of the pain neuromatrix and define pain as an output of the brain
3. Recognize the clinical features of central sensitisation and centrally augmented pain
4. Explain how a manual treatment approach could be of benefit in a patient with a primarily central pain syndrome such as fibromyalgia
5. Communicate your management approach to other physicians

Area of Diagnosis

- Chronic pain syndromes
- Differential diagnosis of diffuse and widespread musculoskeletal pain and fatigue
- Diagnostic criteria for fibromyalgia

Content Overview

- A review of the latest concepts in pain science
 - Appreciate the role of the central pain neuromatrix
 - Applying the biopsychosocial model in practice
 - Origin of the term 'fibromyalgia' and moving beyond the older 'tender point' criteria
 - Appreciating fibromyalgia as a research model for other chronic pain disorders such as temporomandibular disorder and irritable bowel syndrome
 - Differential diagnosis of diffuse musculoskeletal pain
 - Rapid screening tool for differentiating fibromyalgia from other causes of diffuse musculoskeletal pain – such as inflammatory arthritis
 - The psychological and cognitive behavioral dimension of fibromyalgia
 - The importance of reframing unhelpful beliefs and a focus on pain education – 'Explain Pain'
 - Formulating a multi-dimensional management approach for a chronic pain patient and how to effectively communicate the chiropractic doctor's role to other physicians
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eLearning Episode 9 - Lateral Epicondylalgia, Thinking Beyond the Elbow

Learning Objectives

1. Review the current thinking and research perspectives regarding the mechanisms underpinning lateral epicondylalgia
2. Refine and improve your management approach of the lateral epicondylalgia patient
3. Explain the central mechanisms of lateral epicondylalgia
4. Communicate your management approach for lateral epicondylalgia to a medical practitioner

Area of Diagnosis

- Lateral epicondylitis / epicondylalgia / epicondylosis (LE)

Content Overview

- Prevalence and impact of lateral epicondylalgia
 - A review of acute and chronic tendon pain mechanisms – including anatomy and histology
 - Understanding the peripheral components – mechanisms of tendon injury
 - Enhancing our understanding of the central dimension of chronic tendon pain – functional changes in the spinal cord and brain
 - The role of the cervical spine in lateral epicondylalgia
 - Rationale for treating both the peripheral tissues and cervical spine in the patient with lateral epicondylalgia
 - A review of best practice management for lateral epicondylalgia – including the relative effectiveness of different exercise approaches
 - How to professionally communicate the role of the chiropractic doctor to the patient's medical doctor
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eLearning Episode 10 - The Sacroiliac Joint, a Diagnostic Approach

Learning Objectives

1. Recognize key clinical features that help differentiate between the lumbar disc and sacroiliac joint as the major pain source
2. Interpret the results of clinical testing for disc and sacroiliac joint pain based upon the current evidence
3. Communicate your clinical reasoning and diagnostic decision making regarding disc and sacroiliac joint pain to a medical practitioner

Area of Diagnosis

- Sacroiliac pain and dysfunction

Content Overview

- Prevalence and differential diagnosis of sacroiliac joint pain
 - The significance of pain distribution and other aspects of symptom behavior from the history
 - Overview of relevant clinical tests for sacroiliac joint pain
 - Relationship of sacroiliac joint pain and knee pain and dysfunction
 - Management considerations – what is manipulation trying to achieve?
 - Important aspects of professional communication to a patient's medical doctor
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eLearning Episode 11 - The Dizzy Child, A Diagnostic Algorithm

Learning Objectives

1. Differentially diagnose dizziness in a child
2. Review the key signs and symptoms of intracranial space-occupying lesions in a child versus and adult
3. Finesse the basic neurological examination of the child with dizziness

Area of Diagnosis

- Differential diagnosis of dizziness in a child
- Neurological differential diagnosis
- Diagnosis of cranial space-occupying lesions in children

Content Overview

- Review of the epidemiology of dizziness in children
 - Review of the documented migraine equivalents in children
 - A review of space-occupying lesions of the posterior fossa in children
 - The relevant neurological assessment for the dizzy child
 - A clinical-problem solving process for differentially diagnosing dizziness in children
 - The role of the chiropractor in managing the dizzy child
 - How to professionally communicate the chiropractic doctor's role to the medical doctor
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eLearning Episode 12 - Osteoporotic Compression Fractures, Recognizing the Clues

Learning Objectives

1. Recognize the clinical features of an osteoporotic compression fracture
2. Apply a simple diagnostic process to predict the presence or absence of an osteoporotic compression fracture
3. Interpret bone mineral density tests (Dual Energy X-ray Absorptiometry – DEXA) and describe the relevance of T-scores and Z-scores
4. Differentiate between an osteoporotic fracture and Scheuermann's body wedging based upon x-ray appearance
5. Communicate your expertise in diagnosing and managing the osteoporotic patient to a medical practitioner

Area of Diagnosis

- Orthopedics – differential diagnosis of bone lesions of the spine
- Diagnosis of pathological fracture

Content Overview

- Overview of the prevalence of osteoporosis
- The early and subtle clinical features of osteoporotic compression fractures – characteristic pain distribution and symptom behavior
- Outline of the clinical features that are most predictive of osteoporotic compression fracture – age, absence of leg pain, body mass index, gender and lack of regular exercise
- A clinical decision-making tool for assessing the likelihood an osteoporotic compression fracture
- Relevant clinical tests for a patient with suspected osteoporotic compression fracture
- Overview of Dual Energy X-ray Absorptiometry – DEXA
- The significance of T-scores and Z-scores and what they represent clinically
- Definition of osteopenia and osteoporosis based upon T-scores
- Review of the current guidelines regarding density thresholds for medical intervention
- X-ray features of compression fracture – differentiating between old and new fractures
- Distinguishing between a compression fracture and wedged vertebra (from Scheuermann's disease etc) on x-ray
- Management considerations for the patient with osteoporosis
- How to professionally communicate the chiropractor's role to the medical doctor

eLearning Episode 13 - Acute Torticollis In the Adult

Learning Objectives

1. Outline the current thinking on the major types and causes torticollis
2. Differentially diagnose acute torticollis in the adult
3. Assess the adult patient with acute torticollis
4. Propose a management approach for the adult patient with acute torticollis
5. Communicate your diagnostic reasoning on torticollis and the basis for your proposed management

Area of Diagnosis

- Differential diagnosis of acute neck pain

Content Overview

- Definition of torticollis
 - Outline of the pathological causes of torticollis
 - Relevant clinical tests for excluding pathology
 - The current understanding regarding the central neurological mechanisms of torticollis
 - The two most common cervical spine mechanisms of torticollis – meniscoid injury and disc lesion – and how to differentiate between these causes based upon the clinical features
 - Relevant physical examination of the patient with acute torticollis
 - Management considerations for the patient with acute torticollis
 - How to professionally communicate the chiropractic doctor's role to the medical doctor
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eLearning Episode 14 - Rotator Cuff Tears, Diagnosis and Decision-Making

Learning Objectives

1. Summarise the aetiology and natural history of rotator cuff tears
2. Recognize the key history features of a rotator cuff tear
3. Examine the shoulder efficiently and skilfully using the most valuable clinical tests for diagnosing rotator cuff tears
4. Weigh up the risk associated with both conservative management and surgery for rotator cuff tears based upon patient age, tear size, likelihood of progression and potential for healing
5. Communicate your diagnostic thinking about rotator cuff tears through professional correspondence

