



Rebalance^{MD}



Presurgical Resilience Optimization Programme – P.R.O.P Manual

A companion guide to the 8-week
programme.

Dr. Sonja Mathes, MD FRCSC &
Dr. Karen Johnsson, MD CCFP

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INTRODUCTION TO THE PRESURGICAL RESILIENCE OPTIMIZATION PROGRAMME

WHAT IS RESILIENCE?

Being resilient means that we can respond or adapt well when we have challenges in our lives. These challenges can be illness, disability, trauma, tragedy or other stressful situations. Resilience helps you get through the many bumps on the road of life. You might think you either are resilient or you are not – but that's not true. Our resilience will change at different times in our lives – it can go up or down. Resilience is also something that can be learned and practiced. That's what this course is all about – teaching you skills to help you better face challenges.

For most patients in this program, the challenge is a disease or condition that will be treated with an operation. The condition may be arthritis or spine degeneration, tissue or tendon tearing. Your condition comes with challenges and these challenges will be different for different patients. Some challenges that many patients tell us about are the wait for surgery, pain before and after the operation, changes in how they see themselves, financial stresses, changes in their relationships, pre/post operative, change in self identity, financial hardship, threat to social relationships, fear of the surgery or recovery or others.

Resilience is a skill that can be learned. It involves having skills to help you through difficult times and believing that you can apply these skills to make your life better. Resilience also involves trusting your inner wisdom and knowing when to reach out for help. Building a support network and using it, is also an important part of resilience.

GOALS AND OBJECTIVES OF THE PROP COURSE

1. Gain an understanding of what Mindfulness Meditation is and some of the benefits that a Mindfulness Meditation practice can have for physical and mental health
2. Gain an understanding of the relationship between the nervous system and mind-body interactions
3. Gain an understanding of what Cognitive Behavioural Therapy is and the relationship between thoughts-feelings-behaviours and how we can influence this
4. Gain an understanding of pain neuroscience and how we can use mindfulness and CBT skills to influence the experience of pain
5. Gain an understanding of the benefits of restorative Sleep and how to optimize factors to improve quality and quantity of sleep
6. Gain an understanding of how to optimize pre and post surgical nutrition and use resilience tools to make effective pre-surgical nutrition choices.
7. Gain an understanding of how to optimize pre-surgical physical activity, prepare for post surgical rehabilitation and use resilience tools to implement a pre-surgical physical activity pre-habilitation programme.
8. Gain an understanding of how to use social supports and relationships as part of optimizing your resilience.

9. Develop a set of individualized tools to fill your Resilience Toolkit to use in the time before and after surgery to help improve your sense of wellness and the outcome of your surgery

HOW TO USE THIS MANUAL?

The manual is organized by sessions with both background information and specific skills or tools. Each week, we will invite you to practice some of the skills that we have introduced in that session. We will ask you to write down what you intend to practice that week and set yourself a realistic goal. The SMART goals acronym may be helpful to set a specific and achievable goal. This course gives you a great opportunity to try out some new skills, and then discuss how they work for you or others. The more you use the weeks of the program to practice new skills, the more you will get out of it.

SET SMART GOALS		
S	Make it <i>Specific</i> What do I want to accomplish?	
M	Make it <i>Measurable</i> How will I know when I have accomplished my goal?	
A	Make it <i>Achievable</i> How can the goal be accomplished? What steps do I have to take?	
R	Make it <i>Relevant</i> Is this goal worthwhile to attain? Why?	
T	Make it <i>Timely</i> By when will I achieve this goal? When will I set aside time to work on this goal?	

The course teaches many Resilience Tools and by the end of the course you will have discovered certain tools that have resonated with you. Place those tools in your toolbox so that you have an easy reference guide. There is a complete list of Tools at the end of this manual.

Each session will have an “Invitation to Practice” for your meditation that week – some suggested meditations that will have been taught during the session – and an “Invitation for Reflection” which will include suggestions for other exercises or journaling that allow some self reflection or personalizing your optimization plan.

There are references to Tracks for Guided Meditations. These meditations can be found on the BCALM website (www.bcalm.ca) under Resources, then select Art of Living Mindfully CD. <https://www.bcalm.ca/resources/art-of-living-mindfully-cd/>

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SESSION 1: INTRODUCTION TO MINDFULNESS AND MINDFULNESS MEDITATION

WHAT IS MINDFULNESS?

Mindfulness refers to the concept of developing awareness in the present moment and of all that is happening, in the moment – without judging or evaluating your experience. Often, we spend much of our lives either reliving the past or planning for the future and tend to miss the only time that we actually do our living – the present.

Mindfulness meditation uses this concept of moment-to-moment awareness to help us to simply BE WHERE WE ARE rather than in the past or the future. The breath can be used as an anchor for attention and allows focus to be centered on the ever-present rhythm of the breath to promote awareness, calmness and clarity.

Mindfulness is paying attention, on purpose, in the present moment, without judgment.

- Jon Kabat-Zinn

Reproduced from the ALM Manual

ONE BREATH

First, breathe out fully. Then, slowly breathe in, letting your belly and chest expand. Imagine you are gently filling up a balloon in your belly. And then gently breathe out, allowing your chest and belly to fall, imagining a balloon gently deflating.

BELLY BREATHING

What is it?

Healthy breathing moves through the body like a wave. The breath begins by expanding the belly and then moving upward through the chest. It is released by letting the air flow from the chest and then the belly. Belly breathing is slow, deep, and full; it helps us feel calm, grounded and stable. Shallow chest breathing maintains the stress response while belly breathing promotes the relaxation response.

How to do it

When practicing belly breathing, put one hand on your abdomen and one hand on your chest, close or lower your eyes. Now let go, breathe out slowly and feel the wave ebbing; the balloon emptying and your chest and belly flattening. The more fully you exhale, the easier it is to breathe in deeply. With every breath imagine you are connecting to the universe. Breathe in relaxation, breathe out tension. Allow the breath to move up like a wave to expand the chest.

First, breathe out fully. Then, slowly breathe in, letting your belly expand. Imagine you are gently filling up a balloon in your belly. Breathe out fully again and repeat again.

Practice breathing this way for 5 minutes twice a day

Reproduced from the CBIS Manual

RELAXATION BREATH

What is it?

The Relaxation Breath is a portable tool to use casually in your life whenever you are feeling stressed, dissociated or overwhelmed. It is also the first skill to bring formally into your sitting meditation practice. When we sit, we use the Relaxation Breath to come back to the moment, and to ground ourselves right here and right now, leaving all of our details and tensions and busyness aside in order to allow our breath, and our awareness itself, to take center stage.

The Relaxation Breath is a practice of grounding. It is a practice of returning to this moment and to this breath in your body, right here and right now.

Start by sitting or lying down in a comfortable position, where you will have a minimum amount of disturbance for a few minutes. Take a moment to be mindful of this time in which you are allowing yourself to just be and release anything that is not serving you.

Allow your eyes to close if this is comfortable, or else just softly focus them on an area in front of you. Sense your body here and now. Let your face be soft and your jaw loose. Let your shoulders drop away from your ears and let your arms and hands rest easily.

Begin by taking 5-7 deep full inhalations and exhalations, maximizing the air entering and leaving your body. Sometimes it is useful to place one hand on your abdomen and the other on your chest. As you begin your inhalation, allow your abdomen to expand. As your in-breath maximizes the expansion of your abdomen, continue to inhale into your chest. As you exhale, reverse the process, releasing slowly and completely in your chest and then your abdomen. Breathe in through your nose and then out through your nose or mouth, each exhalation carrying energy of surrender and release.

With each breath in be aware of any areas of tension, busyness or holding in your body or mind. As you breathe out, soften and let go of this tension, this busyness ...and of anything that is not serving you.

