PAIN MANAGEMENT: INTERDISCIPLINARY APPROACH

**Medical Management**
Medications, counseling and interventions

**Understand Pain**
Use knowledge to understand treatment options and how you can help manage pain

**Social Supports**
Help with Financial and Employment Supports, Community resources & referrals

**Exercise & Physical Activity**
Can help increase energy, improve function and produce endorphins to decrease pain

**Lifestyle Changes**
Eat well, Be active, Smoking Cessation

**Improve Sleep**
May increase your energy, mood and ability to cope with pain

**Mood Improvement Therapies**
Manage Stress, Anxiety, Depression, Anger & Fear with Cognitive Behavioural Therapy (CBT), Mindfulness or Counseling

**Engaging in Meaningful Activity**
Goal setting, sense of self, motivation and confidence

**Self-Management Techniques**
Relaxation, Breathing, Distraction, Visualization, Body Awareness
CBT CONCEPTUAL MODEL APPLIED TO SELF-CARE

**Thoughts**
- Present moment focus
- Thinking in more adaptive ways
- "I can" vs. "I can't"

**Feelings**
- Hope
- Enjoyment
- Achievement
- Confidence

**Behaviours**
- Engaging in emotionally "nourishing" activities (e.g., time in nature)
- Prioritizing self-care
- Maintaining structure and routine
- Mindfulness
- Socializing

**Physical Factors**
- Reduced stress/tension
- Increased energy
- Improved diet

**pam**

The Ottawa Hospital  L'Hôpital d'Ottawa

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Pain...
- Is part of a system that protects us – “Pain Alarm System”
- Can warn you when you are approaching damage, have been damaged, or are in a similar situation where you experienced pain
- Can come from a physical problem or our mood and emotions
- Is influenced by context, other body systems and previous experiences

How pain is produced...
- Information from the body is detected by sensors on nerves
- Nerves carry information to the spinal cord
- The spinal cord takes the information to the brain
- The brain processes the information from the body and other relevant information (past experience, mood, other body systems) to produce the experience of pain
  - Example: the pain experience from a bee sting will be different for a beekeeper versus someone afraid of bees

Things that can increase pain...
- Physical – “doing too much”
- Mood – depression, stress, anxiety and fear
- Environment – the weather, work, site of previous injury
- Imbalance with immune system – the flu
- Imbalance with hormonal or endocrine system – monthly fluctuations in hormones or daily control of insulin and blood sugar levels
- Sleep deprivation

The “Pain Alarm System” doesn’t always act as we expect...
- Sometimes people have can experience very little pain despite a significant injury (e.g. soldier in life or death situation, athlete in intense competition)
- Sometimes there is pain without cause (e.g. phantom limb pain with an amputation)
- Sometimes pain persists even though the initial injury has healed

Acute Pain is often the result of perceived threat in the tissues. Information detected by sensors on nerve endings send “danger” messages through the nerve, to the spinal cord and then to the brain. The brain processes the information, makes a decision and takes action – it may produce pain or not, it may activate the immune system to produce inflammation and healing processes, it may activate the muscular system to change muscle tension or how we move.

Chronic pain is more complicated. It often starts with an acute episode, but as pain persists, the nervous system changes and becomes more sensitive. More information is sent from the body to the brain and the brain responds to the perception of “increased danger” by increasing intensity, duration and reactivity of the pain experience. The pain is real, but does not mean more tissue damage
Neuroplasticity is the ability of the brain and nervous system to change. It can become hypersensitive and over-reactive, which is known as central sensitization. With central sensitization there are notable changes in the:

1. Tissue – increased number of sensors and sensitivity of sensors
2. Spinal cord – releases chemicals to increase production of sensors
3. Brain – increased activity and reactivity

Symptoms associated with Central Sensitization
- Pain that lasts for longer and feels more intense than expected
- Can feel like pain is worsening or spreading
- Can have spontaneous pain, shock/electrical-like pain or unpleasant sensations
- Can have difficulty using muscles and inflammation without an acute injury

But the good news is the nervous system can change to become less sensitive and reactive. “Neuroplasticity” implies that the nervous system is “plastic”, meaning it can change but it takes time, frequent repetition and practice.

