

LECTURE 01 · RU-RMT 20 PATHOLOGICAL TREATMENTS

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# Course Introduction & Foundations of Pathology

How we will study, treat, and reason about pathology

WELCOME

# Welcome to RU-RMT 20

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This course prepares you to assess and treat common musculoskeletal and neuromuscular conditions safely and effectively, within the registered massage therapist's scope of practice.



## Who this is for

Massage therapy students building clinical competency in pathology-based, treatment-oriented practice.



## What you'll do

Reason clinically — assess, plan, treat, document, and recognise when to refer.



## The outcome

Entry-level readiness to manage pathological presentations confidently and safely.

COURSE OVERVIEW

# Course at a glance

| COURSE CODE | COURSE NAME             | DURATION            | THEORY                                           |
|-------------|-------------------------|---------------------|--------------------------------------------------|
| RU-RMT 20   | Pathological Treatments | 21 days · 147 hours | 44 hours                                         |
| PRACTICAL   | CONDITIONS              | STANDARD            | TEXTBOOK                                         |
| 103 hours   | 24 clinical conditions  | CMTCA-aligned       | Rattray & Ludwig,<br>Clinical Massage<br>Therapy |

# How theory and practical work together

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The course pairs classroom reasoning with supervised hands-on practice — the large majority of the 147 hours is spent at the table. Theory is delivered in person and concurrently live online via Zoom; all laboratory practice, all three oral practicals and all written sittings are in person only.



## Theory — 44 hours

- Lectures introduce each condition's anatomy and pathophysiology.
- Assessment and treatment rationale are taught before you touch the table.
- Builds the clinical reasoning that guides safe hands-on work.



## Practical — 103 hours

- Supervised labs apply techniques and special tests.
- Full treatment sequences are rehearsed end to end.
- The bulk of your 147 hours — competency is built by doing.

# Course learning objectives

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By the end of RU-RMT 20, the successful student will be able to:



## Understand the condition

Describe the etiology, pathophysiology and clinical presentation of common MSK and neuromuscular conditions.



## Assess systematically

Perform a structured assessment — history, observation, palpation, ROM, special tests — and interpret findings.



## Plan & treat

Formulate treatment goals and select indicated soft-tissue techniques for each presentation.



## Work safely

Identify indications, local and absolute contraindications, and cautions for massage.

# Course learning objectives

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## Recognise red flags

Identify presentations requiring referral to a physician or emergency care.



## Document professionally

Chart accurately using SOAP and professional record-keeping.



## Apply self-care

Use hydrotherapy and home-care recommendations to support treatment outcomes.



## Practise within scope

Work within the RMT scope of practice and CMTCA professional standards.

## ROADMAP

# The 21-day schedule

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|    |                                   |    |                          |           |                                                 |
|----|-----------------------------------|----|--------------------------|-----------|-------------------------------------------------|
| 01 | Course Introduction & Foundations | 08 | Scar Tissue              | 15        | Compartment Syndrome                            |
| 02 | Whiplash (WAD)                    | 09 | Thoracic Outlet Syndrome | 16        | Degenerative Disc Disease                       |
| 03 | Tension Headache                  | 10 | Bicipital Tendinosis     | 17        | Hyperkyphosis                                   |
| 04 | TMJ Dysfunction                   | 11 | Lateral Epicondylitis    | 18        | Hyperlordosis                                   |
| 05 | Sprains & Strains                 | 12 | Medial Epicondylitis     | 19        | Piriformis Syndrome                             |
| 06 | Muscle Spasm                      | 13 | Pronator Teres Syndrome  | 20        | Iliotibial Band Syndrome                        |
| 07 | Trigger Points                    | 14 | Carpal Tunnel Syndrome   | 21–<br>23 | Patellofemoral · Plantar Fasciitis · Pes Planus |

# How you will be evaluated

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5%

Professional practice — safety, conduct and engagement, observed across all 21 days.

