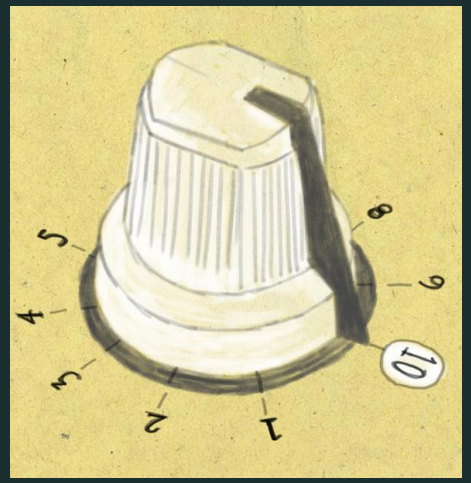
A Functional Approach to Chronic Pain Management

ABI Network Conference · Toronto · October 2026



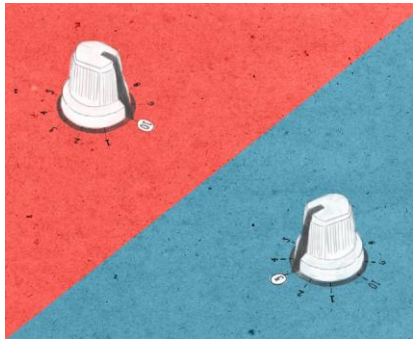
Calvin Leung, OT Reg. (Ont.)

Occupational Therapist · Calvin.leung@function-ability.com

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LEARNING OBJECTIVES

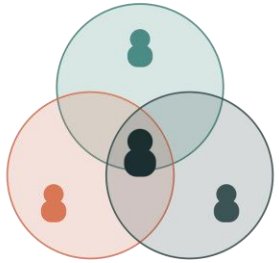
What You'll Walk Away With



01

Make Sense of Pain

To review an understanding of how chronic pain is produced.



02

Understand Best Practices applied towards an Interdisciplinary Model

Understand and translate best practices in pain neuroscience towards a collaborative framework in ABI rehabilitation.

01

PART ONE

How Chronic Pain Works

Why pain can persist long after the tissues have healed.

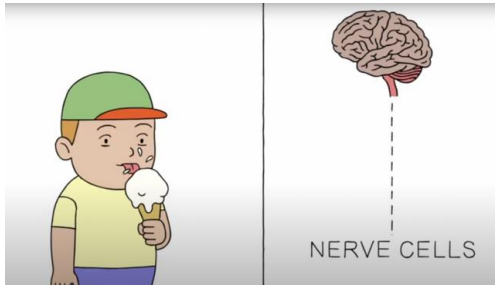
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How Is Pain Produced?

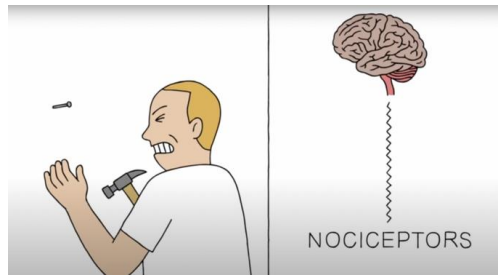
- We have sensors in our body.
- Pain sensor sends a signal to the brain for you to “feel” pain.

Pain is produced in the brain.

(Peng, 2016)