Things to help your nervous system “calm down” and become less sensitive:
- Understand your pain triggers and work to minimize them
- Manage Mood
- Exercise and Meaningful Activity
- Pacing and Planning
- Setting Goals
- Self-Management Strategies
- Improve Sleep and Healthy Lifestyle Behaviours
Exercise and activity is very important – science shows that exercise releases endorphins and produces changes in the nervous system to decrease pain and improve mood.

Other Benefits of Exercise and Physical Activity...
- Increases muscle strength and flexibility
- Increases endurance and stamina and cardiovascular health
- Increases natural pain killers (endorphins) to help control pain
- Helps balance and co-ordination
- Helps to improve quality of sleep
- Reduces fatigue and increases energy level
- Reduces muscular tension and stress
- Helps combat depression and anxiety
- Helps maintain a positive outlook and can be sociable
- Helps to prevent constipation and with weight control

Exercise Principles for Persistent/Chronic Pain
- Find your baseline
  - the right amount of activity without increasing pain
  - you should still be able to breathe calmly
  - be conservative at first
- Challenge yourself and build slowly
  - Over time, try a little more while maintaining your breathing
  - Increasing by a few minutes or 5% more per week is sufficient
- Repetition and daily practice is important
  - It’s better to do a little every day or a little a few times per day than to do one big/long session
  - e.g. walk for 10 minutes 3 times per day instead of 30 minutes all at once, you get the same physical benefits but potentially without increasing pain

Excellent Ways to Exercise with Persistent/Chronic pain
- Mindful based, slow movement that incorporates breathing
  - e.g. Tai Chi, Yoga, Pilates, Feldenkrais
- Cardiovascular exercise and repetitive movement, like walking, biking, swimming or dancing
- Choose activities that you want to do, that you enjoy, is convenient/that you can do regularly and demands your attention
- Get moving with friends or a small group; consider indoor walking programs or classes at your community center
- Use positive distraction while you exercise, like music or enjoying being in nature
- Give yourself a reward for being committed to your exercise, activity, health & well-being
Self-Management strategies have the ability to release endorphins to decrease pain and improve mood. You can use these strategies is a pain flare-up but practicing them daily improves their effectiveness. You can incorporate them into daily activity and exercise or focus on them in a resting position.

**Breathing**

- Breathing is healthy and normal activity for the nervous system.
- It releases endorphins and winds down the nervous system.
- “Tells the alarm system that you hear it and that you are okay”
- Decreases blood pressure, heart rate, muscle tension, pain, stress and anxiety
- Example: start by observing your breath and slowly try to lengthen it you inhale/exhale; when you are comfortable with a slower breath try to deepen it with expanding the lungs fully (lower belly, middle ribcage, upper chest)
- There are many online resources for breathing exercises, some good apps include: “Breathe” and “Head space”

**Body Awareness**

- When in pain, the sense of where the body is in space is often decreased
- Exercise and normal movement can improve body awareness
- “Body scan” can also help reconnect to normal body sensation
- The idea is to listen to your body more than you listen to the pain

**Distraction**

- Distraction is a powerful tool to complete activity and manage pain flare-ups
- You need to pay enough attention to your body to know when the “pain alarm” is sounding, but you do not need to attend to every sensation
- Positive ways to distract include: favourite music or video game, Positive memories, looking at photos, talking with a friend

**Visualization**

- Sometimes pain happens with just the idea of doing a certain movement. Visualization can change your nervous system to improve your physical performance and decrease pain reactivity or overprotective body responses (like muscle spasm or tension)
- Imagine doing the movement with activity, repeat it frequently and use breathing and reassuring self-talk to teach the nervous system it is okay

**Positive Self Talk and Reassurance**

- How we talk to ourselves is very important; watch the “stories” and don’t get carries away with negativity and catastrophization
- Ask yourself “is this really dangerous”
- Consider a mantra – repeating simple, reassuring works over and over (e.g. “I am safe, this is okay”, “I am strong, I can get through this”)
Pain Clinic Education – Healthy Sleep Habits

It is important for proper pain management to have a restful sleep. Most adults need 7 to 9 hours of sleep a night to function at their best.