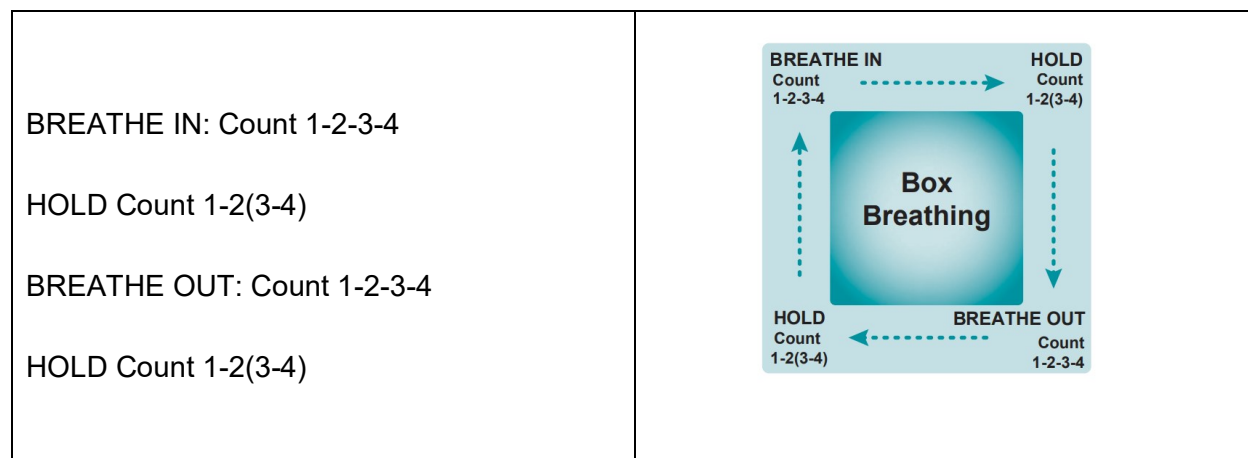
With each inhalation, breathe in vitality, wakefulness and awareness. As you exhale, soften, lighten, and surrender, settling into your body, into this space and into this moment...

Reproduced from the ALM manual

BOX BREATHING

Box Breathing incorporates brief holding of breath after breathing in and out.

This is very useful during anxiety or panic to slow down the breath and prevent hyperventilation.



Reproduced from the CBIS Manual

BODY SCAN MEDITATION

Keeping your awareness on the breath, begin scanning your body from head to toe, using your breath to let go of the tension within your body and mind.

With every inhalation, be aware of any sensation in your physical body. Feel this sensation, and then as you exhale, letting go of any tension you notice as you breathe out.

Begin in your scalp, then your forehead, your face, ears, nose, eyes...

Continue noticing any sensations and, with each exhalation, releasing any tension or holding.

Continue to gently shift your awareness to the rest of your body, slowly, mindfully. Your mouth, chin, jaw, neck, shoulders, arms, hands, fingers...

Each time your thoughts, emotions, or fatigue carry you away, notice this, then bring your attention back to your anchor, the breath. Then, gently, escort your attention back to the part of the body you were last breathing into.

Noticing any sensation in your upper back, in your chest, your heart, lungs, diaphragm...

Move as slowly as you need to, allowing yourself to be aware of the sensations with your inhalation, and the release of any tension with your exhalation.

Breathe into your mid-back and lower back, your abdomen, liver, stomach, gut...

Breath by breath, bringing awareness into each part of the body and releasing anything you are holding onto in your pelvis, your hips, your thighs, your legs, your feet, your toes. Your thoughts may carry your focus away time and again, and each time, gently bring your awareness back to the breath and to the sensations in your body.

Breath by breath, moment by moment...

Once you have scanned your entire body (anywhere from 5-30 minutes), rest for a bit in the feeling of relaxation and calm.

Savour how your body and mind feel...

Remind yourself that this body scan is a gift to yourself. This is a place that you can return to anytime – for a few moments, or much longer – when you need to calm yourself, to heal, to ground, or to just relax.

Reproduced from the ALM Manual.

Track 3 from www.bcalm.ca

MINDFUL OR MIND FULL?



THE AUTONOMIC NERVOUS SYSTEM

A stressful situation — whether something environmental, such as a looming work deadline, or psychological, such as persistent worry about losing a job — can trigger a cascade of stress hormones that produce well-orchestrated physiological changes. A stressful incident can make the heart pound and breathing quicken. Muscles tense and beads of sweat appear.

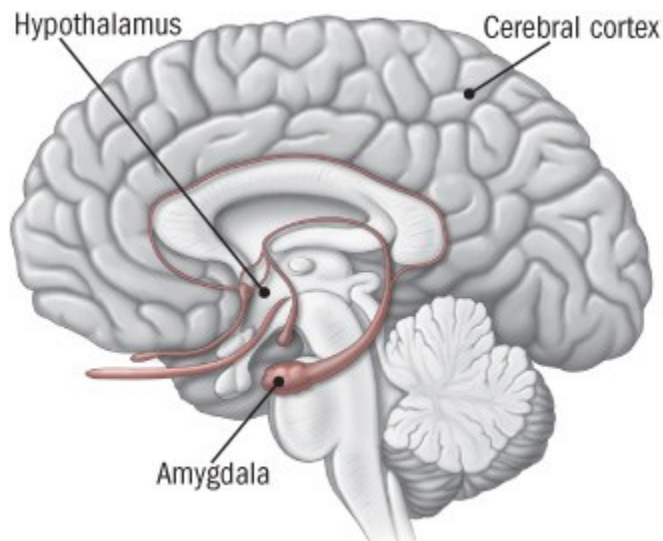
This combination of reactions to stress is also known as the "fight-or-flight" response because it evolved as a survival mechanism, enabling people and other mammals to react quickly to life-threatening situations. The carefully orchestrated yet near-instantaneous sequence of hormonal changes and physiological responses helps someone to fight the threat off or flee to safety. Unfortunately, the body can also overreact to stressors that are not life-threatening, such as traffic jams, work pressure, and family difficulties.

Over the years, researchers have learned not only how and why these reactions occur, but have also gained insight into the long-term effects chronic stress has on physical and psychological health. Over time, repeated activation of the stress response takes a toll on the body. Research suggests that chronic stress contributes to high blood pressure, promotes the formation of artery-clogging deposits, and causes brain changes that may contribute to anxiety, depression, and [addiction](#). More preliminary research suggests that chronic stress may also contribute to obesity, both through direct mechanisms (causing people to eat more) or indirectly (decreasing sleep and exercise).

SOUNDING THE ALARM

The stress response begins in the brain (see illustration). When someone confronts an oncoming car or other danger, the eyes or ears (or both) send the information to the amygdala, an area of the brain that contributes to emotional processing. The amygdala interprets the images and sounds. When it perceives danger, it instantly sends a distress signal to the hypothalamus.

COMMAND CENTER



When someone experiences a stressful event, the amygdala, an area of the brain that contributes to emotional processing, sends a distress signal to the hypothalamus. This area of the brain functions like a command center, communicating with the rest of the body through the nervous system so that the person has the energy to fight or flee.

The hypothalamus is a bit like a command center. This area of the brain communicates with the rest of the body through the autonomic nervous system, which controls such involuntary body functions as breathing, blood pressure, heartbeat, and the dilation or constriction of key blood vessels and small airways in the lungs called bronchioles. The autonomic nervous system has two components, the sympathetic nervous system and the parasympathetic nervous system. The sympathetic nervous system functions like a gas pedal in a car. It triggers the fight-or-flight response, providing the body with a burst of energy so that it can respond to perceived dangers. The parasympathetic nervous system acts like a brake. It promotes the "rest and digest" response that calms the body down after the danger has passed.

After the amygdala sends a distress signal, the hypothalamus activates the sympathetic nervous system by sending signals through the autonomic nerves to the adrenal glands. These glands respond by pumping the hormone epinephrine (also known as adrenaline) into the bloodstream. As epinephrine circulates through the body, it brings on a number of physiological changes. The heart beats faster than normal, pushing blood to the muscles, heart, and other vital organs. Pulse rate and blood pressure go up. The person undergoing these changes also starts to breathe more rapidly. Small airways in the lungs open wide. This way, the lungs can take in as much oxygen as possible with each breath. Extra oxygen is sent to the brain, increasing alertness. Sight, hearing, and other senses become sharper. Meanwhile, epinephrine triggers the release of blood sugar (glucose) and fats from temporary storage sites in the body. These nutrients flood into the bloodstream, supplying energy to all parts of the body.

All of these changes happen so quickly that people aren't aware of them. In fact, the wiring is so efficient that the amygdala and hypothalamus start this cascade even before the brain's visual centers have had a chance to fully process what is happening. That's why people are able to jump out of the path of an oncoming car even before they think about what they are doing.

As the initial surge of epinephrine subsides, the hypothalamus activates the second component of the stress response system — known as the HPA axis. This network consists of the hypothalamus, the pituitary gland, and the adrenal glands.

The HPA axis relies on a series of hormonal signals to keep the sympathetic nervous system — the "gas pedal" — pressed down. If the brain continues to perceive something as dangerous, the hypothalamus releases corticotropin-releasing hormone (CRH), which travels to the pituitary gland, triggering the release of adrenocorticotrophic hormone (ACTH). This hormone travels to the adrenal glands, prompting them to release cortisol. The body thus stays revved up and on high alert. When the threat passes, cortisol levels fall. The parasympathetic nervous system — the "brake" — then dampens the stress response.