40%

Written theory — Quiz 01 10%, Quiz 02 10% and the Final Written Examination 20%.

50%

Practical exams — Oral Practical 1 12%, Oral Practical 2 16%, Final Oral Practical 22%.

5%

Case study assignment — an integrated, multi-pathology written case.

**To pass: 70% overall, all eight components submitted,** each oral practical passed independently at 70%, 70% attendance, and safe professional conduct throughout.



FOUNDATIONS · PART ONE

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# Scope, Standards & Clinical Reasoning

Before any technique, an RMT works within a defined scope and reasons through every client with the same structured method.

# Scope of practice

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Knowing what falls inside — and outside — the RMT scope is the first safety check in every encounter.



## What RMTs do

- Assess soft-tissue and joint function.
- Treat with manual therapy and hydrotherapy.
- Educate on self-care and rehabilitation.



## Outside scope

- Diagnosing disease.
- Prescribing medication.
- Manipulating or adjusting joints (HVLA).

# CMTCA competency standards

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The competency standards define the professional frame around everything you do in this course.



## Client-centred care

Safe, ethical, client-centred care delivered within a clearly defined scope.



## Evidence-informed

Assessment and treatment guided by current evidence and sound reasoning.



## Consent & records

Clear documentation, informed consent and confidentiality at every visit.



## Know your limits

Recognise the limits of practice and refer on appropriately.

# Clinical reasoning, made repeatable

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Every condition in this course is approached with the same structured assessment, so reasoning becomes second nature. You gather findings the same way each time, then let them flow into a working impression, a treatment plan, and clear documentation — the same dependable path from the first client to the hundredth.

***Findings** flow into a working impression → treatment plan → SOAP documentation.*

**Source:** *Assessment-led approach consistent with Rattray & Ludwig (2000), Clinical Massage Therapy, “Establishing the Guidelines for Treatment.”*

# The H-O-P-R-S assessment framework

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## H

### History

Onset, mechanism, aggravating and easing factors, and health history.

## O

### Observation

Posture, asymmetry, swelling, skin, guarding and gait.

## P

### Palpation

Tone, tenderness, temperature, texture and trigger points.

## R

### Range of Motion

Active, passive and resisted — quality, pain and end-feel.

## S

### Special Tests

Targeted orthopaedic tests to confirm or rule out.

**Source:** Assessment framework consistent with Rattray & Ludwig (2000), *Clinical Massage Therapy*

# Turning assessment into treatment

Assessment is only useful when it changes what you do. Findings are weighed into a working impression, which sets the goals, which select the techniques — and the result is recorded so the next visit builds on this one.



## Findings

History, observation, palpation, ROM and special-test results.



## Impression

A working clinical picture of what the tissue is doing.



## Plan & treat

Goals and indicated techniques, applied within tolerance.



## Document

SOAP charting that guides the next session.



FOUNDATIONS · PART TWO

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# Tissue Injury, Inflammation & Healing

Pathology begins at the cellular level. How tissue is injured, inflames and heals shapes every treatment decision you make.

# Cell & tissue injury

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Pathology begins at the cellular level. Understanding how cells respond to stress explains the signs we see and treat.



## Adaptation

Cells adjust to stress — atrophy, hypertrophy, hyperplasia or metaplasia — a reversible response to demand.



## Reversible injury

If stress exceeds adaptation, cells swell and function drops — recovery is still possible if the cause is removed.



## Cell death

Necrosis (injury) or apoptosis (programmed) — irreversible loss that triggers the inflammatory and healing cascade.

# Acute inflammation — 5 cardinal signs

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## Redness

*Rubor*

Vasodilation increases blood flow to the area.

## Heat

*Calor*

Warmer skin from increased perfusion.

## Swelling

*Tumor*

Fluid and proteins leak into the tissue.

## Pain

*Dolor*

Chemical mediators sensitise nociceptors.

## Loss of fn.

*Functio laesa*

Pain and swelling limit normal movement.