Other sensory nerve cell



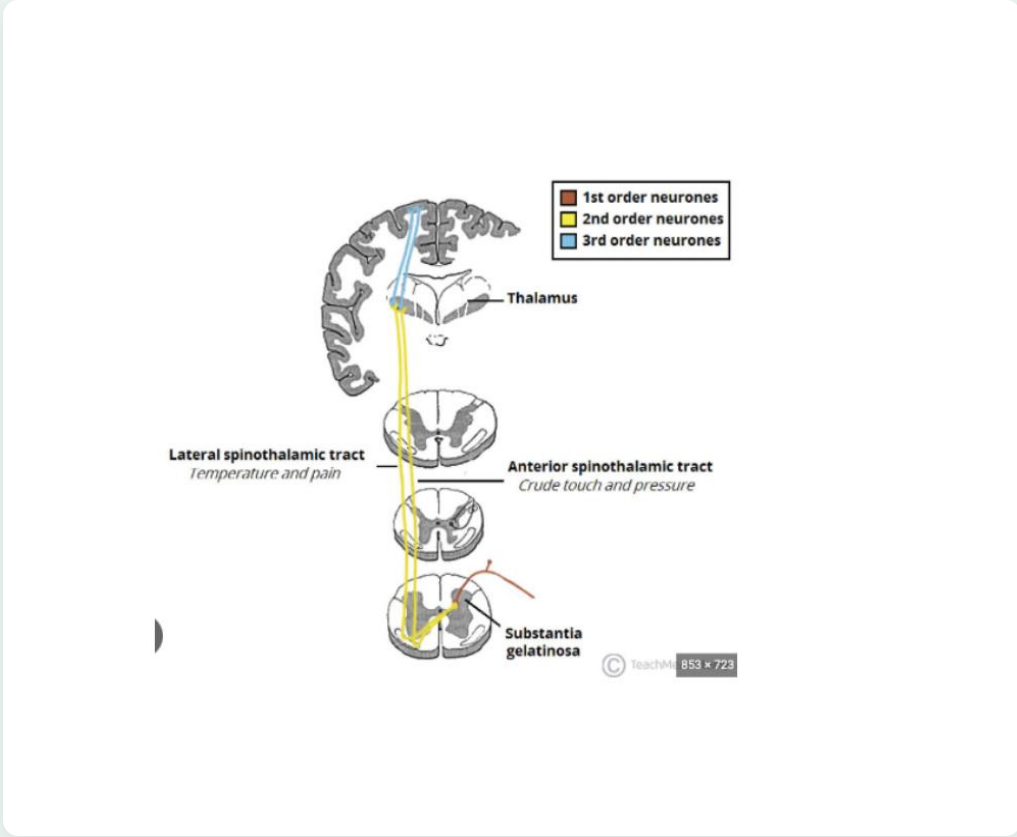
Pain sensory nerve cell

Pain Highways

- We can think about pain signals traveling to the brain on “pain highways”.
- Some of these “highways” have special features.

Relevance

Factors including emotional and cognitive domains also impact our pain experiences.



(Peng, 2016)

THE CORE IDEA

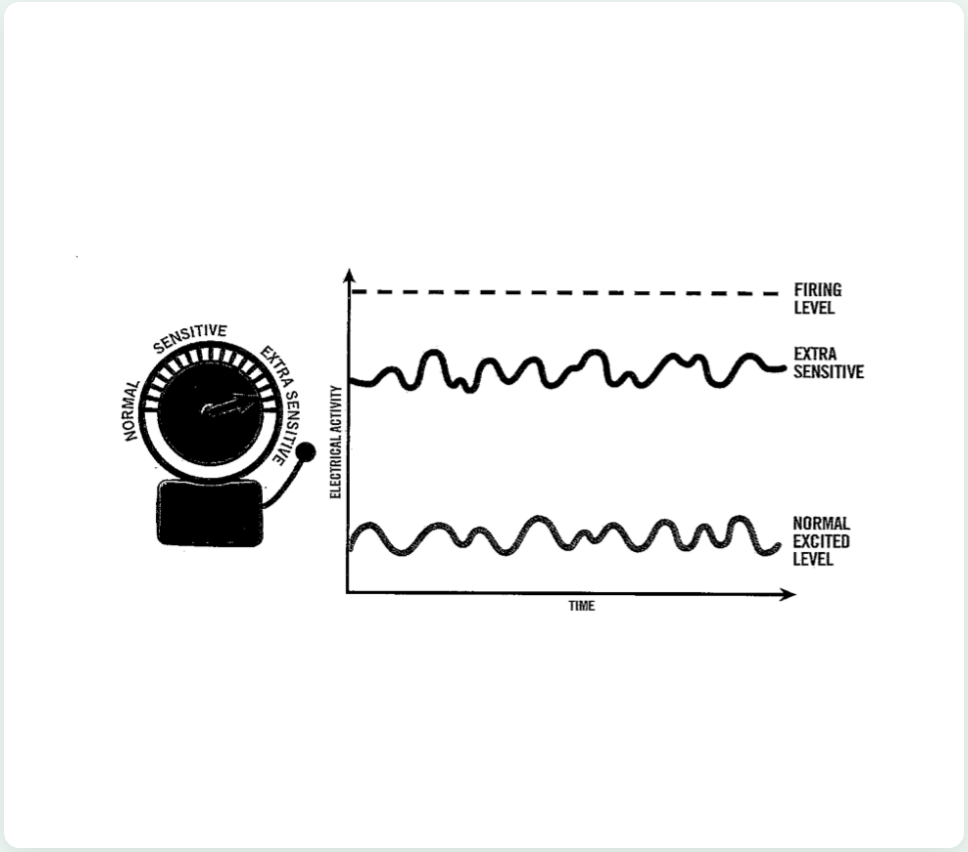
Pain is a subjective and multi-faceted experience.

Why Does the Body Have This Pain System?