Reproduced from <https://www.health.harvard.edu/staying-healthy/understanding-the-stress-response>

NEGATIVE HEALTH EFFECTS OF CHRONIC STRESS

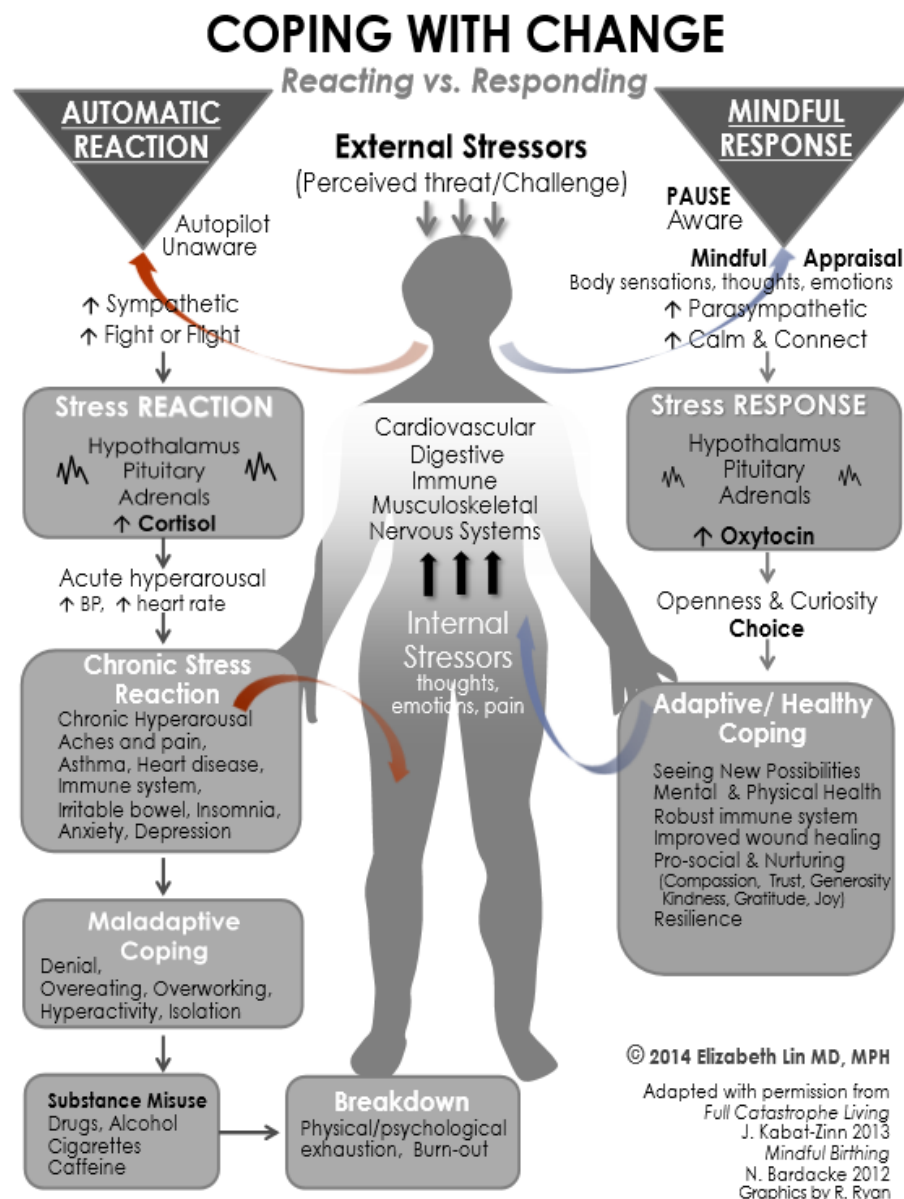
Many people are unable to find a way to put the brakes on stress. Chronic low-level stress keeps the HPA axis activated, much like a motor that is idling too high for too long. After a while, this has an effect on the body that contributes to the health problems associated with chronic stress.

Persistent epinephrine surges can damage blood vessels and arteries, increasing blood pressure and raising risk of heart attacks or strokes. Elevated cortisol levels create physiological changes that help to replenish the body's energy stores that are depleted during the stress response. But they inadvertently contribute to the buildup of fat tissue and to weight gain. For example, cortisol increases appetite, so that people will want to eat more to obtain extra energy. It also increases storage of unused nutrients as fat.

Fortunately, people can learn techniques to counter the stress response.

Fight/flight/freeze = Sympathetic Nervous System

Rest/digest/heal = parasympathetic Nervous System



Reproduced from ALM.

RESOURCES

Group Mindfulness Meditation courses are offered through the BC Association for Living Mindfully and covered by MSP with a referral from a physician. Here's a helpful intro: www.bcalm.ca

BCALM for meditations - Links for guided meditations to download

<https://www.bcalm.ca/resources/art-of-living-mindfully-cd/>

Additional resources

<https://www.bcalm.ca/resources/>

APPS:

Headspace
Calm
Ten Percent Happier
Happify
Smiling Mind
Insight Timer
Mindfulness daily
UCLA Mindful

BOOKS:

“Mindfulness for Beginners” by Jon Kabat-Zinn
“The Miracle of Mindfulness” by Thich Naht Hanh
“The Little Book of Mindfulness” by Patrizia Collard

WILD GEESSE

You do not have to be good.

You do not have to walk on your knees for a hundred miles through the desert, repenting.

You only have to let the soft animal of your body love what it loves.

Tell me about despair, yours, and I will tell you mine.

Meanwhile the world goes on.

Meanwhile the sun and the clear pebbles of the rain are moving across the landscapes, over the prairies and the deep trees, the mountains and the rivers.

Meanwhile the wild geese, high in the clean blue air, are heading home again.

Whoever you are, no matter how lonely, the world offers itself to your imagination, calls to you like the wild geese, harsh and exciting - over and over announcing your place in the family of things.

Mary Oliver, ALM Manual

INVITATION TO PRACTICE

Daily mediation practice of 10-15 minutes

Relaxation Breath

Body Scan Meditation

INVITATION FOR REFLECTION

What are my goals for this course?

How do I want to start/grow my mediation practice? Use the SMART goal sheet to help you explore ways to help you plan your meditation practice. Are there apps or guided meditation tracks that you wan to explore?

<i>SMART GOALS</i>		
<i>S</i>	Make it <i>Specific</i>	What do I want to accomplish?
<i>M</i>	Make it <i>Measurable</i>	How will I know when I have accomplished your goal?
<i>A</i>	Make it <i>Attainable</i>	How can the goal be accomplished? What steps do I have to take? What challenges can I expect?
<i>R</i>	Make it <i>Relevant</i>	Is this goal worthwhile to attain? Why?
<i>T</i>	Make it <i>Timely</i>	By when will I achieve this goal? When will I set aside time to work on this goal?

SESSION 2: INTRO TO COGNITIVE BEHAVIOURAL THERAPY

A COMPARISON OF CBT AND MINDFULNESS

Cognitive Behavioural Therapy/Techniques (CBT) and Mindfulness Meditation (MM) are complementary practices.

MM, although not passive, is more about observing than interacting. When we are mindful we are increasingly more aware of our body sensations, our thoughts and our emotions - but we do not engage with them. The practice is about being non-judgmentally aware of ourselves (mind, body and emotion) and accepting what is present.

CBT is about active engagement, specifically in the cognitive or thinking realm. Cognitive Behavioural Therapy or Techniques are analytical and active. In CBT thoughts are assessed and reframed, or replaced. Although emotion and physical sensation are noted in CBT, it is primarily focused on the thoughts we have, challenging them and altering them in productive ways. This can extend to challenging and changing feelings and behaviours. CBT is based on the powerful inter-relationship that exists between our physical, emotional and thinking self.

MM creates space around what is present and that can allow us to make clearer choices than we might have been making before.

MM practice gives us the awareness and time to make choices that we explore and practice using CBT

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“Between stimulus and response there is a space. In that space is our power to choose our response. In our response lies our growth and our freedom.”

Viktor E. Frankl

THREE MINUTE BREATHING SPACE

What is it?

This is an exercise that you can do almost anywhere, anytime because it is very brief and quite simple. It can be used as a regular practice, in a stressful situation, or if you are upset about something. It can help you step out of “automatic pilot”, become less reactive, and more aware and mindful in your response.

Awareness

Bring yourself into the present moment by deliberately adopting an erect and dignified posture. If possible, close your eyes.

Observe your experience right now, noting your body sensations, your thoughts, and any emotions that are present. Acknowledge and register what is happening for you, even if it is unwanted.

Gathering

After a few minutes, gently redirect your attention from these thoughts to fully focus on your breathing, noticing each inbreath and each outbreath as they occur, one after the other.