**Inflammation is purposeful:** it is a necessary step toward the healing of injured tissue — support the process rather than fighting it.

**Source:** Rattray & Ludwig (2000), *Clinical Massage Therapy*, “Massage and the Inflammatory Process.”

# Acute inflammation is a local contraindication

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When tissue is hot, swollen and acutely inflamed, heavy direct work does harm. The skill is knowing how to help without provoking the area.



## Avoid direct work

Do not apply heavy pressure over hot, swollen, acutely inflamed tissue.



## Work proximally

Treat above the area to assist drainage and circulation indirectly.



## Support the process

Use cold hydrotherapy and gentle techniques to support the body's own response.

**Source:** Contraindication & modification principles per Rattray & Ludwig (2000), *Clinical Massage Therapy*, Ch. 13.

# The three stages of healing

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Healing is not a single event but an overlapping sequence. Matching your treatment to the current stage is the single most important rule in this course — the right technique at the wrong stage sets recovery back.



## 1 • Inflammatory

0–72 hrs (up to ~1 wk). Hemostasis and clean-up; heat, swelling, pain.



## 2 • Proliferative

~3 days–3 wks. New type-III collagen and capillaries lay down fragile scar.



## 3 • Remodeling

~3 wks–12+ months. Collagen matures to type I, aligns to stress, regains strength.

**Source:** *Stages and treatment considerations per Rattray & Ludwig (2000), Clinical Massage Therapy, “Types and Stages of Healing.”*

# 0–72 hours (up to ~1 week)

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In the inflammatory stage the body is securing the injury and clearing debris. The tissue is fragile and reactive, so the massage role is protective and indirect.



## Protect

No direct deep work over the injured tissue — it is a local contraindication.



## Proximal only

Work proximally to reduce swelling indirectly with gentle, lymphatic-style strokes.



## Cold hydrotherapy

Cold to ease pain and limit the spread of inflammation; teach it as self-care.

## ~3 days to 3 weeks

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New collagen and capillaries are laying down fragile scar. Gentle, well-directed input now helps the new fibres organise without tearing them.



### Pain-free mobilization

Gentle, pain-free movement to keep the area mobile as it rebuilds.



### Light cross-fibre

Light cross-fibre work to guide fibre alignment along lines of stress.



### Maintain ROM

Preserve range of motion so the maturing scar does not lock the tissue down.

## ~3 weeks to 12+ months

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Collagen matures to stronger type-I fibres and aligns to the loads placed on it. The tissue can now tolerate — and benefit from — deeper, more demanding work.



### Deeper frictions

Frictions to remodel mature scar and free restricted fibres.



### Stretching

Stretching to restore length and full, functional range.



### Strengthen & refer

Strengthening, and onward referral, to restore full function.

# What we are really treating

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## Acute (nociceptive)

Protective, proportional to tissue damage, time-limited; responds to addressing the source.



## Chronic / persistent

Outlasts healing (>3 months); involves nervous-system sensitisation, not just tissue damage.



## Referred

Felt away from its source — trigger-point or visceral referral; map the patterns carefully.



## The value of touch

Massage modulates pain via gate control, autonomic down-regulation and a calming relationship.

**Source:** *Therapeutic relationship & stress physiology per Rattray & Ludwig (2000), Clinical Massage Therapy, Ch. on the physiology of stress.*



FOUNDATIONS · PART THREE

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# Safety: Indications, Contraindications & Red Flags

Client safety always outranks completing a treatment. Knowing when to treat, when to adapt and when to stop is the heart of safe practice.

# General indications for massage

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Across the conditions in this course, massage is broadly indicated to:



## Reduce tension & spasm

Lower muscle tension, spasm and trigger-point activity.



## Improve circulation

Support circulation and tissue nutrition.



## Decrease pain

Reduce pain and nervous-system sensitisation.



## Restore ROM

Restore and maintain range of motion.



## Mobilise scar

Improve tissue extensibility and scar mobility.