Area of Diagnosis

- Differential diagnosis of rotator cuff pathology

Content Overview

- A review of clinically relevant anatomy and biomechanics of the shoulder
- The prevalence, etiology and natural history of rotator cuff tears
- A review of the subacromial impingement model
- A size categorization of rotator cuff tears
- An outline of 10 history and examination features that have predictive value in identifying medium or large rotator cuff tears
- The physical examination of the shoulder – with emphasis on which clinical tests are the most reliable for identifying rotator cuff tears
- Assessing rotator cuff tears on MRI
- Understanding the critical time window for surgical repair for appropriate candidates
- Criteria for categorizing patients based upon their risk profile: a decision-making process for identifying patients who are unlikely to respond to conservative management and are likely to obtain the best outcome from early surgical intervention
- How to professionally communicate the chiropractic doctor's role to the medical doctor

eLearning Episode 15 - The Acute Locked Back

Learning Objectives

1. Outline the current thinking on the major causes of acute antalgia of the lower back
2. Differentially diagnose acute lumbar antalgia
3. Evaluate the adult patient with acute lumbar antalgia
4. Communicate your diagnostic reasoning on the acute locked back and the basis for your intervention

Area of Diagnosis

- Acute lower back pain

Content Overview

- Epidemiology of acute non-specific lower back pain
 - A review of the major peripheral pain generators involved in the 'acute locked back'
 - Synovial fold injury
 - An overview of the 'neutral zone' of lumbar motion segments and reasons for sudden uncontrolled movements
 - The disc as a cause of non-specific acute lower back pain
 - Clinically relevant overview of the anatomy, physiology and biochemistry of the intervertebral disc – where and how does degenerative change begin?
 - Exploration of the current models of disc injury and degeneration – contrasting the models of genetic predisposition and environmental factors
 - Differentiating between a primary pain source in the disc and facet joint based upon symptom behavior and clinical features on examination
 - Management considerations for acute non-specific lower back pain
 - How to professionally communicate the chiropractic doctor's role to the medical doctor
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eLearning Episode 16 - Diagnosing Lateral Hip Pain and the Bursitis Myth

Learning Objectives

1. Describe the anatomy, function and clinical importance of the abductor mechanism of the hip
2. Assess lateral stability of the hip
3. Differentially diagnose lateral hip pain and dysfunction
4. Explain the pathological process of gluteal tendinopathy
5. Recognise gluteal tendon pathology on MRI
6. Formulate a management plan for gluteal tendinopathy and educate the patient

Area of Diagnosis

- Differential diagnosis of lateral hip pain
- Greater trochanteric pain syndrome
- Gluteal tendinopathy

Content Overview

- Prevalence of lateral hip pain
 - Review of the relevant anatomy and biomechanics of the abductor mechanism of the hip
 - Re-thinking trochanteric bursitis as the major cause of lateral hip pain – a new model emerging in the literature
 - Assessing the abductor mechanism of the hip
 - Symptom behavior and clinical features on examination that predict gluteal tendinopathy
 - MRI evaluation of the abductor mechanism of the hip
 - Relative effectiveness of interventions for greater trochanteric pain syndrome – such as cortisone injection and platelet rich plasma
 - Criteria for surgical referral
 - How to professionally communicate the chiropractic doctor's role to the medical doctor
-

eLearning Episode 17 - Pregnancy-Related Lower Back Pain

Learning Objectives

1. Review the hormonal and biomechanical changes of pregnancy in relation to the tendency for musculoskeletal pain and dysfunction
2. Differentially diagnose lumbopelvic pain related to pregnancy
3. Evaluate the pregnant woman with lumbopelvic pain
4. Propose evidence-based recommendations regarding the management of pregnancy-related lumbopelvic pain
5. Communicate your management of the pregnant woman to her family doctor and obstetrician

Area of Diagnosis

- Lower back and pelvic pain
- Sacroiliac joint instability

Content Overview

- Prevalence of lower back and pelvic girdle pain during pregnancy
 - Excluding non-musculoskeletal causes of lumbopelvic pain during pregnancy
 - Differential diagnosis of the major lumbopelvic pain sources in the pregnant patient
 - Overview of the role of relaxin hormone and relationship to lumbopelvic pain
 - Assessment of the pregnant woman – reliability of clinical tests
 - Evidence-based management of pregnancy-related lumbopelvic pain
 - How to professionally communicate the chiropractic doctor's role to the medical doctor
-

eLearning Episode 18 - Lumbar MRI - Essentials of Interpretation

Learning Objectives

1. Demonstrate a methodical search pattern for evaluating and interpreting lumbar MRI
2. Review the basic anatomical layers of the lumbar spine on MRI
3. Explain the diagnostic value of the different MRI sequences
4. Recognize the architecture and organisation of neural tissue on lumbar MRI
5. Correlate imaging features on lumbar MRI with a patient's clinical findings

Area of Diagnosis

- Lower back and pelvic pain

Content Overview

- Review of essential anatomy on MRI imaging
 - Review of sequences – T1, T2 and STIR (fat suppression) – and their clinical utility
 - Classification of disc herniation
 - Key MRI features that help with forming a prognosis for a disc lesion
 - Grading nerve root compression
-

ACADEMIA PREMIUM ONLINE EDUCATION

DIAGNOSTIC DRILLS

2.0 HRS CONTINUING EDUCATION



DETAILED LEARNING OBJECTIVES AND CONTENT OVERVIEW



Educator

DR ANTHONY D. NICHOLSON

BSc M.Chiro DACNB DIANM

Diagnostic Drill 1 – Facet, Disc or Sacroiliac Pain, How Can You Tell?

1. Outline the 3 major pain generators in the lower back and their relative prevalence in chronic lower back pain
 2. Recognise the key history and clinical features that are predictive of each of the major pain sources in the lower back
 3. Examine the patient using high-value tests that will help to differentiate between the 3 major sources of chronic lower back pain
 4. Define clinical prediction rules and describe their role in differentially diagnosing chronic lower back pain
-

Diagnostic Drill 2 – Upper Limb Neural Tension Testing

1. Review the clinical anatomy of peripheral nerves
 2. Summarise the mechanical properties of peripheral nerves and define the concept of neural tension
 3. Apply the Upper Limb Neural Tension Test (ULNTT)
 4. Communicate a rationale for rehabilitating the neurodynamic properties of peripheral nerves
-

Diagnostic Drill 3 – Lower Limb Neural Tension Testing

1. Define the concept of thecal sensitivity
 2. Differentiate nerve root tension signs and thecal tension signs and describe the clinical implications of each
 3. Perform lower limb neural tension tests and describe their diagnostic usefulness
 4. Prescribe a slump stretching exercise based upon the clinical indications
-

Diagnostic Drill 4 – Spinal Cord Compression

1. Identify the most common cause of spinal cord compression (myelopathy)
2. Recognize the clinical signs and symptoms of spinal cord compression in daily practice
3. Identify the MRI criteria for a definitive diagnosis of cervical myelopathy
4. Apply a quick screen for detecting upper motor neuron signs arising from cord compression

Diagnostic Drill 5 – Joint Pain - Could It Be Inflammatory?