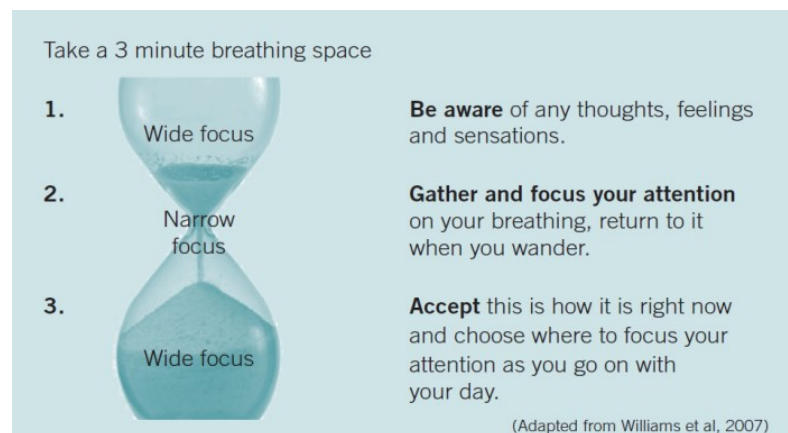
Your breath can function as an anchor to bring you into the present and help you tune into a state of awareness and stillness.

Expanding

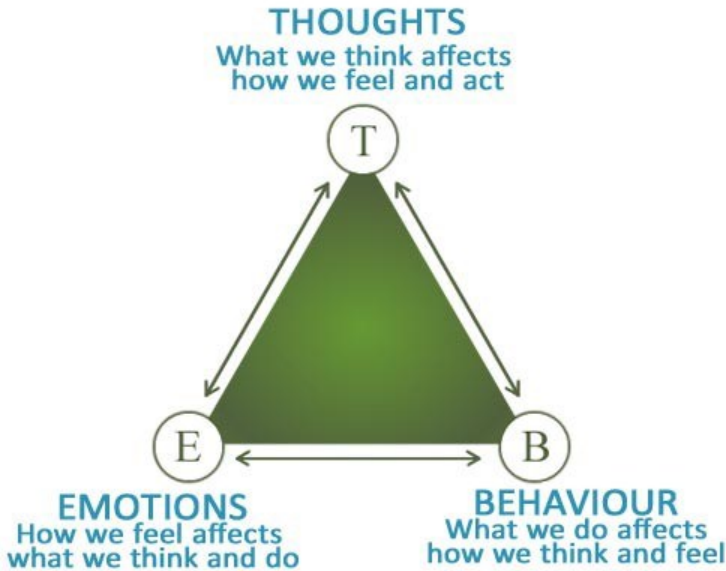
Expand the field of your awareness to include the rest of your body, your experience, and the situation, seeing if you can gently hold it all in awareness.

After reconnecting with the present moment in this way, you may notice an increased capacity for responding effectively; with awareness of what is truly needed in the situation and how you can best take care of yourself.

Adapted from Segal, Z. V., Williams, J. M. G., Teasdale, J. D. , Mindfulness-Based Cognitive Therapy for Depression: A New Approach to Preventing Relapse ,New York: Guilford Press, 2002, 351pp
ALM Manual



TRIANGLE OF EXPERIENCE



RECOGNIZING THOUGHT DISTORTIONS - COMMON THINKING ERRORS

The situations we find ourselves in don't cause our feelings — our ways of thinking about them do. Here are some distorted ways of thinking that often increase unhelpful feelings. Notice the ones that most relate to you.

FILTERING Everyone's life has some negative things. If you focus only on the negative and filter out all positive or neutral things, your life will indeed seem depressing.

EMOTIONAL REASONING Emotions are based on what we think and often not based on facts. Don't always believe what you feel. Feelings are not facts.

OVER-INCLUSIVE You think of one problem, then another and another, until you feel completely overwhelmed. Or you may take on the problems of family members as your own.

BLACK OR WHITE THINKING You think only in extremes or absolutes, forgetting that most things fall in the middle and are shades of grey.

JUMPING TO CONCLUSIONS You predict a negative outcome without adequate supporting evidence.

MIND READING You believe that others are thinking and feeling badly about you and you react as if this is true.

PREDICTING THE FUTURE You think that things may turn out badly and only focus on the bad things that might happen. You convince yourself that a bad outcome is sure to happen.

CATASTROPHIZING You imagine the worst and make things seem like a bigger deal than they are. This increases your fear and makes it harder to deal with what is really going on.

SHOULD You make rules for yourself and others about how things "should" be. You become angry or upset when these rules are not followed.

CBIS

STOP SPOT SWAP: RECOGNIZING AND CHANGING UNHELPFUL THOUGHTS OR BEHAVIOURS

As we become more aware of our thoughts, we can bring mindfulness and self compassion to help us. Noticing our thoughts is the first step. Often, we have automatic negative thoughts that influence us greatly, without ever bringing them to full awareness. Actively and intentionally noticing our thoughts is the first step. Meditating, journalling, talking to friends, and doing CBT exercises can help us be more aware and tune in to these thoughts.

When we pay attention, we may notice how negative our thoughts really are. This is sometimes called "stinking thinking", thoughts that are overly negative and unhelpful, that we accept without question. It's time to stop and question them!

STOP: Thought stopping is an important CBT skill. When you purposefully pay attention to your thoughts, and notice they are not helping you, try *thought stopping*. Picture a big red stop sign, or say out loud to yourself "Stop!" You may find it helpful to move around or do something different to stop the thought.

SPOT: When you are aware of the negative thought, and you can stop or step away from it, you can start to examine the thought more critically. Can you *spot* a thought distortion?

SWAP: Once you notice the thought and recognize the distortion, try *swapping* for some other thought that might be more helpful to you. How would you swap the thought if you were talking to a dear friend or a beloved child?

THOUGHT DISTORTION – STOP SPOT SWAP WORKSHEET

Examine a recent situation in which you were upset or distressed. Often, starting with a small event is easiest. Don't pick your biggest challenge to tackle first! Complete the worksheet to see if you are able to recognize any thought distortions and replace them with thoughts that better serve you.

Date and Time <i>When did the thought occur?</i>		
Situation <i>What was the context? What was happening at the time and prior to the thought?</i>		
SPOT the Automatic Thought <i>Describe the thought. Rate how much you believed it out of 100?</i>		
Emotion <i>What feelings came to you at the time? How intense were they out of 100%?</i>		
Thought Distortion <i>Can you recognize the pattern of thought distortion? E.g. Catastrophizing; filtering?</i>		
SWAP to an Alternative Thought <i>What is a more helpful alternative?</i>		
Outcome <i>Now re-rate how much you believe the original thought and your emotions out of 100%</i>		

SELF-COMPASSION: NOT SENDING THE SECOND ARROW

There is a two and a half thousand-year-old story attributed to the Buddha.

The story, passed down through the centuries, is called “The Second Arrow”.

The Buddha thought of all the difficulties and misfortunes that come into most of our lives, and pictured them as an arrow shot deeply into us.

Then, the Buddha said, that for most of us humans, one arrow is not enough; in our reactivity to the situation, a second arrow is shot, a mental arrow, fired from ourselves to ourselves.

This is our reaction to being hurt and distressed. It is usually made up of a fair amount of self-criticism, self-loathing, self-blame and anger at ourselves. Although we cannot often control what happens to us in life, we can learn to respond to it differently. We can, over time, learn to refuse to fire the second arrow.

Awakening self-compassion, and learning to refrain from sending the second arrow, is often the greatest challenge we humans face on the path to wellness. We can have many difficulties in our lives, from addictions in the family, to failing relationships, to sickness of a child or family member, to a physical or mental illness, and more. These bring the pain of the first arrow, and we often have little control. Yet, when we begin to investigate we can see that the greatest pain comes from how we feel about ourselves in the difficult situation - how we condemn ourselves, blame ourselves, and attack ourselves. This suffering is the second arrow.

The good news is that we do have some choice about the second arrow. We can stop attacking ourselves. We can learn to recognize when we are at war with ourselves and decide to pause and deepen our attention. And then we can allow ourselves to enter the gateway of self-compassion.

Adapted from Graeme Armstrong as well as Tara Brach, Ph.D., from her book “True Refuge” Bantam Books 2012

ALM Manual

CYCLE OF AVOIDANCE

In CBT, becoming aware of our thoughts and challenging unhelpful thoughts is a key practice. Another key component of CBT is examining our behaviors and how they affect us, for better or worse. As we become more aware of how our behaviors affect our feelings and thoughts, we can pause to consider our choices, and perhaps choose another path.

Most people prefer to avoid discomfort of any kind, whether physical or psychological pain. This can be a healthy behavior but can also work against us at times. Avoiding strong emotions robs us of the chance to use these emotions in a positive way. Avoiding anxiety paradoxically makes anxiety worse.