Inflammation

During tissue damage a “soup of chemicals” are released:

- Injury site feels more sensitive. This is our body’s way to say stop and repair.
- Chemicals 1) bring nutrients and 2) fight infections.



(Peng, 2016)

THE PROBLEM

When this system goes “bad” — clients experience chronic pain

TWO ROUTES IN

How Does This Chronic Cycle Begin?

01

With objective tissue damage

Chronic pain that occurs as a result of persistent objective tissue damage (e.g. shoulder injury, brain injury with positive imaging).

02

Without objective tissue damage

Chronic pain in the absence of objective tissue damage (e.g. chronically sensitized, concussion).

THE CORE IDEA SUMMARIZED

Pain is often a nervous system sensitivity issue, rather than a musculoskeletal issue.

Why this matters after a brain injury

01

Although most individuals recover following concussion, approximately 10–20% experience persistent post-concussion symptoms, which may include ongoing pain and headache.

(Leddy et al., 2016; Theadom et al., 2016)

02

A systematic review of 28 studies (17,899 participants) found that chronic pain was common following moderate-to-severe TBI, affecting 51% with bodily pain, 31% with headache, and 40% with any chronic pain.

(Papic et al., 2026)

03

Migraine involves neurogenic inflammation and sensitization of trigeminal pain pathways, contributing to heightened nociceptive sensitivity and amplification of migraine pain.

(Ramanchandranm 2018)

02

PART TWO

From Science to Practice

What the mechanism changes about treatment.

What This Changes in Practice

01

Consider all domains when making referrals.

02

Emphasize activity engagement.

03

Provide consistent messaging across the team.

04

Incorporate caregiver support in this care plan.

Consider Every Domain, and Educate

- Consider all domains when making referrals (Turks et al., 2008; Huges et al., 2017; Pearson et al., 2020; Booth et al., 2017).
- Education is important (Nijs et al., 2019; Sharpe et al., 2019). Communicate with medical and rehabilitation team. We all play a role in providing consistent messages.

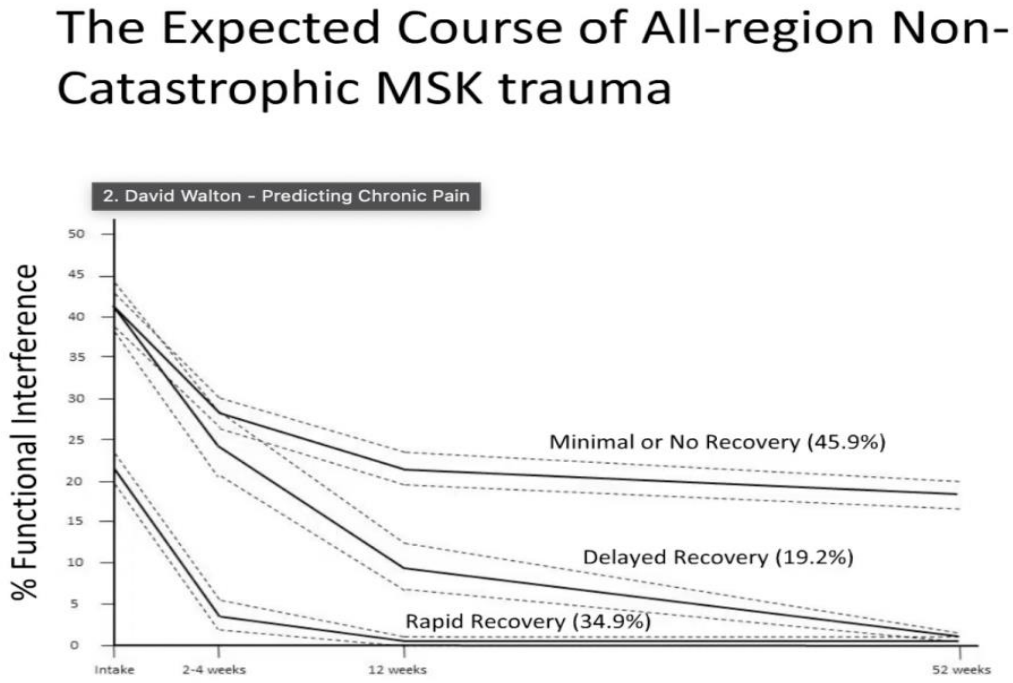
TABLE 1 Percentage that deemed each overall approach to be necessary; and the cumulative percentage that deemed each overall approach to be necessary or desirable

Approach	Necessary	Desirable
Increasing activity	36/42 (86%)	41/42 (98%)
Psycho-education	37/42 (88%)	41/42 (98%)
Psychosocial Issues	23/42 (55%)	42/42 (100%)
Stress management	27/39* (69%)	38/39 (97%)
Cognitive approaches	32/41* (78%)	41/41 (100%)
Acceptance commitment therapy	11/40* (27%)	35/40 (87%)
Lifestyle interventions	16/40* (40%)	39/40 (97%)
Motivational interventions	17/41* (41%)	36/41 (88%)
Interoceptive interventions	13/41* (32%)	30/41 (73%)

Do Not Delay Treatments

The earlier the trajectory is influenced, the better the functional outcome.