1. Summarise the clinical signs and symptoms of inflammatory joint disease
 2. Classify seronegative and seropositive arthritis
 3. Outline the standard laboratory investigations involved in the differential diagnosis of inflammatory joint pain
 4. Review the radiological features of spondyloarthritis
-

Diagnostic Drill 6 – Classifying Disc Herniation

1. Apply a validated classification system to disc herniation
 2. Use accurate and updated terminology to discuss and define disc pathology
 3. Predict the clinical outcome of a disc herniation based upon morphological classification
 4. Demonstrate superior diagnostic reasoning with disc herniation through inter-professional communication
-

Diagnostic Drill 7 – Thoracolumbar Disc Herniation

1. Review the neuroanatomy of the thoracolumbar junction (T/L) in relation to the impact of disc herniation
 2. Recognize the clinical features of thoracolumbar disc herniations and their tendency to mimic lower lumbar disease
 3. Distinguish between upper and lower motor neuron pathology
 4. Differentiate lesions affecting the epiconus, conus and cauda equina based upon presenting neurological signs and symptoms
-

Diagnostic Drill 8 – Dizziness

1. Define dizziness
2. Review the major causes of dizziness
3. Differentially diagnose the dizzy patient
4. Propose a rationale for manual treatment for the dizzy patient

Diagnostic Drill 9 – Benign Paroxysmal Positional Vertigo (BPPV)

1. Describe the pathophysiology of BPPV
 2. Identify the clinical features of BPPV and list the diagnostic criteria
 3. Apply the Dix-Hallpike test to confirm a diagnosis of BPPV
 4. Perform the Epley manoeuvre
-

Diagnostic Drill 10 – Lumbar Spinal Stenosis

1. Describe the pathology of lumbar spinal stenosis (LSS)
 2. Recognize the nerve root sedimentation sign on lumbar MRI
 3. Apply a clinical prediction rule for diagnosing lumbar spinal stenosis
 4. Propose a clinical rationale for manual treatment for the patient with spinal stenosis
-

Diagnostic Drill 11 – Coccydynia

1. Define coccydynia
 2. Summarise the structural and functional mechanisms underpinning coccydynia
 3. Recognize the clinical features of coccydynia
 4. Differentially diagnose coccydynia
-

Diagnostic Drill 12 – Temporomandibular Joint Dysfunction

1. Recognize the main clinical manifestations of temporomandibular joint dysfunction (TMD)
2. Describe the current views on the diagnostic value of clinical tests for identifying TMD
3. Outline the major sub-classifications of TMD as reported in the literature
4. Apply a series of clinical tests in an attempt to identify and sub-classify TMD

Diagnostic Drill 13 – Double Crush Syndrome

1. Define 'double crush syndrome'
 2. Summarise the current theories and proposed mechanisms of double crush injuries to neural tissue
 3. Recognise and classify the signs and symptoms of peripheral nerve injury
 4. Propose a clinical rationale for managing a patient with putative double crush syndrome
-

Diagnostic Drill 14 – Thoracic Outlet Syndrome

1. Define 'Thoracic Outlet Syndrome' (TOS) and outline the subdivisions
 2. Review the anatomy of the thoracic and cervical outlets, costoclavicular space and subcoracoid tunnel
 3. Compare and contrast the three sites of proposed neural compression that fall under the rubric of TOS
 4. Characterise neurological versus vascular TOS, and true versus disputed neurological TOS
-

Diagnostic Drill 15 – Hip Pain in a Child

1. Summarise the main causes of paediatric hip pain
 2. Examine the hip in a child
 3. Differentially diagnose hip pain in the paediatric patient
 4. Communicate your diagnostic reasoning and rationale for management via inter-professional correspondence
-

Diagnostic Drill 16 – Joint Hypermobility Disorders

1. Classify the common connective tissue disorders that present to neuromusculoskeletal practice
2. Recognise the often subtle clues that might indicate abnormal connective tissue structure and extensibility
3. Assess a patient for joint hypermobility and other skeletal manifestations of connective tissue disorders
4. Incorporate a deeper appreciation of a patient's connective tissue integrity into your clinical and therapeutic decision-making.

Diagnostic Drill 17 – Important Aspects of Lumbar MRI

1. Review the indications for ordering MRI of the lumbar spine
 2. Develop a methodical search pattern for reading and interpreting lumbar MRI
 3. Recognize clinically relevant features on lumbar MRI
 4. Integrate lumbar MRI and clinical findings to formulate a diagnosis and prognosis for conditions of the lumbar spine and pelvis
-

Diagnostic Drill 18 – Inguinal Pain

1. Review the clinical anatomy of the inguinal region
 2. Summarise the major causes of inguinal pain
 3. Explain the pathophysiology of inguinal hernia
 4. Differentially diagnose inguinal pain
-

Diagnostic Drill 19 – Frozen Shoulder, What's Going On?

1. Describe the pathophysiology of frozen shoulder
 2. Recognize the early clinical features of frozen shoulder
 3. Differentially diagnose early frozen shoulder presentations
 4. Formulate a management approach for the patient with frozen shoulder
-

Diagnostic Drill 20 – Piriformis Syndrome

1. Discuss and debate the clinical validity of piriformis syndrome
2. Review the anatomical course of the sciatic nerve through the buttock and posterior thigh
3. Describe the clinical features of piriformis syndrome
4. Evaluate a patient for suspected piriformis syndrome using relevant clinical tests

Diagnostic Drill 21 – Spondylolysis in the Adolescent

1. Describe the full spectrum of pars injury ranging from bone stress to spondylolysis
 2. Recognize the risk factors for spondylolysis, especially in a young athlete
 3. Compare and contrast different imaging modalities for obtaining clinically meaningful information in relation to impending or actual pars injury
 4. Differentially diagnose the adolescent with lumbosacral pain
-

Diagnostic Drill 22 – Spondylolisthesis and its Implications

1. Compare and contrast isthmic and degenerative spondylolisthesis
 2. Identify the early risk factors for degenerative spondylolisthesis
 3. Recognize the features of segmental instability
 4. Describe the different mechanisms of neural compression associated with spondylolisthesis
-

Diagnostic Drill 23 – Cervical Injury in a Teenager

1. Classify minor and major cervical spine injuries
 2. Differentially diagnose cervical spine injuries based upon age and mechanism of injury
 3. Recognize the clinical and x-ray clues of an occult fracture of the cervical spine
 4. Utilize the NEXUS criteria to help exclude a cervical spine fracture
-

Diagnostic Drill 24 – Making a Functional Neck Diagnosis

1. Explain the role of the neck in postural control
2. Recognize the clinical signs and symptoms of disturbed postural control that occur after neck injury
3. Evaluate sensorimotor control in daily practice
4. Diagnose functional impairments of the cervical spine and plan a management approach

Diagnostic Drill 25 – Nocturnal Leg Cramps: A Diagnostic Algorithm

1. Review the physiology of muscle contraction
 2. Summarise the major causes of nocturnal leg cramps
 3. Apply a diagnostic algorithm to the patient with nocturnal leg cramps
 4. Outline the neurological, vascular, metabolic and pharmacological differential diagnoses
-

Diagnostic Drill 26 – Calf Pain and Swelling, What Are You Thinking?