For example, consider someone who is anxious about going for a blood test. The more they worry about the test, the worse they feel. They may tell themselves a story that they can't handle it, and if they avoid doing the test, they may confirm for themselves this belief. The next time they are faced with a blood test, they will actually be more anxious. If instead they go through with the test, and face the associated anxiety, they have proven to themselves that they can handle it, even if it wasn't pleasant. Each time they have another blood test, they show themselves again that they can get through it, and each time they will become less anxious. If they repeat this practice enough times, they will have very low levels of anxiety. If the anxiety has reached the level of a phobia, graduated exposure may be required.

This also applies to how we handle strong emotions. It is easy to feel overwhelmed by feelings of anger, sadness or fear. Many people avoid these emotions at all costs and use unhealthy coping mechanisms to distract themselves. Some common ways we resist are by planning, consuming, overworking, avoiding, judging, controlling, keeping busy and misusing substances or food. This can lead to a variety of consequences including depression and addictions. Acknowledging and allowing our emotions, using whatever supports we need, teaches us we can have a full range of feelings without being lost in them. We can choose behaviors that support healthy expression of our feelings. As we do this more often, we can recognize that feelings come and go. When we don't avoid our feelings, their intensity will pass more quickly. When we avoid our pain with our behaviours that don't serve us, we fuel our suffering.

In these examples, avoidance becomes the second arrow from the Buddhist story. The consequences of our avoidance can sometimes be worse than what we were avoiding in the first place.

Bringing our tendency to avoidance into conscious awareness allows us to consider the consequences and choose a behavior that serves us better.

Adapted from CBT Skills Manual and the ALM Manual

INTRODUCTION TO METTA MEDITATION

What is it?

Metta or Loving Kindness meditation practice aims to foster a mental state of kindness, love, and compassion. When done regularly, metta meditation can help minimize negative emotions toward yourself and others. Like other forms of mindfulness meditation, it can also reduce stress and physical pain. Self compassion and kindness are fundamental beliefs that help us care for ourselves with a gentleness and forgiveness of imperfection.

Metta (Loving Kindness) Meditation- Track 6 www.bcalm.ca

“May I be free from fear.”

“May I be free from stress or from physical or mental suffering.”

“May I be strong, healthy and vital.”

“May I take care of myself with ease.”

“May I be happy.”

Or if you prefer you can practice with these alternative phrases:

“May I be happy and live with a joyful heart”

“May I be peaceful and live with ease”

“May I be safe and protected from all forms of harm”

“May I be healthy and have energy and strength”

1. Focus your attention and awareness on the energy these words represent. Offer this metta to yourself first, and practice this for several weeks until it feels natural and easy.

FURTHER CBT RESOURCES

Group CBT courses (8 weeks, currently virtual) are offered through the Divisions of Family Practice (on referral from your primary care provider) and covered by MSP. Here's a helpful intro: <https://www.divisionsbc.ca/victoria/resources/mhsu-program/cbt-skills-group>

Here's a helpful and free online workbook called Positive Coping with Health Conditions. It was funded through SFU and Vancouver Coastal Health Authority: <https://psychhealthandsafety.org/pcwhc/>.

The more detailed Antidepressant Skills Workbook is here: <https://psychhealthandsafety.org/asw/>

Check out the website www.anxietycanada.com and the associated app: MindShiftCBT. These are helpful even if you're not feeling anxious.

Mood Gym is an interactive website developed at the Australian National University. It is available for a small yearly fee. <https://moodgym.com.au/>

INVITATION TO PRACTICE

The 3 minute breathing space
Metta Meditation 10-15 Minutes daily

INVITATION TO REFLECT

Journal – Thoughts/Feelings/Actions Worksheet

THOUGHT DISTORTION – STOP SPOT SWAP WORKSHEET

Date and Time <i>When did the thought occur?</i>		
Situation <i>What was the context? What was happening at the time and prior to the thought?</i>		
Automatic Thought <i>Describe the thought. Rate how much you believed it out of 100?</i>		
Emotion <i>What feelings came to you at the time? How intense were they out of 100%?</i>		
Thought Distortion <i>Can you recognize the pattern of thought distortion? E.g. Catastrophizing; filtering?</i>		
Alternative Thought <i>What is a more helpful alternative? Can you Swap the thought?</i>		
Outcome <i>Now re-rate how much you believe the original thought and your emotions out of 100%</i>		

SESSION 3: PAIN MANAGEMENT AND PAIN MINDSET

PRESURGICAL PAIN

It is important to acknowledge that many people waiting for surgery are dealing with a lot of pain. While surgery aims to significantly reduce the pain, we will also need to prepare for pain after the surgery and during the surgical recovery. We must also acknowledge that surgery may reduce but may not eliminate pain. Waiting for surgery while you are in pain can be very challenging.

Dealing with daily pain impacts almost all aspects of a person's life. There are ways your healthcare providers can help you manage your pain, such as surgery, medications, bracing and injections. There are also ways you can influence your own experience of pain. This module aims to give you more tools help you manage your pain. A combination of both medical interventions (medication, surgery, injections) and Self-Directed Pain Management strategies are additive and will blend will to optimize your pain control. These are complementary to your medical plan not meant to be an 'exchange for'. It is also important to distinguish between the benefits of working with your mind (such as attention and thoughts) and any the suggestion of 'mind over matter'. The message is not 'if you just control your mind, pain will go away'. But certainly, the mind can have powerful effects on your experience of pain.

In this module, we will give you skills to identify the factors that change your sensation of pain and develop a set of tools to try to decrease your pain.

WHAT IS PAIN?

The International Association for the Study of Pain defines pain as beings "a noxious sensory and emotional experience". Pain is an important evolutionary signal to alert us to possible harms and minimize ongoing injury, such as when we accidentally touch a hot stove. The pain is unpleasant (noxious) and we pull our hand away.

But sometimes pain is not a sign of ongoing harm, such as postoperative pain after surgery. For example, persisting with physiotherapy after joint surgery, despite discomfort, will ultimately decrease pain and improve function. While people with arthritis frequently have pain, the pain is not necessarily a sign of worsening damage. For example, even though walking may cause knee pain, the knee joint is not being damaged by the walking.

Pain perception is highly influenced by our beliefs about pain and our emotional state. Anxiety sensitizes our brains to pain and are associated with higher pain perception. Our beliefs about pain are also powerful. Thought distortions can lead to a negative pain mindset, which also makes our pain worse and prolonged. This is compounded by a sense of helplessness.

The skills in mindfulness meditation that we have been practicing can help you settle your nervous system, moving from fight/flight/freeze to rest/digest/heal. As you decrease your anxiety, you can dial down your pain experience.

Becoming more aware of our thoughts about pain is also helpful. CBT skills help us stop unhelpful thoughts, spot the thought distortions and swap them with more supportive ones. Consider the different impact of:

I just had knee surgery. My knee hurts. There must be something seriously wrong. What if the pain gets worse forever? This is a disaster!

Versus

I just had knee surgery. My knee hurts but my medical team reassures me the pain is a normal amount. I know I will have pain while I am healing. The pain will shift over time. I have skills I can use to help me manage my pain.

Can you spot the black and white thinking, predicting the future, and catastrophic thinking of the first statements? This kind of pain mindset becomes a vicious cycle of increased anxiety, decreased movement and function, and worsening pain.

Substituting more realistic and helpful thoughts can lessen anxiety, and help you recognize the ways you can influence your pain for the better.

As you find supportive ways to deal with your pain, you may find yourself in a positive cycle of lessened anxiety, improved movement and function, and more manageable pain.

When learning these pain management skills, know that regular practice is essential. Focus first on regularly practicing the skills, and improved pain management will follow. A conscious practice can encourage your body and brain to move away from pain.

“Nobody wants more pain, but having a negative pain mindset is like picking up the can of gasoline and pouring it on a fire. You can learn to put the can of gasoline down, and by doing so it changes your pain in the moment, and steers your nervous system away from pain in the future.”

Beth Darnall from *Preoperative Optimization of the Chronic Pain Patient*, H. Mcanally, L. Freeman, B. Barnall. Oxford Press, 2019.

ACTIVITIES TO DECREASE PAIN- HEALTHY DISTRACTIONS

Many simple behavioural changes can be a healthy distraction from pain. Here are a few examples.

Enjoyable Activities: Any activity that captures your attention and interest in a positive way can help. Whether you enjoy crafting, painting, reading, doing jigsaw puzzles, watching funny movies or carving wood, do something you love that you are able to do and notice how you feel.

Spend time in Nature: Nature has profound abilities to calm the nervous system, ground us and elevate the mood. Many parks are easily accessible by car or public transport but even a park in an urban environment will give the benefits of sunlight, the birdsong and a welcome reason to leave the home.

Enjoyable People: Spend time letting supportive family and friends distract you from pain. Allow your focus to sometimes shift to others. Laughing with friends is a great way to activate natural pain relief.

