

The CMMS Course

With Robyn Midgley

LEARNING OBJECTIVES

SECTION 1: INTRODUCTION TO THE CMMS COURSE

Lesson 1: Introduction to CMMS

To have a clear understanding of what the CMMS course entails through the use of an informative animated video.

Lesson 2: Definitions

To ensure a clear understanding of the medical terms and definitions that are used throughout the course.

SECTION 2: THE CHALLENGE OF THE STIFF HAND

Lesson 3: Overview of the stiff hand

Accurately describe and explain hand stiffness, the variety of treatment techniques that are available and the treatment challenges that a hand therapist is presented with. The therapist will have a clear understanding of the challenges of joint stiffness and how they are integrated into practice.

Lesson 4: Causes of joint stiffness

To accurately define and explain joint stiffness in terms of anatomy, physiology and biomechanical principles.

Lesson 5: Connective tissue & Ligaments

To have a clear understanding of soft tissue biomechanics, the role that collagen plays in the development and treatment of joint stiffness, and understand elastin and the viscoelastic behaviour of connective tissue.

Lesson 6: The treatment of stiff joints

To be able to assimilate the history of the management of joint stiffness along with the influences that contribute towards the development of joint stiffness and how this integrates into current ideas and concepts with regards to the management of joint stiffness.

SECTION 3: FACTORS CONTRIBUTING TOWARDS JOINT STIFFNESS

Lesson 7: Stages of wound healing

To accurately explain the different stages of wound healing i.e inflammatory, fibroplasia and maturation stage and how the stages of wound healing impact on the treatment approach, treatment methods and treatment modalities used.

Lesson 8: The effect of wound healing on joint stiffness

Therapists can confidently explain how wound healing affects the result of the stiff joint through the various stages of wound healing and how complications may arise and impact on the development of joint stiffness.

Lesson 9: Traumatic and fibro proliferative conditions

To have a clear understanding of the influence of trauma and complications that arise from trauma on the stiff joint.

Lesson 10: Oedema

To define oedema, explain the causes and consequences and management of oedema and how oedema can be effectively managed through the use of the CMMS technique.

Lesson 11: Pitting versus non-pitting oedema

To have a clear understanding of the difference between pitting and non-pitting oedema and how to influence the lymphatic system effectively to reduce oedema.

SECTION 4: JOINT STIFFNESS

Lesson 12: Joint Stiffness

The therapist will be able to define joint stiffness and understand active versus passive ROM and the role ROM exercise plays in relieving joint stiffness.

Lesson 13: Interosseous muscle tightness

To have a deep understanding of the interosseous muscles and their role in the development of intrinsic muscle tightness and joint stiffness.

Lesson 14: Quantifying interosseous muscle tightness

To accurately assess and quantify interosseous muscle tightness as an objective outcome measure.

Lesson 15: Muscle-tendon unit tightness.

The therapist will be able to define, explain and discuss the concept of muscle-tendon unit tightness and the role it plays in the development of joint stiffness.

Lesson 16: Adherence

The therapist will be able to define tissue adherence, provide examples of tissue adherence and the effect it has on muscle tightness and joint stiffness.

Lesson 17: Skin and scar tightness

To be able to explain external scars and how they affect MCP, PIP and DIP joint flexion.

SECTION 5: MOTOR CORTEX REPATTERNING

Lesson 18: What is MCRP?

The therapist will have a deep understanding of motor cortex re-patterning and why MCRP is the key to resolving joint stiffness.

SECTION 6: PATTERNS OF MOTION

Lesson 19: Muscle isolation and pathological pattern of motion

Muscle isolation and pathological pattern of motion.

The therapist will have a clear understanding of what a normal pattern of motion is and how this influences the treatment plan for the stiff hand.

Lesson 20: Intrinsic Plus Pattern of Motion

The therapist will be able to demonstrate and explain what a dominant intrinsic plus pattern of motion looks like and why it affects joint stiffness and how to influence the pattern to achieve a desired result.

Lesson 21: Intrinsic Minus Pattern of Motion

The therapist will be able to demonstrate and explain what a dominant intrinsic minus pattern of motion looks like and why it affects joint stiffness and how to influence the pattern to achieve a desired result.

Lesson 22: Dupuytren's Fasciectomy

The therapist will have a clear understanding of fibro-proliferative conditions and how a case series report sampling post-operative Dupuytren's Fasciectomy patients demonstrates how CMMS can be more effective than traditional therapy in the management of these patients.

SECTION 7: CLINICAL REASONING AND TREATMENT IMPLEMENTATION

Lesson 23: Identifying problems and CMMS principles

Identifying the presenting problems with the stiff hand and how to apply CMMS principals in the assessment and treatment of the stiff hand. The therapist will be able to present and discuss CMMS principles.

Lesson 24: Clinical Reasoning and treatment implementation

To follow and understand the clinical reasoning algorithm and be able to identify how each stage can be implemented into the assessment and treatment of the stiff hand.