1. Differentially diagnose leg pain and swelling
 2. Review the mechanisms and causes of deep venous thrombosis (DVT)
 3. Recognize the mechanisms and causes of lymphoedema
 4. Utilize a clinical prediction rule to decide when to refer a patient for further evaluation of suspected DVT
-

Diagnostic Drill 27 – Medial Knee Pain

1. Outline a process for rapid differential diagnosis of medial knee pain
 2. Review the clinically relevant anatomy of the medial knee
 3. Recognize the most common causes of medial knee pain and dysfunction that present to primary care
 4. Evaluate the structures of the medial knee
-

Diagnostic Drill 28 – Meniscus Tears and Essentials of Reading Knee MRI

1. Review the normal anatomy of the knee menisci on MRI
2. Interpret MRI of the knee
3. Outline the criteria for diagnosing meniscus tears on MRI
4. Encapsulate the key factors that influence orthopedists to consider surgical intervention, and weigh up the predictors of a successful outcome

Diagnostic Drill 29 – Lateral Knee Pain and the Iliotibial Band

1. Enhance your skills in the rapid differential diagnosis of lateral knee pain
 2. Recognize the most common causes of lateral knee pain and dysfunction that present to primary care, especially the extra-articular pathologies that can mimic a lateral meniscus tear
 3. Review the clinically relevant anatomy and function of the iliotibial tract and the latest research on the proposed mechanism of iliotibial band syndrome
 4. Evaluate the structures of the lateral knee
-

Diagnostic Drill 30 – Anterior Knee Pain in an Adolescent

1. Review the clinically relevant anatomy and function of the extensor mechanism of the knee
 2. Recognize the most common causes of anterior knee pain in an adolescent – such as Osgood-Schlatter disease, Oostochondritis Dissecans, Sinding-Larson-Johansen disease and patellofemoral syndrome
 3. Evaluate the knee extensor mechanism
 4. Differentially diagnose anterior knee pain in an adolescent
-

Diagnostic Drill 31 – Diagnosing Idiopathic Scoliosis and Assessing Risk of Progression

1. Recognize the anatomical features of a developing scoliosis in a child
2. Review the risk factors for scoliosis progression
3. Summarise the management options that are currently recommended for adolescent scoliosis and their relative effectiveness
4. Assess the risk of progression of an adolescent curve and make an evidence-based judgment regarding the appropriate level of monitoring or other intervention that is required

Diagnostic Drill 32 – Plantar Heel Pain

1. Review the functional anatomy of the plantar fascia and understand the points of failure and injury
 2. Describe the common nerve entrapment sites in the foot that can cause plantar heel pain
 3. Recognize the clinical features of plantar fasciopathy
 4. Differentially diagnose plantar heel pain (especially, distinguish plantar fasciopathy from neural causes of plantar heel pain)
-

Diagnostic Drill 33 – Migraine: More Than Just A Headache

1. Review the current theories regarding migraine etiology
 2. Recognize the symptom spectrum of the migraineur
 3. Differentially diagnose migraine and evaluate the migraine patient
 4. Formulate a management approach for the migraine patient
-

Diagnostic Drill 34 – Migraine: What To Look For in a Child

1. Summarise the current evidence on migraine in childhood
2. Classify the migraine equivalents of childhood
3. Describe how the expression of migraine as an illness evolves from early infancy, through early childhood and then into the teenage and adult years
4. Present a management plan for pediatric migraine patient

Diagnostic Drill 35 – The Thoracolumbar Junction, A Clinical Thinking Challenge

1. Review the functional anatomy and biomechanics of the thoracolumbar junction
 2. Discuss the relevant peripheral nerves that arise from the thoracolumbar junction, their areas of supply, and sites for potential entrapment
 3. Describe the symptom patterns that can arise from dysfunction at the thoracolumbar junction
 4. Differentially diagnose flank and iliac crest pain
-

Diagnostic Drill 36 – The Chronically Painful Hamstring

1. Review the clinical anatomy of the gluteal triangle
 2. Differentially diagnose chronic inferior gluteal pain
 3. Describe the peripheral and central mechanisms that are thought to contribute to chronic tendon pain
 4. Provide a clinical rationale for managing the patient with chronic hamstring pain
-

Diagnostic Drill 37 – The Chronically Stiff and Painful Neck

1. Summarise the functional impairments that have been identified in chronic neck pain patients
2. Define the broader dimensions of chronic neck pain with a neuroscience context
3. Apply a modern neuroscience approach to the management of the chronic pain patient
4. Communicate your role in the management of chronic pain to both the patient and their other clinicians

Diagnostic Drill 38 – Why Does My Shoulder Keep Hurting?

1. Review the neural anatomy of the shoulder to better appreciate the type, location and functional plasticity of sensory receptors
 2. Explain the role of central pain processing mechanisms in the maintenance of pain and altered movement behavior of the shoulder
 3. Correlate MRI of the rotator cuff with clinical findings
 4. Support the role of manual treatment in the management of persistent shoulder pain
-

Diagnostic Drill 39 – How To Diagnose And Manage Tension-Type Headache

1. Summarise the latest advances in the pathophysiology of primary headache
 2. Discuss the role of the central nervous system in primary headache
 3. Articulate the socioeconomic burden of tension-type headache
 4. Describe how episodic tension-type headache evolves into chronic tension-type headache and the important role that the chiropractic doctor can play in recognizing and preventing this transition
-

Diagnostic Drill 40 – Ankle Sprain – What You Really Need To Know

1. Review the clinical anatomy of the ankle
2. Apply the Ottawa Ankle Rules to guide clinical decision-making
3. Evaluate ankle radiographs and recognise the most common fractures of the ankle
4. Recognise chronic ankle instability based upon history and examination findings

ADVANCED ONLINE CLINICAL TRAINING

COMMUNICATION DRILLS

2.0 HRS CONTINUING EDUCATION



DETAILED LEARNING OBJECTIVES AND CONTENT OVERVIEW



Educator
DR MATTHEW D. LONG
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Communication Drill 1 – Diagnosing Lumbar Facet Joint Pain

1. Describe the challenge of communicating with medical practitioners, who view the world differently to chiropractors
 2. Explain why facet joint pain is still a somewhat controversial diagnosis to many medical doctors
 3. Demonstrate the importance of highlighting your diagnostic thinking, not your treatment
 4. Communicate your findings using anatomical rather than functional terms
-

Communication Drill 2 – Diagnosing a Lumbar Annular Fissure

1. Communicate a disc pathology diagnosis to a patient's medical practitioner
 2. Explain why lumbar disc pain is generally under-diagnosed
 3. Demonstrate how to walk your reader through your diagnostic process so that they understand your conclusions
 4. Develop the skill of focusing your explanations upon one key concept
-

Communication Drill 3 – Diagnosing Sacroiliac Joint Pain

1. Demonstrate a process for educating a GP over time, by limiting the number of concepts in each letter
 2. Explain why the sacroiliac joints often do not feature in many doctors' triage process
 3. Show the use candour to demonstrate impartiality
 4. Develop the skill of walking the reader through your thinking process
-

Communication Drill 4 – Adjustments and Analgesia

1. Describe the perspective that most medical practitioners have about the mechanisms underpinning manipulation
2. Explain why many health professionals underestimate the impact of chronic pain
3. Summarise the neurological effects of manipulation
4. Re-conceptualise the reservations that many medical practitioners have about over-servicing

Communication Drill 5 – Managing a Lumbar Disc Protrusion (Without Radiculopathy)

1. Illustrate the importance of specific words as a vehicle for conveying trust and reassurance
 2. Explain the concern that a medical doctor might have at the thought of you manipulating a herniated disc
 3. Demonstrate the importance of communicating your diagnostic criteria and patient selection process
 4. Support the use of manual treatment in the presence of intervertebral disc lesions
-

Communication Drill 6 – Manipulation and Sacroiliac Joint Pain

1. Illustrate how educating your reader takes time, and how new concepts should be introduced over multiple letters
 2. Demonstrate the process of differential diagnosis for sacroiliac pain
 3. Propose several mechanisms for manipulation improving the function of the sacroiliac joints
 4. Provide a mechanical rationale for applying manual treatment to the sacroiliac joints
-