Benefits of a good sleep include:
- Improved memory, attention to details, decision making and response time
- Improved tissue repair, growth and healing
- Improved immune system function and ability to fight infection
- Improved regulation of insulin, which helps control blood sugar levels, food cravings and body weight
- Improved regulation of stress hormones, which helps improve mood, makes us less irritable and less prone to depression

The DO’s
- Maintain a regular schedule with a bedtime before midnight
- Establish a regular, relaxing bedtime routine. Allow enough time to wind down before going to bed. Find a relaxing activity, such as reading or listening to music, or take a hot bath, which can help muscles relax and make you feel drowsy
- Create a sleep conducive environment that is dark, comfortable, cool and free of distractions or noise
- Light and darkness are important cues that help program your body clock; Get exposure to bright sun in the morning, dim the lights in the evening and sleep in a dark room or use an eye mask
- Treat your bed as your sanctuary from stresses of the day and used your bed for sleep only, so you positively associate your bed with sleeping
- Exercise regularly; best to complete your workout at least a few hours before bedtime

The DON'Ts:
- Do not eat a large meal close to bedtime. Your body cannot rest while digesting a large meal. Finish eating at least 2-3 hours before your regular bedtime and avoid drinking too many fluids
- Avoid caffeine close to bedtime as it can keep you awake; it can take 6-12 hours for caffeine to leave the system (e.g. coffee, tea, soft drinks, chocolate)
- Avoid alcohol close to bedtime; it can interfere with deep sleep and cause wakening when the effects of alcohol have worn off
- Avoid taking late naps; naps help make up for lost sleep but late afternoon naps make it harder to fall asleep at night. If you must nap, keep it to under an hour and before 3:00pm

If you continue having problems, consider
- Using a sleep diary to record your sleep habits and activity, AND
- Discussing problems with your doctor to help treat the problem or refer to a sleep specialist

(Adapted from the National Sleep Foundation “Healthy Sleep Tips” and “Guide to Sleeping Well”, which can be found at www.sleepfoundation.org)
Healthy Lifestyle Habits

Choosing a healthy lifestyle to optimize your overall health is important in managing chronic pain, the same as in managing other chronic health conditions, such as Heart Disease and Diabetes

Good Nutrition
- Balanced diet with fruits/vegetables, lean protein, whole grains
- Anti-inflammatory foods – green vegetables, berries, salmon, nuts and seeds, ginger and tumeric, coconut oil
- Avoid refined sugar and trans fatty acids

Supplements – Vitamin D (1000 IU/day), Calcium (500mg/day), Omega 3 Fatty Acids (500mg/day), Magnesium Citrate (250mg bid)

Smoking Cessation – smoking interferes with good blood circulation that healing tissues require
The primary goal of the Occupational Therapist at The Ottawa Hospital Pain Clinic working with people with pain is to help them apply physical and psychological coping strategies in order to participate in meaningful daily activity such as self-care, productivity and leisure.

The following strategies were discussed at your two day education session:

PACING:
- Pacing is a strategy used to manage pain while participating in activity.
- It is important to participate in meaningful activity to maintain overall conditioning and quality of life.
- Remember to pace to your tolerances. Start low and go slow.
- Your tolerance is the amount of time (considering intensity) you can participate in activity before pain intensifies.
- Consider a pacing strategy that will work for you e.g. a timer, alarm, Parkwood pacing points etc.

PLANNING:
- Set aside some quiet time each day to reflect on your day and your plan for tomorrow.
- It is important to consider the demands of your day and your activities prior to engaging e.g. time, tools, and emotional demand of the activity.
- Remember your pacing strategies, your exercises and your relaxation.
- Build flexibility into your plan.
- Re-prioritize and evaluate throughout the day.
- Reflect on your plan at the end of each day and make adjustments as required.
- Consider the 4D’s when reviewing your to do list: DO, DEFER, DELEGATE and DELETE.
- Adjust your plan for a bad day. Try to do what you can and prepare in advance.

GOAL SETTING:
Setting goals can help you to prioritize your activities and focus your energy on activities and values that are important to you.

The following is a guideline for principles to consider when setting goals (SMARTER):

**S** – Specific (who, what, when, where, why?)
**M** – Measurable (how much or how many?)
**A** – Achievable (realistic)
**R** – Relevant (meaningful)
**T** – Time limited (set a timeline for completion)
**E** – Evaluate (reflect)
**R** – Revise (make adjustments as required)
The social worker at the Ottawa Hospital Pain Clinic can provide psychosocial assessment, support and education to pain clinic patients and their families on issues such as coping strategies, family stressors, housing, finances, education and employment, facilitate groups on topics such as parenting and refer to appropriate community resources and programs as needed.