Lesson 25: Traditional and CMMS Home exercise programs

To identify and discuss the importance of home exercise programs. To understand the FIIT principle, how to blend programs and how to prescribe the CMMS HEP.

Lesson 26: Managing Oedema

To gain an in depth understanding of how to evaluate oedema, what the effects of chronic oedema are, how to reduce oedema without damaging the superficial lymphatic system. The therapist will also gain an understanding of why the CMMS technique is well suited to reduce oedema.

Lesson 27: Active pumping versus gliding motion and Passive Range of Motion

The objective is to understand why active pumping of the digits is superior to passive range of motion and what the benefits and risks are if active mobilisation is not used sooner rather than later when treating the stiff hand.

Lesson 28: Sensorimotor input and proprioceptive feedback.

To understand the role proprioception and sensorimotor feedback plays when applying the CMMS technique. The therapist will have an understanding of improvements can be measured, what could prevent improvements / gains and how best to address implement the concepts into treatment.

Lesson 29: Use of orthotic mobilisation

The therapist will be able to define mobilisation orthoses for the stiff hand and be able to name the benefits of each. The therapist will also have an understanding of when to apply a mobilisation orthosis to a stiff hand and which design / pattern to use.

Lesson 30: Types of mobilisation orthosis

The therapist will be able to discuss and design the 3 types of mobilisation orthoses: serial static, dynamic, and static progressive mobilisation

Lesson 31: Choosing MO based on stage of healing

The therapist will be able to evaluate the stages of wound healing and select the appropriate mobilisation orthosis.

Lesson 32: Active re-direction orthosis

The therapist will be able to describe what an active re-direction orthosis is, how to design it and when to apply it using critical thinking and analysis.

SECTION 8: CLINICAL APPLICATION OF CMMS

Lesson 33: Introduction to CMMS

With sound clinical reasoning and understanding of the stiff hand, the therapist will now learn to evaluate which patient the technique is appropriate for, when to apply it, for how long to apply it, when to wean from the technique and when to discontinue the technique. All lessons prior to this will come together.

Lesson 34: MCRP and CMMS

The therapist will learn how CMMS effect influence MCRP and vice versa. They will understand why with CMMS, you are not only treating the hand, you are treating the brain and this is where the key to success lies. The therapist will gain a new philosophy with regards to assessing and treating the stiff hand and be able to recognize early on when a hand is about to become stiff.

Lesson 35: Lesson Why use POP – explanation.

The therapist will understand and accept that the technique is best applied with POP, why it is superior to thermoplastic and why the unique properties lend itself to treating multiple problems simultaneously.

Lesson 36: Intrinsic plus cast

The therapist will watch a practical demonstration on how to apply an intrinsic plus cast on a patient. Robyn Midgley demonstrates and explains the technique and shares her experience by providing tips and tricks for a successful application.

Lesson 37: Intrinsic minus cast

The therapist will watch a practical demonstration on how to apply an intrinsic minus cast on a patient. Robyn Midgley demonstrates and explains the technique and shares her experience by providing tips and tricks for a successful application.

Lesson 38: Serial finger extension & MCPJ immobilization cast

The therapist will watch a practical demonstration on how to apply a serial finger extension & MCPJ immobilization cast on a patient. Robyn Midgley demonstrates and explains the techniques and shares her experience by providing tips and tricks for a successful application.

Lesson 39: How to remove the cast

The therapist will watch a practical demonstration on how to remove a cast safely. Robyn Midgley demonstrates and explains the techniques and shares her experience by providing tips and tricks for the successful removal of a cast.

SECTION 9: APPLYING THE TECHNIQUE

Lesson 40: Treatment guidelines & cast exercises

The therapist will be able to explain the treatment guidelines for CMMS and have a clear understanding of which cast design to apply, how long to be in the cast and when to begin weaning from the cast. The therapist will have a clear understanding of the cast exercises for each cast design and be able to explain how frequently the exercises must be applied.

Lesson 41: Weaning process

The therapist will have a clear understanding of why cast weaning is imperative to the success of the technique and how to wean from the cast using a bivalve cast.

SECTION 10: OVERALL SUMMARY AND APPLICATION OF CMMS

LESSON 42: Benefits of POP in CMMS technique and overall recap

The therapist will be reminded of the benefits of using POP, why the CMMS technique is beneficial in the management of both the acutely and chronically stiff hand, why its application is so successful and why it should be applied sooner rather than later to a stiff hand.

SECTION 11: TECHNIQUES

Lesson 43: Summary of the various treatment techniques

The therapist will have a clear understanding of the variety of treatment techniques that can be applied to the stiff hand.

SECTION 12: QUALIFYING

Lesson 44: Prove embedded knowledge

The therapist will submit their case study according to the guidelines provided. The therapist must meet all the criteria with regards to the image and video requirements as well as provide a case summary no greater than 1 x A4 page. It is also required that the therapist presents their case to the CMMS Membership Club and is peer reviewed.