Communication Drill 7 – Sciatica: Reasoning an Alternate Diagnosis

1. Provide examples of the overlapping clinical presentations that exist in chiropractic practice
 2. Describe the tendency for most clinicians to view leg referral as discogenic
 3. Formulate a reasoned explanation for your diagnosis
 4. Communicate a contrary diagnosis using the established etiquette of inter-professional communication
-

Communication Drill 8 – Diagnosing Cervicogenic Headache

1. Describe scenarios in clinical practice that require you to offer diagnostic opinions that differ from other health professionals
2. Summarise the clinical features that distinguish cervicogenic headache from tension-type headache
3. Demonstrate a methodical diagnostic process in professional written form
4. Describe manipulation using terms that are meaningful to a medical doctor

Communication Drill 9 – Managing Migraine Headache

1. Formulate the communication of ideas and concepts into a 'curriculum' that is delivered over time
 2. Analyse the medical practitioner's perspective regarding the perceived role for chiropractors in the treatment of migraine
 3. Demonstrate the use of specific language to make important clinical distinctions or clarifications
 4. Summarise the complex neurology underpinning migraine and the various somatic structures that influence it
-

Communication Drill 10 – Diagnosing a Cervical Disc Lesion

1. Analyse the viewpoint of a medical doctor when a patient presents with axial pain and no radicular signs or symptoms
 2. Describe the relationship between wry neck and intervertebral disc pain
 3. Demonstrate the process of differential diagnoses for cervical discogenic pain
 4. Provide examples of how confident vocabulary builds the reader's trust
-

Communication Drill 11 – Managing Lumbar Spinal Stenosis

1. Provide an example of professional communication that incorporates an understanding of your reader's initial mindset
 2. Provide a management rationale for the patient with spinal stenosis
 3. Support the judicious use of manipulation for a patient with severe degeneration
 4. Compose a biologically plausible explanation for the benefits of manipulation in the presence of neurogenic claudication
-

Communication Drill 12 – Managing Acute Torticollis

1. Demonstrate the clinical relevance of managing a condition that is often perceived to be self-resolving
2. Pose important clinical questions in your correspondence by speaking in the patient's voice
3. Demonstrate the use of reserved language
4. Provide a clinical rationale for managing recurrent torticollis

Communication Drill 13 – Diagnosing Costovertebral Pain

1. Summarise the origins of chest wall pain
 2. Illustrate the importance of ordering the flow of your narrative
 3. Articulate the concerns that a GP would have when the patient experiences undiagnosed chest pain
 4. Explain mechanical chest pain and provide a rationale for manual treatment
-

Communication Drill 14 – Diagnosing Tension-Type Headache

1. Compare and contrast the relative time devoted to the study of headache in graduate medical and chiropractic educational programs
 2. Give examples of how the general understanding of Tension-Type Headache (TTH) may differ between clinical professions
 3. Outline a differential diagnostic process for headache
 4. Summarise the link between cervical spine disorders and TTH
-

Communication Drill 15 – Diagnosing BPPV

1. Discuss the medical doctor's perspective and potential concerns about a chiropractor's ability to comprehensively diagnose vertigo
 2. Explain why vertigo is an area of diagnostic confusion amongst clinicians
 3. Summarise the concerns that many non-chiropractors have about vertebrobasilar ischemia
 4. Describe the diagnostic criteria for BPPV
-

Communication Drill 16 – Managing Postural Neck Pain

1. Discuss the perceived nature of postural syndromes from the medical doctor's perspective
2. Describe postural pain syndromes from a neurological perspective
3. Analyse the relationship between muscular dysfunction and facet joint pain
4. Explain the concept of 'instability'

Communication Drill 17 – Diagnosing Fibromyalgia

1. Recognize that pain science is not a core component of undergraduate medical education, and fibromyalgia is poorly understood
 2. Discuss fibromyalgia as a neurological condition
 3. Explain the relationship between diffuse symptoms and a central pain-processing disorder
 4. Illustrate the use of candour when claiming efficacy for your treatment
-

Communication Drill 18 – Managing Adolescent Idiopathic Scoliosis

1. Outline the possible concerns that a medical practitioner might have with any paediatric spinal manipulation
 2. Develop a strategy for communicating your expertise in scoliosis management
 3. Explain the central role of the brain and postural system in adolescent idiopathic scoliosis
 4. Demonstrate the use of candour when claiming efficacy for your treatment
-

Communication Drill 19 – Managing a Degenerative Hip

1. Recognize that the role of chiropractic treatment in managing hip OA is not immediately obvious to most health professionals
 2. Develop a strategy for communicating your expertise in managing a patient with hip OA
 3. Formulate a management plan for the patient with a degenerative hip
 4. Illustrate the use of reserved language when claiming efficacy for what you do
-

Communication Drill 20 – Managing Carpal Tunnel Syndrome

1. Refine your technique of adding new layers of distinction to your reports
2. Relate cervical spine function to carpal tunnel syndrome
3. Discuss carpal tunnel theories from the medical doctor's perspective
4. Draw from the scientific literature to support potentially controversial statements

Communication Drill 21 – Managing Shoulder Pain

1. Illustrate the skill of balancing complex ideas and details with readability
 2. Discuss the level of familiarity that a medical practitioner might have with the interrelationship of the spine and shoulder
 3. Give examples of how to convey comprehensive clinical impressions without belabouring the detail
 4. Provide a rationale for incorporating spinal manipulation into the management of shoulder pain
-

Communication Drill 22 – Managing Spondylolisthesis

1. Give examples of explaining your diagnostic reasoning when there is uncertainty about the underlying pain source
 2. Describe potential concerns that may arise when communicating the chiropractic management of spondylolisthesis
 3. Illustrate how you would communicate the significance of a pars defect
 4. Provide a rationale for the use of manual treatment in the management of a patient with a spondylolisthesis
-

Communication Drill 23 – Managing Scheuermann’s Disease

1. Discuss Scheuermann's disease from the medical practitioner’s perspective, especially in relation to the origins of pain in this disorder
 2. Differentially diagnose Scheuermann's disease
 3. Provide a rationale for the use of manual treatment in the management of a patient with Scheuermann's disease
 4. Communicate a management plan for a patient with Scheuermann's disease
-

Communication Drill 24 – Managing Pregnancy-Related Lower Back Pain

1. Identify and discuss concerns that may arise in a reader who is unfamiliar with the chiropractic management of the pregnant patient
2. Differentially diagnose pregnancy-related lower back and pelvic pain
3. Summarise the goals of treatment in pregnancy-related pain
4. Formulate a communication strategy for the chiropractic management of pregnancy-related pelvic pain

Communication Drill 25 – Diagnosing Thoracic Facet Joint Pain

1. Outline the common internal pathologies that can mimic thoracic mechanical pain
 2. Describe the differential diagnostic process for thoracic facet pain
 3. Illustrate the importance of emphasising the diagnostic process over treatment description in your professional correspondence to a medical practitioner
 4. Develop a communication strategy for describing how you approach the thoracic pain patient
-

Communication Drill 26 – Diagnosing Meralgia Paraesthetica

1. Describe the differential diagnostic process for lateral thigh pain
 2. Summarise the importance of different vocabulary styles when writing to a medical colleague
 3. Illustrate the etiquette used when making a contrary diagnosis to another health professional
 4. Communicate a management plan for a patient with meralgia paraesthetica
-