(Lee et al., 2020)



Movement, Meaning and Everyday Life





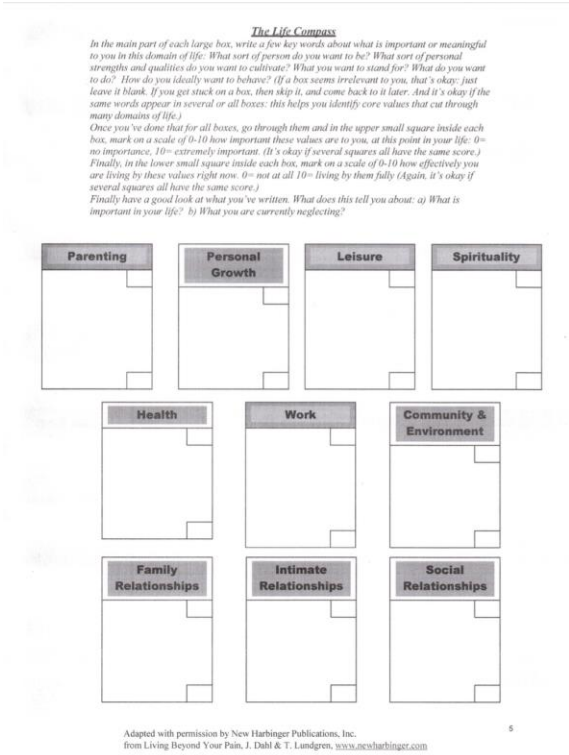




Forming a Shared Goal

Setting the shared goal

- Write one functional goal the whole team targets
- Make it observable: “20 minutes of grocery shopping”, not “improve tolerance”.
- Anchor it to something the client values — that is what survives a bad week.
- Check it is achievable on a bad day, not only on a good one.



The Life Compass

In the main part of each large box, write a few key words about what is important or meaningful to you in this domain of life: What sort of person do you want to be? What sort of personal strengths and qualities do you want to cultivate? What you want to stand for? What do you want to do? How do you ideally want to behave? (If a box seems irrelevant to you, that's okay: just leave it blank. If you get stuck on a box, then skip it, and come back to it later. And it's okay if the same words appear in several or all boxes: this helps you identify core values that cut through many domains of life.)

Once you've done that for all boxes, go through them and in the upper small square inside each box, mark on a scale of 0-10 how important these values are to you, at this point in your life: 0= no importance, 10= extremely important. (It's okay if several squares all have the same score.)

Finally, in the lower small square inside each box, mark on a scale of 0-10 how effectively you are living by these values right now. 0= not at all 10= living by them fully (Again, it's okay if several squares all have the same score.)

Finally have a good look at what you've written. What does this tell you about: a) What is important in your life? b) What you are currently neglecting?