Music Therapy: Music has a powerful impact on our brains and our bodies. Choose music you love that reminds you of happy times in your life. Find a relaxing playlist to help you wind down. If you want to get more active, use music to help you move.

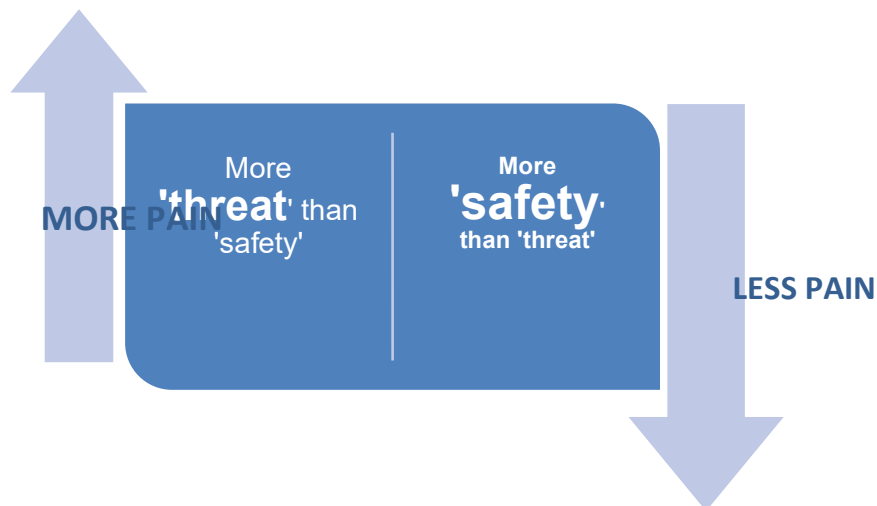
Physical Activity: Our bodies are meant to move, and any way you can move your body can help you shift your pain. Walking, swimming and cycling are wonderful activities. But even shifting your position, moving your arms if your legs are too sore, and gentle stretches can help.

WHAT DETERMINES HOW MUCH PAIN WE FEEL?

Simply speaking, the brain determines how much pain we will feel.

Nerve 'receptors' in the body transmit information up to the brain. This is then processed along with all the information it can gather about the current situation. This information is not just the state of our "damaged tissues" but also, how safe we feel, our mood, our breathing, past experiences, and many other contextual factors. The brain then takes this information and it decides how much pain to 'give us' to protect our well-being.

Unfortunately, the brain doesn't always get it right! Pain is highly complex, and the level of pain experienced for a certain painful stimulus will vary widely depending on the 'context' of a situation.



FACTORS THAT CAN 'TURN UP' OR 'TURN DOWN' OUR PAIN EXPERIENCE

Here are some examples from both our internal (body) and external environment that change our experience of pain.

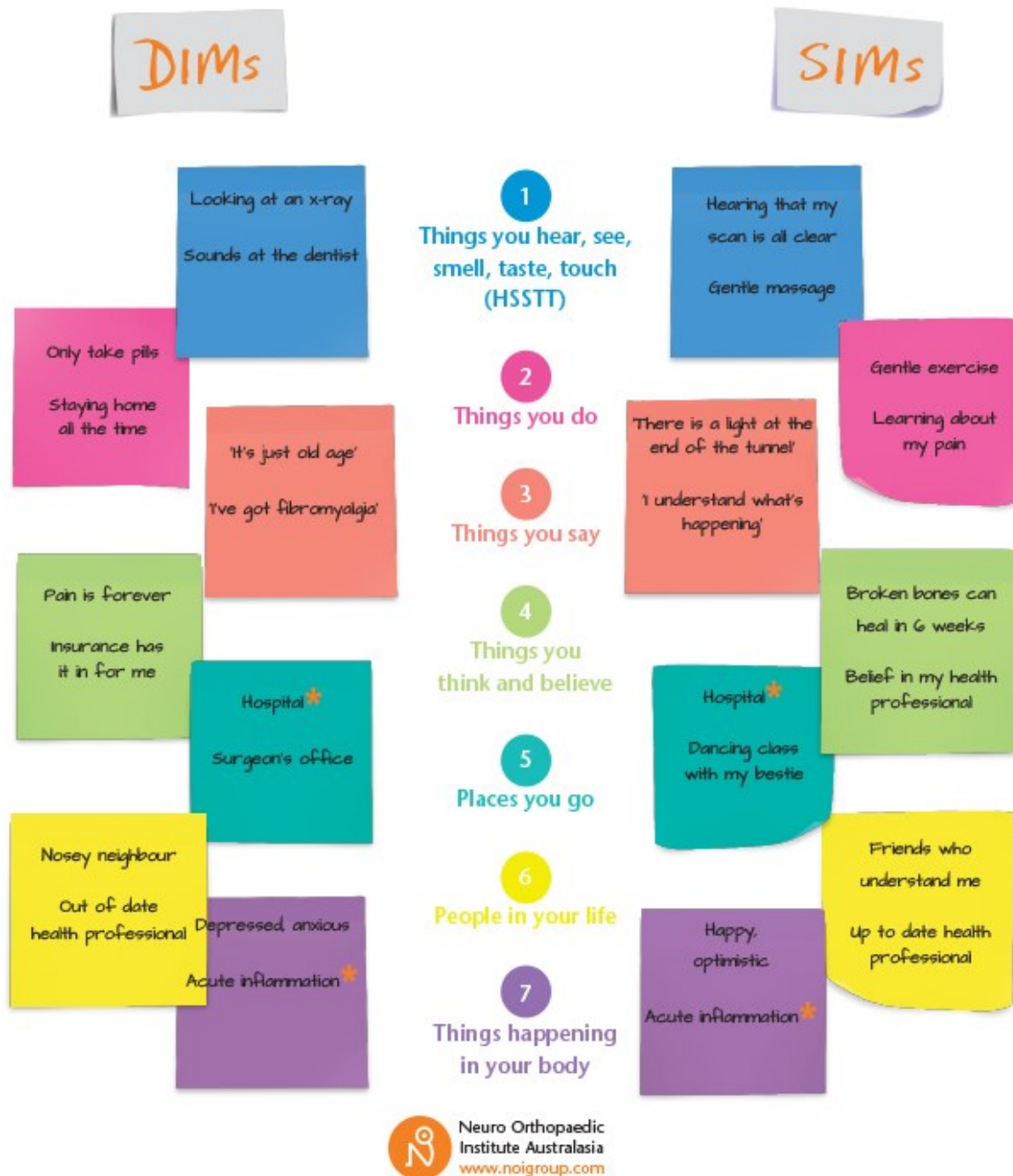
Sleep	• inadequate sleep, restorative sleep
Mood and emotions	• happiness, anger, stress, well-regulated mood
Social circumstance	• work, family, finances, friends, support
Physical	• breath and movement patterns, inflammation, other health issues, medication
Beliefs and expectations	• "I have heard that this may never get better" vs "pain does not always mean damage"
Memories	• things we feel we need to 'protect' against, previous similar experiences
Breath	• a 'tool' for pausing to see where we are – emotionally, physically and in our thoughts

The above factors directly influence how much pain we experience.

You have been working on some of these things with the course already - such as breathing and relaxation techniques, and awareness of patterns of thought and behaviour.

DANGER IN ME VS SAFETY IN ME

The following diagram is from the “The Explain Pain handbook : the Protectometer”. The left side of the list describes things that may be perceived as ‘danger’ – danger in me (DIMS). The right side lists thing that elicits a sense of ‘safety’ – safety in me (SIMS). DIMS/SIMS can turn up or down the amount of pain we experience. Down the middle are ‘contexts’ that influence pain.



The Explain Pain Handbook: Protectometer, Butler & Moseley 2015

DIMS & SIMS EXERCISE

Two or three Danger in Me's (DIMS) relate to your current condition or upcoming surgery.

Two or three SIM's that relate to your current condition or upcoming surgery.

Knowing the factors that elicit a sense of 'threat' and knowing what makes us feel 'safe' is a tool to help manage our pain. We can deliberately choose to increase our sense of safety in order to decrease our 'fight/flight' mode and thereby modify our pain experience. Pain can be higher if we are feeling anxious, uncertain or out of control.

Being aware of our breath can be a way of both assessing our state of mind and body AND a way to shift gears from a state of stress to a state of calm. This may alter our pain directly or may just allow us to feel more control even if the pain itself does not change.

PACING IS IMPORTANT

Pacing of activities to compensate for pain is a critical skill to learn. This involves acknowledging that what you can do may be different than it used to be. It may differ day to day. Spread out your activities over several days, schedule breaks in between activities, balance activities that are more uplifting with activities that are draining.

Some people faced with pain will choose to stop doing almost everything. This natural protective response can make things worse, by leading to declining function, worsening mood, social isolation and a sense of helplessness.