Communication Drill 27 – Diagnosing Chronic Cervical Facet Joint Pain

1. Provide examples of how candour can be used to build trust and show impartiality
 2. Articulate the diagnostic thinking process
 3. Illustrate the balanced use of the scientific literature to build credibility
 4. Communicate a management plan for the patient with cervical facet joint pain
-

Communication Drill 28 – Diagnosing Cervicogenic Dizziness

1. Demonstrate the use of precise diagnostic terminology
2. Illustrate the need for extra detail when ruling out possible pathology
3. Discuss the delicate balance required when providing a different diagnosis to the one originally given by the patient's medical doctor
4. Communicate a management plan for the patient with cervicogenic dizziness

Communication Drill 29 – Diagnosing Mal de Debarquement Syndrome

1. Explain how you might tactfully introduce a potentially new diagnosis to a patient's medical doctor
 2. Describe the significance of a 'diagnosis of exclusion'
 3. Illustrate the balance of detail required in different situations
 4. Discuss the importance of communicating a prognosis
-

Communication Drill 30 – Managing Tinnitus

1. Explain why most other health professionals may not view chiropractors as having a role in the management of tinnitus
 2. Summarise contemporary theories regarding the mechanical and neurological effects of manipulation
 3. Describe the mechanisms of somatic tinnitus
 4. Communicate complex neurological relationships in a simple fashion
-

Communication Drill 31 – Diagnosing Medial Knee Pain – Pes Anserine Syndrome

1. Discuss the role of a chiropractor in managing extremity conditions from a medical practitioner's perspective
 2. Provide examples of how to communicate a contrary diagnosis to one already made by a medical doctor
 3. Illustrate the process of walking a medical practitioner through your clinical reasoning
 4. Incorporate the concept of functional interdependence of different body regions into your professional communication
-

Communication Drill 32 – Diagnosing Coccydynia

1. Summarise the contemporary understanding of coccydynia
2. Describe the differential diagnosis of coccydynia
3. Illustrate the process of walking the medical doctor through your diagnostic reasoning process
4. Support the proposition that medical doctors are more interested in how you make a diagnosis than in how your treatment works

Communication Drill 33 – Diagnosing Lateral Knee Pain – ITB Syndrome

1. Analyse and discuss the perceived diagnostic scope of chiropractors in relation to peripheral disorders
 2. Compare and contrast the different perspectives that a chiropractor and a GP would have when approaching a knee complaint
 3. Communicate the multifactorial nature of a peripheral problem
 4. Illustrate the use of concrete rather than abstract terms in clinical reasoning
-

Communication Drill 34 – Diagnosing the ‘Acute Locked Back’ – Meniscoid Extrapment

1. Discuss the way in which a medical practitioner would likely view the antalgic patient
 2. Explain the process of differentiating between facet and disc-derived pain
 3. Show examples of professional correspondence that emphasise the role of a diagnostician over that of a provider of therapy
 4. Explain complex anatomical concepts in simple terms
-

Communication Drill 35 – Managing Recurrent Lower Back Pain and Instability

1. Explain the concept of building a 'Bridge of Communication'
2. Communicate complex neurological concepts in simple terms
3. Discuss the concept of segmental instability within the context of professional communication with a medical practitioner
4. Consolidate the concepts of proprioception and segmental stability into a strategy for explaining other ideas of higher neurology in later reports

Communication Drill 36 – Diagnosing a Temporomandibular Disorder

1. Provide a rationale for the evaluation and management of temporomandibular disorder (TMD) by a chiropractic doctor
 2. Draw upon contemporary theories in pain science to explain why TMD is co-morbid with other conditions such as neck pain, migraine and fibromyalgia
 3. Discuss the relationship between cervical spine dysfunction and TMD
 4. Communicate a management plan for treating TMD as a complex multifactorial condition
-

Communication Drill 37 – Managing Whiplash and Chronic Cervical Pain

1. Identify and discuss the common misconceptions about the nature of whiplash
 2. Discuss concerns that a GP might have about patient dependence upon passive treatment
 3. Present strategies for explaining complex ideas without bogging down in excessive detail
 4. Expound on the concept of central sensitisation and give examples of how to explain the origin of sensory disturbances other than pain
-

Communication Drill 38 – Diagnosing a Thoracic Cord Lesion

1. Describe the distinctive symptom profile of spinal cord lesions
 2. Outline strategies for developing collaborative relationships with medical doctors for patient management
 3. Illustrate the importance of tact when making a different diagnosis to the GP
 4. Communicate the appropriate use of advanced spinal imaging
-

Communication Drill 39 – Diagnosing a Labral Tear of the Hip

1. To appreciate that labral tears are common, but frequently undiagnosed
2. Illustrate the tactful description of imaging features non reported on by a radiologist
3. Give examples of how much detail to include when highlighting your expertise
4. Develop a multi-stage process of co-operation with your medical colleagues

Communication Drill 40 – Diagnosing Spondylolysis in a Young Athlete

1. Explain how and why spondylolysis can be symptomatic before a fracture is visible on plain-film or CT imaging
 2. Describe the indications for requesting an MRI scan in a young athlete
 3. Discuss the medical doctor's perspective regarding the chiropractic management of pediatric and adolescent patients
 4. Illustrate the importance of effective co-management with a patient's GP
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Communication Drill 41 – Diagnosing Blurry Vision and Neck Pain

1. Draw upon contemporary neuroscience theories to explain why blurry vision is a frequent accompaniment to traumatic neck pain
 2. Develop strategies for explaining complex biological mechanisms in simple language
 3. Offer a rationale as to why a GP would be more wary of any disorder with neurological symptoms
 4. Demonstrate the use of the 'bridge of communication'
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Communication Drill 42 – Diagnosing the Child With Torticollis

1. Discuss reasons for medical doctors being concerned about pediatric chiropractic care
 2. Show examples of communicating a diagnostic reasoning process to the medical doctor
 3. Explain the differences between adult and pediatric treatment methods
 4. Provide a management rationale for a child with torticollis
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Communication Drill 43 – Diagnosing Abdominal Migraine in a Child

1. Present a perspective as to why medical doctors might query the relevance of a chiropractic approach to the child with migraine
2. Demonstrate clinical reasoning communication strategies that put a medical doctor at ease
3. Explain why abdominal migraine is poorly understood and under-recognized
4. Show examples of phrasing that position the writer as a diagnostician, not a therapist

Communication Drill 44 – Explaining a Lumbar Disc Prognosis (Surgery Not Required)

1. Demonstrate advanced skills in MRI interpretation
 2. Outline the clinical criteria for referring a disc patient for a surgical opinion
 3. Illustrate the importance of making a prognosis and communicating this to a medical doctor
 4. Use professional communication styles to position yourself as a diagnostician, not a therapist
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Communication Drill 45 – Explaining a Lumbar Disc Prognosis (Surgery Is Required)

1. Illustrate the importance of demonstrating impartiality with clinical decision-making
 2. Translate clinical findings into a well-reasoned argument
 3. Use well-recognised analogies to explain complex ideas
 4. Discuss the importance of acting as a 'patient advocate' in the health care system
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Communication Drill 46 – Diagnosing a Cervical Radiculopathy

1. Discuss the typically benign prognosis of cervical radiculopathy
 2. Demonstrate communication strategies that position the chiropractic doctor as a problem solver
 3. Illustrate the importance of subtle language and its use in priming the reader
 4. Communicate a rationale for the conservative management of cervical radiculopathy
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Communication Drill 47 – Diagnosing Cervical Myelopathy