## Calm & educate

Reduce stress, support autonomic balance and teach self-care.

# Contraindications — a framework

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Sort every concern into one of three levels. The level tells you whether to avoid everything, avoid an area, or simply modify your approach.



## Absolute

Do not massage at all — e.g. acute compartment syndrome, DVT, systemic infection or fever, unstable conditions.



## Local

Avoid a specific area but treat elsewhere — e.g. acute inflammation, open wounds, a recent injury site, varicosities.



## Regional / caution

Modify technique, pressure or position — e.g. pregnancy, osteoporosis, certain medications, frail clients.

**Source:** Framework per Rattray & Ludwig (2000), *Clinical Massage Therapy*, Ch. 13 — Contraindications & Modifications.

# When in doubt, don't

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Every screening decision comes back to one rule. Completing a treatment is never worth a risk you have not cleared.

**Client safety always outranks completing a treatment.** *Screen thoroughly, reassess continuously, and assess, adapt or refer when something does not fit.*

# Red flags requiring referral

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Massage therapists do not diagnose — but you must recognise when a presentation is beyond scope and refer on.



## **Pain out of proportion**

Severe pain out of proportion to injury, or pain unrelieved by rest.



## **Neurological loss**

Numbness, weakness, or loss of bowel or bladder control.



## **Compartment emergency**

Hot, swollen, hard compartment or an absent distal pulse — an emergency.



## **Signs of infection**

Fever, spreading redness or malaise.

# Red flags requiring referral

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## Suspected fracture

Suspected fracture, dislocation or unexplained deformity.



## Night pain & weight loss

Unexplained weight loss, night pain or night sweats.



## Possible DVT

Calf swelling or tenderness suggestive of deep-vein thrombosis.



## Recent major trauma

Recent significant trauma or head injury.

**Refer, don't treat:** when any red flag is present or suspected, direct the client to a physician or emergency care before hands-on work.

# Hydrotherapy principles

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Temperature is a treatment. Cold and heat have opposite effects on the vessels — choosing the right one for the stage is what makes hydrotherapy useful or harmful.



## Cold — cryotherapy

- Vasoconstriction reduces acute inflammation, swelling and pain.
- Use in the acute stage — the first 48–72 hours.
- First choice over hot, freshly injured tissue.



## Heat — thermotherapy

- Vasodilation relaxes muscle and eases chronic stiffness.
- Improves tissue extensibility before deeper work.
- Avoid over acute inflammation.

**Source:** *Hydrotherapy principles per Rattray & Ludwig (2000), Clinical Massage Therapy, Ch. 6 — Hydrotherapy.*

# Hydrotherapy — the key rules

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## Always use a barrier

Never apply ice or heat directly to skin — use a cloth barrier.



## Mind the contraindications

Avoid heat over acute inflammation and over areas of impaired sensation.



## Contrast for sub-acute

Contrast therapy can create a vascular flush in the sub-acute stage.



## Check the response

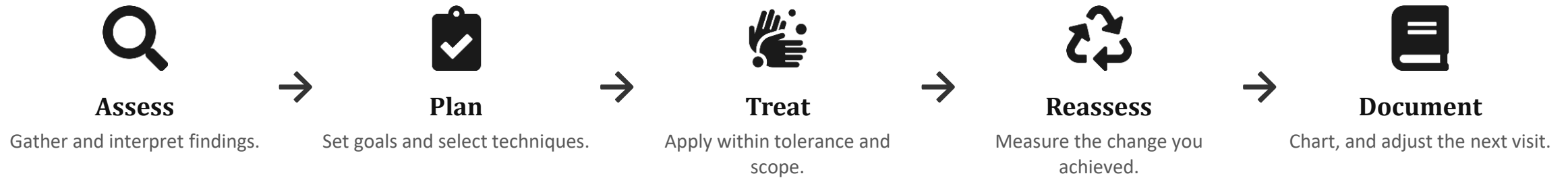
Always check skin response and the client's tolerance.