Helpful Community resources:

- [http://www.champlainhealthline.ca/](http://www.champlainhealthline.ca/)
- Community Health and Resource centres ([www.coalitionottawa.ca](http://www.coalitionottawa.ca))
- 211 (City of Ottawa for social services)
- Living Healthy Champlain for support groups on chronic pain. ([www.livinghealthychamplain.ca](http://www.livinghealthychamplain.ca))
- Online support group [http://www.ontarioselfmanagement.ca/](http://www.ontarioselfmanagement.ca/)
- March of Dimes ([https://www.marchofdimes.ca/EN/programs/employment/Pages/default.aspx](https://www.marchofdimes.ca/EN/programs/employment/Pages/default.aspx))
- Neil Squire ([https://www.neilsquire.ca/involved/job-opportunities/](https://www.neilsquire.ca/involved/job-opportunities/))
- Legal Aid Clinics ([http://www.legalaid.on.ca/en/contact/contact.asp?type=cl](http://www.legalaid.on.ca/en/contact/contact.asp?type=cl))
- Para-Transpo ([http://www.octranspo.com/accessibility/para_transpo](http://www.octranspo.com/accessibility/para_transpo))
- Loblaws Free Access to Dietician ([https://www.loblaws.ca/dietitians](https://www.loblaws.ca/dietitians))
- Algonquin College for dental and Massage therapy
- InnoviCares ([https://www.innovicares.ca/en](https://www.innovicares.ca/en))
Online Resources to Understand Pain and Manage Mood:

“Understanding Pain: What to do about it in less than five minutes!” Online Youtube video by Live Active (2013): https://www.youtube.com/watch?v=RWMKucuejls

Canadian Institute For the Relief of Pain and Disability offering videos and coping strategies using mindfulness and other mechanisms: http://www.cirpd.org/Webinars/Pages/ChronicPain.aspx

Or go to: www.cirpd.org/ and select “Resource Centre” at the top of the page, then select “CIRPD Webinars”, then select “Chronic Pain Webinars” then scroll down and under the “Webinar Recordings” heading click on “Self-Management Techniques” and review the webinars in this section

Free Guided Mindfulness Meditation: http://marc.ucla.edu/body.cfm?id=22


Cognitive Behaviour Therapy Self-Help Resource for Anxiety: http://www.getselfhelp.co.uk/anxiety.htm

“Self Help for Anxiety” by the getselfhelp.co.uk organization. Website with various resources and educational materials to better understand anxiety: http://www.getselfhelp.co.uk/anxiety.htm


“Live, Plan, Be” (LPB): Canadian website dedicated to understanding pain, managing pain symptoms, connecting with other people experiencing pain, and creating plans and strategies to manage your pain. https://www.liveplanbe.ca/


Pain Toolkit http://www.paintoolkit.org/

Understand Pain, Live Well Again – Neil Pearson
http://www.canadianpaincoalition.ca/media/video/overcome_pain/part_1/
http://www.canadianpaincoalition.ca/media/video/overcome_pain/part_2/
http://www.canadianpaincoalition.ca/media/video/overcome_pain/part_3/

Treating Pain Using the Brain – David Butler
https://www.youtube.com/watch?v=4ABAS3tkkuE

Why things Hurt – Lorimer Moseley
https://www.youtube.com/watch?v=gwd-wLdlHjs
Central Sensitization Syndrome, Dr. Sletten Mayo Clinic
https://www.youtube.com/watch?v=8defN4ilbho

A 10-minute Guide to Understanding Pain and What to do About it

How to Turn Down the Volume of Persistent Pain
http://knowpain.co.uk/wp-content/uploads/2014/05/TazzyPersistentPainBooklet.pdf

Understanding the Complexity of Pain – Generation Care
https://www.youtube.com/watch?v=Zv6RPoVZx9M

BOOKS

Explain Pain – Lorimer Moseley and David Butler
Understand Pain, Live Well Again – Neil Pearson
The Pain Truth – Barham Jam
Painful Yarns – Lorimer Moseley
The Mind Body Prescription: Healing the Body, Healing the Pain – Dr. John Sarno
The Brain That Changes Itself: Stories of Triumph from the Frontiers of Brain Science – Norman Doidge