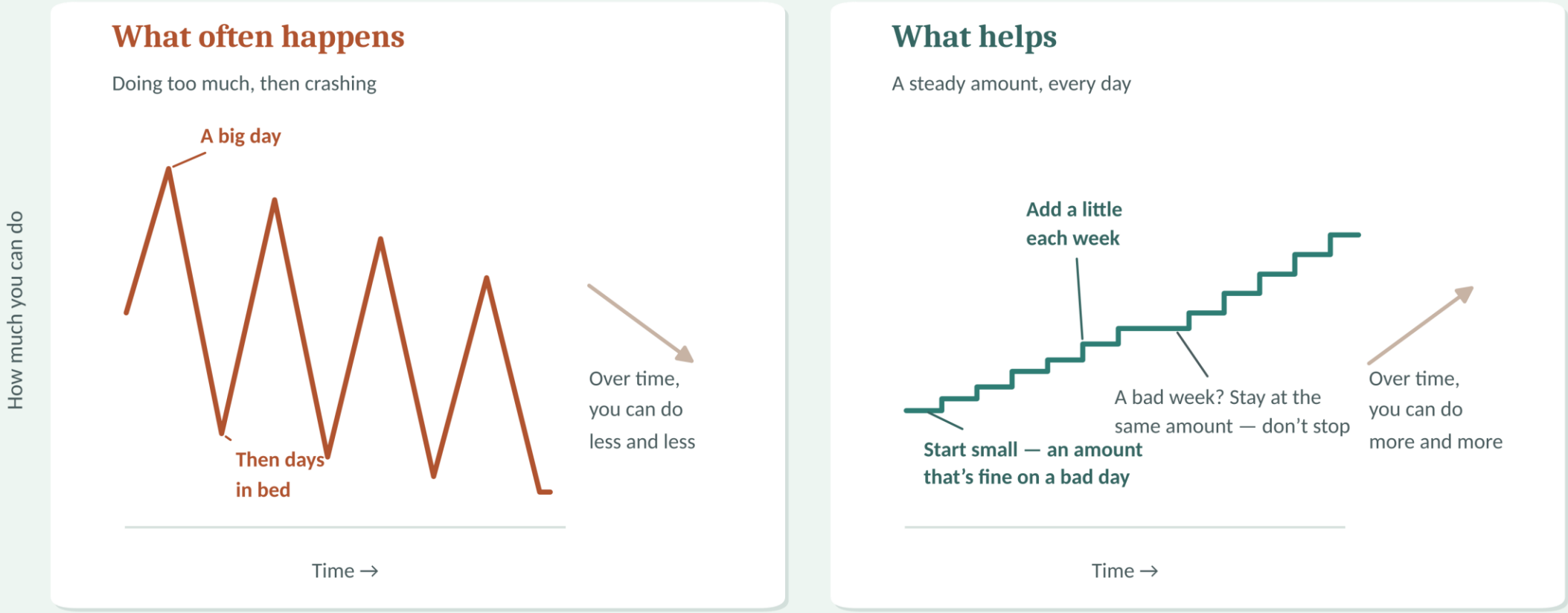
Parenting | Personal Growth | Leisure | Spirituality

Health | Work | Community & Environment

Family Relationships | Intimate Relationships | Social Relationships

Adapted with permission by New Harbinger Publications, Inc.
from Living Beyond Your Pain, J. Dahl & T. Lundgren, www.newharbinger.com

Change in Pain Threshold Takes Time



Time-Contingent Activity Pacing

Building the pacing plan

- Set the baseline from what the client manages on a bad day.
- Measure in time or repetitions, never in how the day feels.
- Increase on a schedule, agreed in advance.

THE WEEKLY DOSE

next week's quota = this week's quota × 1.1 – 1.2

1

Rate the baseline.

on a bad day

2

Increase by 10–20% each week.

by the clock, not by feel

3

Apply the 30–60 minute rule.

pain settles back to baseline = on track

ACTIONABLE STEPS · CONSISTENT MESSAGING

Providing a Shared Explanation

Use the smoke alarm. Everyone — OT, PT, psychology, the support worker and the family — says a version of the same four things.

Explaining why the pain persists

"Your pain system is like a smoke alarm that has become too sensitive. It is still doing its job — now it is too sensitive and protective."

When the imaging is normal

"A normal scan does not mean the pain is not real. It means the alarm is set too low."

When movement hurts

"Hurting when you move does not mean you are causing damage."

What the caregiver says in a flare

"We turn the volume down, and we keep going with the plan."

ACTIONABLE STEPS · CONSISTENT MESSAGING

The Words at Home Matter as Much as the Session

Say this

- *“Hurt doesn’t always mean harm — your alarm is sensitive right now.”*
- *“Let’s do the smaller version today, not none of it.”*
- *“This flare-up is information, not a setback.”*

Steer away from this

- “It’s all in your head.” — invalidates a real, measurable process.
- “Just push through it.” — drives the boom-and-bust cycle.
- “Rest until the pain stops.” — the pain outlasts the tissue damage.

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ACTIONABLE STEPS · CAREGIVER SUPPORT

Collaborating With Family and the Support Network



Bring caregivers in from the start

Family helps set the goals from day one, with one named contact for everyone.



Write the flare-up plan early

Agree what eases off, what never stops, and when it restarts — before the first flare.



Don’t forget the caregiver

They provide the support. Put their own support in the plan, before a crisis.

Canadian TBI Guideline (INESSS-ONF)

Resources

Online Pain Resources

- Live Well with Pain: https://livewellwithpain.co.uk/practitioner-resources/downloads/
- AI Tools for trackers



Free Community Resources

- Progress over Pain (6 week program)
- Toronto Academic Pain Medicine Institute
- OBIA Caregiver Support Group
- Community Day Programs
- Canadian Mental Health Association

Questions?

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