1. Illustrate the implications of using confident language when describing serious conditions
2. Demonstrate the use of tactful written communication to a patient's doctor when proposing a different or updated diagnosis
3. Summarise the diagnostic criteria for cervical spondylotic myelopathy
4. Describe the decision-making process for referring a patient with a suspected myelopathy

Communication Drill 48 – Diagnosing Ankylosing Spondylitis (Co-Management Required)

1. Give examples of how non-mechanical conditions require a specific communication strategy
 2. Introduce the idea of co-management to a medical doctor
 3. Demonstrate skills in correlating imaging findings and clinical symptoms in patients with inflammatory arthritis
 4. Discuss conservative management approaches for a patient suffering from ankylosing spondylitis
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Communication Drill 49 – Diagnosing Hemicrania Continua

1. Review the mechanisms and clinical features of hemicrania continua
2. Develop communication strategies for making respectful diagnostic suggestions to a patient's medical doctor
3. Discuss the importance of diagnostic accuracy with respect to clinical outcome in the management of chronic headache
4. Communicate a rationale for the co-management of the chronic headache patient

ADVANCED ONLINE CLINICAL TRAINING

CLINICAL MASTERCLASSES

LIVE EVENT VIDEO RECORDINGS

DETAILED LEARNING OBJECTIVES AND CONTENT OVERVIEW



Educator

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1. Pain in the Frame: A Conceptual Overview of Pain

Learning Objectives

1. Summarise the latest concepts in pain science and integrate them into your clinical reasoning, diagnostic decision-making and management strategies for chronic pain conditions

Content Overview

- The peripheral machinery of nociception – receptors and primary afferents
 - Peripheral sensitization
 - Central sensitization
 - Descending pain modulation - brainstem inhibitory and excitatory connections onto the spinal cord
 - The central pain neuromatrix
 - The role of mesolimbic and attentional systems in the transition to chronic pain
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2. Pain in the Frame: Chronic Tendon Pain

Learning Objectives

1. Differentially diagnose chronic inferior gluteal pain
2. Explain why tendons become chronically painful
3. Describe the peripheral and central mechanisms that are thought to contribute to chronic tendon pain
4. Apply manual treatment that is guided by the latest understanding of peripheral and central chronic pain mechanisms

Content Overview

- Using hamstring tendinopathy as a model for exploring the mechanisms that underpin chronic tendon pain
- A pathoanatomical approach to the diagnosis of inferior gluteal pain in athletes – the gluteal triangle
- Using relevant clinical tests to challenge the major structures that could cause inferior gluteal pain – lumbar disc, facet joint, sacroiliac joint, hip joint, piriformis and hamstring
- Review of clinical tests for identifying proximal hamstring tendinopathy
- Considering the question: what causes tendons to become chronically painful?
- Structure and function of normal tendon tissue
- What happens when a tendon become pathological?

- Major clinical features of tendon pain
 - Physiological versus pathological pain
 - Applying new concepts in pain science to better understand the frustrating condition of chronic tendon pain
 - A review of the potential contributors to chronic tendon pain – matrix changes, vascular changes, changes in tenocyte structure and function, biochemical changes, cell changes
 - Central mechanisms for tendon pain – spinal cord and brain
 - A contemporary management approach that aims to address both the peripheral and central mechanisms of chronic tendon pain
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3. Pain in the Frame: Chronic Shoulder Pain

Learning Objectives

1. Review the types and location of sensory receptors in the shoulder joint and their role in pain production
2. Describe the role of central pain processing mechanisms in the maintenance of pain and altered movement behaviour of the shoulder
3. Incorporate the latest understanding of central pain mechanisms into your diagnostic and therapeutic decision making process for the chronic shoulder pain patient

Content Overview

- Prevalence and epidemiology of rotator cuff tears
- A conventional tissue pathology diagnosis – based upon triad of history, examination and imaging
- Examination key contradictions with the pathological model – incidence of asymptomatic rotator cuff tears, incongruence between symptoms and tissue lesions on imaging findings, inability of structural change to explain response to therapeutic exercises, biomedical diagnosis based upon tissue faults is not associated with clinical outcomes
- Applying current concepts in pain science to better explain the full clinical picture of chronic shoulder pain
- The neuroanatomical basis of chronic rotator cuff pain
- A review of the peripheral sensory machinery of the shoulder – classification, location and density of sensory receptors in shoulder joint tissues
- Functional and chemical plasticity of sensory receptors
- Review of the concepts of peripheral and central sensitization of the pain pathways
- Review and interrogation of the subacromial impingement model
- Degeneration versus de-conditioning of the rotator cuff – biological, psychological and social factors

- Central neurological mechanisms underpinning chronic rotator cuff pain
 - Using the Mature Organism Model (Gifford) to appreciate the role of biopsychosocial factors in chronic shoulder pain
 - Reframing and challenging unhelpful beliefs that drive chronic rotator cuff pain
 - Understanding and explaining the role of manual treatment in addressing both the peripheral and central dimensions of chronic rotator cuff pain
 - The role of active rehabilitative tasks in challenging learned pain associations
 - Reframe, remap, relearn – a model for overall patient management
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4. Pain in the Frame: Chronic Lower Back Pain (Part 1)

Learning Objectives

1. Summarise the latest concepts in pain science regarding the peripheral and central mechanisms that drive pain chronicity
 2. Explain the role of spinal surgery in chronic lower back pain
 3. Analyze the clinical criteria that are important in deciding when the lower back pain patient is most likely to benefit from spinal surgery versus conservative management
-

5. Pain in the Frame: Chronic Lower Back Pain (Part 2)

Learning Objectives

1. Apply a clinical thinking process to sub-classify patients with lower back pain based upon most dominant pain mechanisms
2. Explain the role of manual treatment in both treating and helping to prevent chronic lower back pain

6. Pain in the Frame: Chronic Neck Pain

Learning Objectives

1. Summarise the functional impairments that have identified in chronic neck pain patients
 2. Describe chronic neck pain using contemporary concepts in pain science
 3. Apply a modern neuroscience approach to the management of the chronic pain patient
 4. Communicate a rationale for management of the chronic pain patient to a medical doctor
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7. Pain in the Frame: Chronic Headache

Learning Objectives

1. Articulate the socioeconomic burden of chronic headache
 2. Update your knowledge based upon the latest advances in the pathophysiology of primary headache
 3. Discuss the role of the central nervous system in primary headache and practically apply the concepts in managing this patient group
 4. Professionally communicate your role in the diagnostic evaluation and management of chronic headache
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1. Dizziness, Balance & Posture: The Neurology of Balance (Part 1)

Learning Objectives

1. Define the postural control system (sensorimotor control)
 2. Explain how motor control is organised
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2. Dizziness, Balance & Posture: The Neurology of Balance (Part 2)

Learning Objectives

1. Review the sensory components of postural control - vestibular and cervical
 2. Outline the reflexes that stabilise the spine and eyes
 3. Describe the different eye movements and their clinical use
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3. Dizziness, Balance & Posture: Vertigo or Dizziness (Part 1)

Learning Objectives

1. Summarise the major causes of dizziness and vertigo that present to chiropractic practice
 2. Differentially diagnose the dizzy patient
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4. Dizziness, Balance & Posture: Vertigo or Dizziness (Part 2)