Resources for Exercise with Chronic Pain

Life is Now Pain Care http://lifeisnow.ca/pain-care-for-life/

Yoga Videos
Yoga for Chronic Pain: http://www.chopra.com/articles/chair-yoga-flow-for-all-levels
Mindful Chair Yoga: http://www.whitecloudwellness.com/
Somatic Yoga with James Knight: https://www.youtube.com/user/JamesKnightGYSE

Tai Chi
Top 10 Tai Chi Moves for Beginners: https://www.youtube.com/watch?v=vHBR5MZmEsY
Tai Chi for Beginners, Dr. Paul Lam: https://www.youtube.com/watch?v=hI0HGrYCEJ4
Daily Tai Chi, 8-minute Exercise: https://www.youtube.com/watch?v=PNtwQdxwwMg

Feldenkrais
Feldenkrais with Alfons, Learn Movement Basics: https://www.youtube.com/watch?v=nIE2WMMk-hM
One Minute Feldenkrais Lesson, Robert Spencer: https://www.youtube.com/watch?v=BIqi97M3qhY
Stand up Without Effort, The Feldenkrais Method: https://www.youtube.com/watch?v=cDURAYq1SC1

Aquafitness
Jack Purcell Community Centre Pool (Chronic Pain Swim Mon-Fri 2:25-3pm, Temperature 92°)
http://jpra.ca/programs/chronic-pain/
Dovercourt Pool (Programs for arthritis, fibromyalgia, cancer survivors; Pool 86-88°, Whirlpool 104°)
Better Strength, Better Balance Exercise Program, City of Ottawa / Champlain LIHN
This is a beginner level program for those wishing to improve their strength and balance for people 65+. Strong muscles, strong bones and better balance will make you more mobile and less likely to fall. You are strong enough to participate safely if you can do ALL of the following: stand on one foot for 2 seconds, stand for 20 minutes (e.g. in a grocery line), walk one block (100 meters or 325 feet) without becoming out of breath and needing to sit down, walk up 10 stairs. Classes are unsuitable for people who are very active. Participants attend class twice a week for 12 weeks. **First time participants** can register for the next available session at any time. Call Ottawa Public Health at 613-580-6744 (TTY: 613-580-9656).

City of Ottawa Active Sitting Program

Get Moving: Active Sitting Program Multilingual DVD and Manual

This easy to follow 30-minute DVD and user’s guide present physical activity geared for older adults with a low level of activity. Seniors with some physical limitations will also benefit from Get Moving. The program was developed with the expertise of local physiotherapists and a senior’s fitness instructor.

Note: the manual is available in French/English only. Individual copies $12 each. Available at: **The Good Companions** (link is external) (613-236-0428) **OR** at the Centre de services Guigues (613-241-1266). Copies are also available for loan from your local library.

Women Alive Program

The Woman Alive/Femme active Program offers affordable physical activity opportunities to women living on limited income in order to increase their capacity to care for their own health. The Woman Alive Leader’s Manual displays how partnerships between two or more agencies can be an excellent method of pooling resources to offer an effective and affordable program. The program also provides the participant with an environment that allows for positive social interactions and cultural sensitivity. If you have questions about the program, please call the location you would like to attend.

- Dempsey Community Centre: 613-247-4846
- Foster Farm Community Centre: 613-828-2004
- Jack Purcell Community Centre: 613-564-1050
- Kanata Leisure Centre: 613-591-9283
- Plant Recreation Centre: 613-232-3000
- Carlington Recreation Centre: 613 -798-8919
- Heron Road Community Centre: 613-247-4808
The City of Ottawa offers help with program fees so that all residents can take part in recreation and culture activities regardless of their ability to pay. If you are already a participant in a community or social service agency program, or if you are an individual or family with a low-income, you may qualify for the Ottawa Hand in Hand recreation and culture fee support program. To apply for the Ottawa Hand in Hand, Recreation and Culture Fee Support: Get the application form at any recreation facility or at a Client Service Centre. Complete the application form and bring it to your local recreation or cultural facility. A supervisor will review the application for approval.

- Residents are encouraged to apply for the Ottawa Hand in Hand fee support as early as possible before the program registration period. Each qualifying individual, or member of a family, is eligible for an annual amount of fee support ($170 per person).
- Applicants are encouraged to pay a minimum of 25 per cent of the program cost. A parent or guardian can transfer all, or a portion of their Ottawa Hand in Hand fee support entitlement to a child or children in their household.