**Source:** *Hydrotherapy guidance per Rattray & Ludwig (2000), Clinical Massage Therapy, Ch. 6.*

# The treatment cycle

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Treatment is a loop, not a line. Each visit assesses, plans, treats and measures change — then documents so the next visit starts from evidence, not memory.



# SOAP charting

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## S

### Subjective

What the client reports — symptoms and history.

## O

### Objective

What you find and do — tests, findings and techniques.

## A

### Assessment

Your impression and the response to treatment.

## P

### Plan

Next steps, home-care and frequency.

**Source:** SOAP & record-keeping per Rattray & Ludwig (2000), *Clinical Massage Therapy*, “Establishing the Guidelines for Treatment.”



FOUNDATIONS · PART FOUR

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# The Course Method & What's Next

Every condition you study will follow one dependable structure — so the reasoning you build now carries through all 22 conditions.

# How each condition is taught

Every condition lecture follows the same six-step structure, so you always know what comes next.



## Define & understand

Definition, functional anatomy, etiology and risk factors.



## Pathophysiology

What goes wrong in the tissue, step by step.



## Assess

Signs and symptoms, assessment, special tests and differentials.



## Treat safely

Indications, contraindications, and medical and manual treatment.



## Hands-on

Treatment goals, soft-tissue techniques and frequency.



## Self-care

Hydrotherapy, home-care and client education.

# Why the structure matters

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A repeatable structure frees your attention for the client in front of you. When the path from history to home-care is automatic, you can spend your thinking on what is unusual about this person — not on remembering what to do next. That is how clinical reasoning becomes second nature, and how safe practice becomes a habit rather than an effort.

***Reason, don't memorise.*** *The same method, applied every time, is what carries you across all 22 conditions.*

YOU'RE READY TO BEGIN

# Foundations — key takeaways

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## **Reason, don't memorise**

Use the H-O-P-R-S framework for every client.



## **Respect the tissue**

Match your treatment to the stage of healing.



## **Safety first**

Screen for contraindications and red flags every time.



## **Document everything**

SOAP charting protects the client and your practice.



## **Stay in scope**

Work within the RMT scope and CMTCA standards.



## **Support recovery**

Use hydrotherapy and self-care between visits.

# Working with the texts

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Two sources anchor this course. Use them together: one for the structures, one for the clinical reasoning and hands-on decisions.



## Tortora & Grabowski

Principles of Anatomy & Physiology (9th ed.) — your reference for the structures beneath every condition.



## Rattray & Ludwig

Clinical Massage Therapy — the assessment, healing-stage, hydrotherapy and treatment reasoning behind each lecture.



## CMTCA standards

The professional frame — scope, consent, documentation and the limits of practice.

**Source:** Rattray, F. & Ludwig, L. (2000). *Clinical Massage Therapy*. Toronto: Talus Inc.

# Sources for this lecture

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**Rattray, F. & Ludwig, L. (2000).** Clinical Massage Therapy: Understanding, Assessing and Treating Over 70 Conditions. Toronto: Talus Inc. — the inflammatory process, types and stages of healing, hydrotherapy, contraindications and modifications, assessment guidelines and SOAP documentation.

**Tortora, G.J. & Grabowski, S.R. (9th ed.).** Principles of Anatomy & Physiology. — functional anatomy and physiology underpinning each condition.

**Canadian Massage Therapy Council for Accreditation (CMTCA).** Competency standards — scope of practice, ethics, consent, documentation and referral.

**RU-RMT 20 — Lecture 01 (Course Introduction & Foundations).** Course lecture notes: course structure, clinical-reasoning framework, safety and the teaching method.



UP NEXT — LECTURE 02

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# Whiplash (WAD)

You'll put the foundations to work on a real condition: the acceleration–deceleration mechanism, the Quebec Task Force grades, safe assessment, and a stage-based massage protocol. Bring your H-O-P-R-S framework.