Others may wait for a day when they feel “not too bad” and push hard doing every activity and chore they can think of. The intention is good, but they may end up taking several days to physically recover from this over exertion and end up discouraged. This “boom and bust” cycle also ultimately leads to declining function over time.

Finding the baseline of activity, you can currently manage is a helpful place to start. With self compassion and consistency, you can keep some activity going, feel good about what you do accomplish, and over time gently increase your activity. Some days this may not be possible, but other days you will be able to gradual increase your window of tolerance. This will help you maintain and perhaps even increase your function.

The idea of pacing applies both to general activities, like chores, enjoyable outings, and social contacts, as well as physical activity done for exercise. Pacing and physical activity will be discussed more in Session 5.

KEY PAIN POINTS AND TOOLS

- *Pain is complex*
- *Many factors can turn up or turn down the intensity of our pain experience*
- *The brain decides how much pain we will have (not just the state of our tissues)*
- *The amount of pain is a measure of ‘threat’ perceived by the brain*
- *Pain is ALWAYS dependent on context and can change moment to moment*
- *Knowing your DIMS and SIMS can help to shift from a threatening to a non-threatening mode in your body*
- *Understanding pain can help reduce pain (and the secondary suffering we experience)*
- *All the tools covered in this course can*
 - a) *help you choose how you respond to your pain and influence your pain, rather than having an automatic reaction*
 - b) *lay the foundations for how you cope with all future pain experiences*
- *Understanding pain can reduce the stress and anxiety related to pain and modify or ‘dial down’ your pain experience*

- *There are many factors that influence pain and we may have more control than we think*

OUR RELATIONSHIP TO PAIN

“Chronic pain is not all about the body, and it’s not all about the brain – it’s everything. Target everything. Take back your life.”

From Stanford’s Sean Mackey, MD, PhD and his [lecture](#) “Pain and the Brain”.

“Healing severe or chronic pain, I believe, includes transforming our relationship to the pain, and, ultimately, it is about transforming our relationship to who we are and to life.”

From Sarah Anne Shockley’s book: ‘The Pain Companion: Practical Tools for Living With & Moving Beyond Chronic Pain’

“You are braver than you believe, stronger than you seem, and smarter than you think.”
Christopher Robin to Winnie the Pooh, (A. A. Milne)

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GROUNDING BREATH

Stand comfortably with your feet shoulder width apart. If you use an aid for walking, have it available to use. Allow your knees to be soft, not locked. Stand comfortably for a few breaths, feeling the connection of your feet to the ground beneath you. Deepen your breathing slightly, using diaphragmatic breathing (belly breathing). As you breathe out, allow your knees to bend slightly, and sink into the pressure of your feet on the ground. As you breathe in, straighten your knees slightly, stand taller and imagine that you are drawing energy up from the ground. With each breath out, bend your knees a little and feel your feet supported by the ground. With each breath in, stand taller and feel your energy rising.

If you like, you can add your arms to the movement. Start with your arms relaxed at your side, shoulders and elbows soft. With each breath in, slightly lift your arms up and away from your body. With each breath out, allow your arms to relax to your side again.

This meditation can also be done sitting. Sit comfortably with your back supported, your spine gently straightened, and your knees and hips bent at 90 degrees. As you breathe out, push your feet gently against the ground, and allow your body to sink into the chair, to increase the sense of contact and support. As you breathe in, relax the pressure on your feet, and allow your body to straighten and rise slightly out of the chair.

Whether sitting or standing, as you breathe out, sink into support. As you breathe in rise into strength.

Some people like to imagine themselves as a tree during this meditation; their feet or legs grounding them to ground or cushion; strong like the roots of a tree. The body is likened to a tree; reaching tall into the sky, towards the sun, know that the strong roots will support the tree no matter how strong the storm.

This meditation can be helpful if you are caught up in anxious thoughts. It helps you to mindfully focus on your breath and your feet. It also provides small mindful movements through your large joints and your whole body. This can ease stiff and painful joints.

54321 MEDITATION

What is it?

This five-step exercise can be very helpful during periods of anxiety or panic by helping to ground you in the present when your mind is bouncing around between various anxious thoughts.

Before starting this exercise, notice your breathing and invite ONE BREATH or a few RELAXATION BREATHS.

Slow, deep, long breaths can help you maintain a sense of calm or help you return to a calmer state. Once you find your breath, go through the following steps to help ground yourself:

5: Notice **FIVE** things you SEE around you. It could be a pen, a spot on the ceiling, anything in your surroundings.

4: Notice **FOUR** things you can TOUCH or FEEL around you. It could be your hair, a pillow, or the ground under your feet.

3: Notice **THREE** things you HEAR. This could be any external sound outside of your body or even in your body.

2: Notice **TWO** things you can SMELL. On your body or in the room; something you are holding.

1: Notice **ONE** thing you can TASTE. What does the inside of your mouth taste like—gum, coffee, breakfast?

VIDEOS ABOUT PAIN

Understanding the Complexity of Pain

This video uses graphic illustration to explain many of the concepts of this presentation in an 8-minute overview.

<https://www.youtube.com/watch?app=desktop&v=Zv6RPoVZx9M>

PAIN READING

Explain Pain ([G. Lorimer Moseley](#), [David S. Butler](#))

Explain Pain Handbook: Protectometer

WEB RESOURCES ON PAIN

Pain BC provides information and resources about living with chronic pain

www.painbc.ca

Arthritis Society of Canada has several resources on their website.

<https://arthritis.ca/living-well?pillar=/Living-Well/About-flourish>

The Island Health Pain Management Services Clinic provides information on pain management and self-management resources.

<https://www.islandhealth.ca/learn-about-health/pain-pain-management/chronic-pain-resources>

Island Health Pain Management Services also provides access to guided meditations for relaxation.

<https://www.islandhealth.ca/learn-about-health/pain-pain-management/chronic-pain-resources>

INVITATION TO PRACTICE

This week we invite you to meditate daily for 15-20 minutes and practice these meditation:

Grounding Breathing

Mountain Meditation

54321 Meditation

INVITATION FOR REFLECTION

Invitation to examine a recent painful experience. Can you identify the DIMs/SIMs? Did you have any thought distortions? Use the pain experience worksheet below to see if you identify some of the other factors that determine how much pain you had. Do you see how your pain was influenced and how you could change things?

PAIN EXPERIENCE WORKSHEET		
Date and Time <i>When was the painful experience?</i>		
Situation <i>What was the context? What was happening at the time and prior to the thought? DIMs? SIMs?</i>		
Automatic Thought <i>What thoughts did you have about your pain?</i>		
Emotion <i>What feelings came to you at the time? How intense were they out of 100%?</i>		
Pain Distortion <i>Can you recognize any DIMs that distorted your pain experience?</i>		
DIM SWAP <i>What is a more helpful alternative SIM? Can you swap the DIM for a SIM next time?</i>		
Outcome <i>Now reevaluate your pain? How much do you think you could have reduced your pain through more SIMS?</i>		

SESSION 4: SLEEP

“There is a time for many words, and there is also a time for sleep.”

— Homer, The Odyssey

The hours spent sleeping are a vital time for our bodies to rest, heal and recover. Sleep and pain have a strong relationship. You may have noticed that on days you have not slept well, your pain is more intense. Research has shown that the number of hours that you have slept the previous night is a predictor of how your pain will be that day. Poor sleep leads to having pain that is harder to control as well as other mental health consequences such as increased anxiety and depression. And of course, pain, anxiety and depression can lead to poor sleep! In this session, you will learn how to optimize your environment for sleep and some relaxation meditations.

CBT AND SLEEP

CBT is a recognized therapy for insomnia and can be very helpful. As in any area, we can look at our thoughts and behaviours and increase our awareness of how they impact our emotions, sensations, and sleep.

Finding helpful thought swaps can be very valuable. For example, people who have had difficulties with sleep might say “I never sleep well” or even “I can’t sleep”. While this reflects very real challenges, it can become a reinforcing belief. Even saying “I have had troubles with sleep in the past” has a different impact. When we expect to sleep poorly, we often do. When trying to fall asleep, or fall back to sleep after waking up, people often say things to themselves which makes it more difficult to sleep. Anything which triggers a fear reaction releases adrenalin (epinephrine) into our system, and will keep us awake another 10-20 minutes at least. So if we look at the clock and say “Oh no! It’s 1 am! I’m going to be exhausted tomorrow!” Then we have woken ourselves up more fully and made it harder to sleep. If we do this every 15 minutes, it will be very difficult to sleep indeed. A helpful behaviour can be to turn the clock away so you don’t check the time at night. Perhaps you can find some reassuring phrases to use when you wake such as “I’m okay, I’m safe, I can sleep” or “I can do some relaxation breathing until I fall back to sleep”. Experiment with something that fits for you.