Learning Objectives

1. Differentiate between peripheral and central causes of vertigo
2. Diagnose and manage the patient with BPPV

5. Dizziness, Balance & Posture: The Cervical Spine (Part 1)

Learning Objectives

1. Describe the role of the neck in dizziness, vertigo and other balance disturbances
 2. Differentially diagnose cervicogenic dizziness
 3. Formulate a management plan for the patient with cervicogenic dizziness
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6. Dizziness, Balance & Posture: The Cervical Spine (Part 2)

Learning Objectives

1. Apply sensorimotor control rehabilitative strategies for patients with whiplash associated disorder and chronic non-dramatic neck pain
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7. Dizziness, Balance & Posture: The Dizzy Child (Part 1)

Learning Objectives

1. Describe the diagnostic spectrum for childhood dizziness and vertigo
 2. Exclude a pathological cause for dizziness in childhood
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8. Dizziness, Balance & Posture: The Dizzy Child (Part 2)

Learning Objectives

1. Specify the migraine equivalents of childhood
2. Explain how you would manage the child with dizziness

1. Mastering the First Two Consultations (A Neuroscience Approach): Understanding the Problem of Pain

The specialist neuromusculoskeletal clinician is expected to operate at the leading edge of pain neuroscience. This series of online classes has been designed to bring the specialist-level clinician up to date with the latest concepts in pain science and develop competence in utilising therapeutic pain neuroscience education as part of daily practice.

At the core of this program is a process for constructing an effective clinical encounter from the very first consultation. It is about asking the right questions to uncover the faulty beliefs that the expert clinician must address; using words to empower the patient, rather than to create fear. Physicians are encouraged to move away from ideas based upon 'damaged parts' and towards those of 'brain plasticity'. We must steer our patient's understanding away from frustrating notions of bones 'in' and 'out' of place, and towards enlightening concepts of 'crisper brain maps' - it's about using pain neuroscience education as best practice. As you shall see, we need to de-educate in order to re-educate.

Learning Objectives

1. Review the latest concepts in pain neuroscience to understand the problem of chronic pain
 2. Begin making a conceptual shift away from pain as a marker of tissue damage and towards pain as a marker of the perceived need to protect body parts
 3. Integrate the latest concepts in pain neuroscience education into daily practice
 4. Define contextually aided healing and recovery
 5. Examine the influence of the non-specific effects in the doctor-patient interaction and define the contextual healing effect
 6. Review the important role of the initial patient questionnaire beyond the capture of traditional clinical information
 7. Identify patient-specific beliefs that will become targets for an educational intervention for the chronic pain patient
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2. Mastering the First Two Consultations (A Neuroscience Approach): Guiding Initial Expectations

Learning Objectives

1. Define the essential elements of a clinical encounter and consider how contextual factors can be more intentionally harnessed to improve clinical outcomes
 2. Skilfully construct the clinical encounter to maximise effectiveness
 3. Transform traditional history taking and use advanced interviewing strategies to uncover unhelpful beliefs regarding the cause of the patient's persistent pain
 4. Appreciate the concept of forming a therapeutic alliance with your patient
 5. Utilise simple tools and strategies to stratify patients based upon the level of psychosocial risk
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3. Mastering the First Two Consultations (A Neuroscience Approach): Calibrating Your Investigation

Learning Objectives

1. Categorize pain generation into nociceptive dominant, peripheral neuropathic dominant or central dominant mechanisms
 2. Use clinical features from the intake forms and history to begin identifying the patient's dominant pain mechanism
 3. Calibrate the clinical examination based upon the dominant pain mechanism and psychosocial risk level
 4. Apply the clinical examination as an educational intervention
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4. Mastering the First Two Consultations (A Neuroscience Approach): Words Can Harm, Words Can Heal

Learning Objectives

1. Define the essential elements of the working diagnosis
2. Demonstrate a process for enrolling the patient in clinical problem-solving
3. Review the criteria for diagnostic imaging for neuromusculoskeletal conditions
4. Weigh up the benefits of diagnostic imaging versus the risk in terms of the patient forming or reinforcing unhelpful beliefs regarding the cause of their pain
5. Compare the effectiveness of mechanical versus neuroplasticity explanations for chronic spinal pain

5. Mastering the First Two Consultations (A Neuroscience Approach): Putting it all Together

Learning Objectives

1. Define therapeutic neuroscience education
 2. Apply conceptual change strategy as an essential component of patient management
 3. Explain the neurophysiological effects of a rapid passive joint movement
 4. Provide a clear rationale for manual treatment based upon current neuroscience concepts
 5. Develop a series of simple metaphors to improve the efficacy of patient education
 6. Formulate a management plan for the patient with persistent pain and effectively communicate the plan to the patient
 7. Prescribe an active rehabilitation strategy for patients based upon functional movement conditioning
 8. Use a collaborative approach to set therapeutic goals for patient management
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1. Advanced Spinal Diagnosis – Lumbopelvic: Disc Lesions Without Neural Compression

Learning Objectives

1. Describe the spectrum of disc pathology that presents clinically
 2. Identify clinical features from the history with high diagnostic value for identifying disc pain
 3. Use clinical tests with high diagnostic value to identify disc lesions
 4. Expertly interpret imaging studies and correlate the findings with clinical features to more accurately diagnose disc lesions and formulate a prognosis
 5. Weigh up the management options for a disc lesion and make evidence informed therapeutic decisions
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2. Advanced Spinal Diagnosis – Lumbopelvic: Disc Lesions With Neural Compression

Learning Objectives

1. Describe the spectrum of neural insult in the lumbopelvic spine that presents clinically
 2. Differentially diagnose disc lesions causing neural insult based upon history, examination and imaging data
 3. Formulate a prognosis for a disc lesion that is causing neural compression
 4. Weigh up the management options and make evidence informed decisions
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3. Advanced Spinal Diagnosis – Lumbopelvic: Facet Joint Lesions

Learning Objectives

1. Describe the spectrum of facet joint pathology that presents clinically
 2. Differentially diagnose facet lesions based upon history, examination and imaging data
 3. Formulate a prognosis for a facet joint lesion
 4. Weigh up the management options and make an evidence informed therapeutic decision
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4. Advanced Spinal Diagnosis – Lumbopelvic: Sacroiliac Joint Lesions

Learning Objectives

1. Describe the spectrum of sacroiliac joint pain and dysfunction that presents clinically
 2. Identify the clinical features in the history that have diagnostic value for identifying sacroiliac joint syndromes
 3. Apply clinical tests that have the highest diagnostic value for diagnosing sacroiliac pain
 4. Correlate relevant imaging findings with clinical information to formulate a prognosis
 5. Weigh up the management options and make evidence informed treatment decisions
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5. Advanced Spinal Diagnosis – Lumbopelvic: Spondylolysis and Spondylolisthesis

Learning Objectives

1. Describe the spectrum of spondylolysis and spondylolisthesis that presents clinically
 2. Identify the history features that have diagnostic value for identifying spondylolysis
 3. Use advanced imaging studies as a diagnostic tool
 4. Correlate relevant imaging findings with clinical information to formulate a prognosis
 5. Weigh up the management options and make evidence informed therapeutic decisions
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6. Advanced Spinal Diagnosis – Lumbopelvic: Spinal Stenosis

Learning Objectives

1. Describe the spectrum of clinical presentations within the domain of spinal stenosis
 2. Identify the clinical features in the history that have diagnostic value for identifying spinal stenosis
 3. Apply clinical tests with diagnostic value for spinal stenosis
 4. Differentiate symptomatic spinal stenosis from other diagnostic possibilities
 5. Make evidence-informed management decisions for patients with spinal stenosis
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