We also want to train our brains that our bed is where we sleep. This means only using your bed for sleep (and intimacy). Using your bed to work from home, or watch tv, doesn’t train you to sleep in your bed. Similarly, lying awake in your bed for long periods of time, also reinforces being awake in bed. If you are awake for more than 20 minutes, consider moving to another location to read quietly, meditate, or do other relaxing activities. When you notice you are getting sleepy again, go back to your bed.

MINDFULNESS AND MINDFULNESS MEDITATION FOR SLEEP

Mindfulness skills can also help you sleep better. Being more aware of how you feel and what routines help you wind down can encourage sleep. For example notice how you feel if you read the news before going to sleep. Compare this with how you feel if you look at beautiful pictures of nature, or even cute animal videos. You may be surprised at the difference.

Be mindful of your sleep environment including light, noise, temperature and disruptions. If you wake up at night, what wakes you? Knowing if its pain, someone snoring, or the cat wanting to be let out will change your intervention to improve your sleep

Many meditative practices can help you sleep better, and many guided sleep meditations are available online or through smart phone apps. Some people like to listen to nature sounds, easily found online or on the apps. Others prefer a specific meditation. Here are some examples:

Progressive Muscle Relaxation: especially helpful for sleep and we will practice this in session
 Metta meditation: also good for sleep and we will practice a couple of versions of this in session
 Gratitude meditation: just listing everything you can think of that your are grateful for, or appreciate, in your life can help you sleep. You can include anything in your list from people, places, things, experiences or even mundane every day things that we often take for granted. I'm grateful for a warm bed, a roof over my head, clean air, running water, etc.

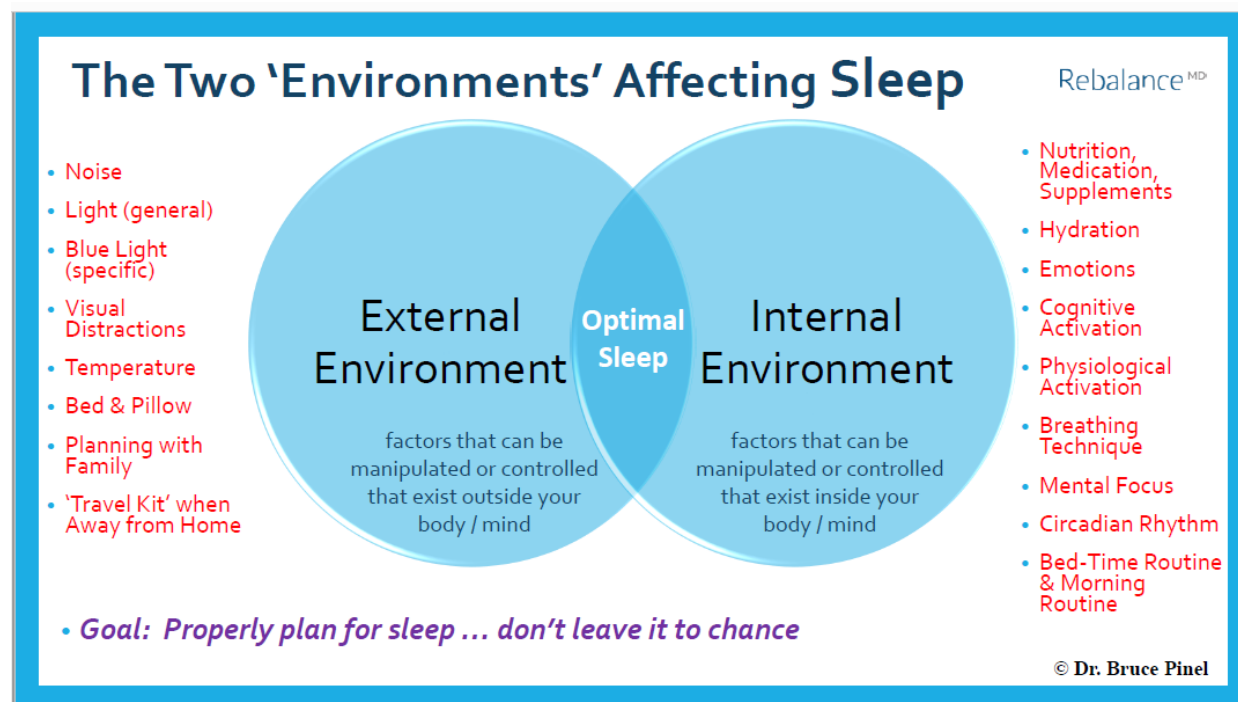
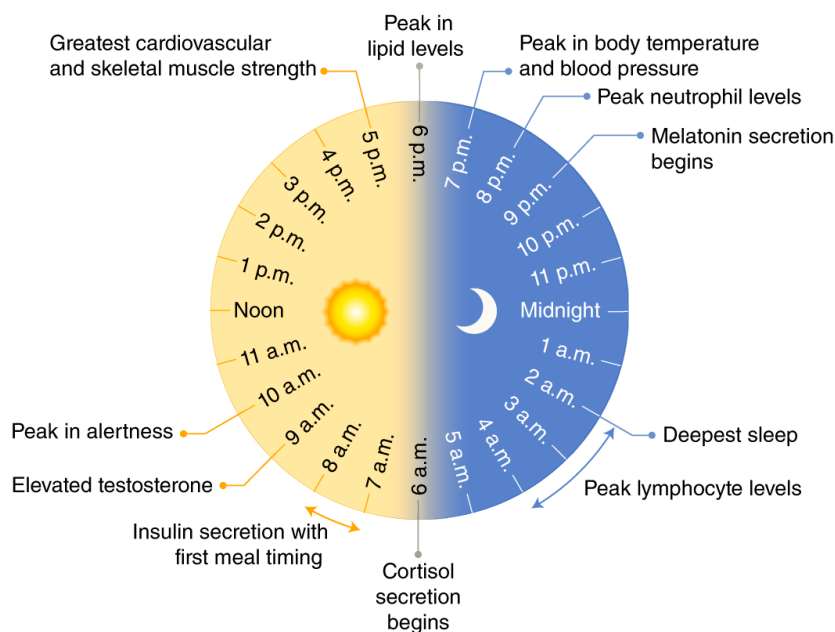
CIRCADIAN RHYTHM AND THE SLEEP-WAKE CYCLE

The time you are awake, or the Wake Cycle involves a large amount of collecting, storing and recall of data. The time you are asleep, or the Sleep Cycle portion of your day is for data editing, processing and consolidation. The Sleep Cycle is stimulated by the pineal gland, which releases the hormone melatonin. Melatonin tells us when it is time to go to sleep. Many of us think of melatonin as a sleep aide but what it does is stimulate your brain to move into the sleep cycle portion of the circadian rhythm. That is why melatonin is helpful for jet lag or shift work when your circadian rhythm is 'off schedule', but probably not a helpful sleep aide for insomnia or other sleep disorders.

SLEEP STAGES

- **Stage 1 & 2** are non-REM sleep. In these stages, the brain stays active and decides which memories to process, edit and consolidate and links them to established knowledge in your long term memory.
- **Stages 3 & 4** are also non-REM sleep, and may be consolidated in 1 Stage. These are the deep sleep stages for physiological maintenance, regeneration and & repair through release of Human Growth Hormone (HGH), triggered by melatonin release.
- **Rapid Eye Movement** – REM sleep is a dream state in which the brain is fully active but the body is temporary immobilized, akin to the brain 'testing' its programming software.

The Circadian Rhythm is the 24 hour daily physiological clock that your body runs by. Our circadian rhythm includes timed release of hormones such as cortisol that is key for adapting to stress and regulation of the parasympathetic (rest and digest) and sympathetic (fight or flight) nervous systems.



Noise	Need to control / minimize external noise (traffic, snoring, chatting in adjacent room, neighbourhood,	Ear plugs; background white noise, e.g. fan as a buffer to startling sharp noises
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Light	Darker is better	Eye shades; night lights for bathroom; consider curtains/blinds
Blue Light	This comes from tech – cell, tablet, laptops, TVs. Blue light is an irritant to the Pineal Gland in the brain, which is the part of the brain that regulates the release of melatonin If melatonin release is inhibited then sleep cycles are compromised and quality of sleep suffers Lack of melatonin inhibits the release of HGH (Human Growth Hormone) which is essential for tissue repair. Tablets & Smartphones are estimated to delay sleep cycle between 60-90 minutes, and disrupt quality of sleep cycles.	Have another light source on in the room = low tech Put device away early & away from you = pragmatic
Visual Distractions	e.g Clock – time can spiral into thought distortions, catastrophizing	Turn your clock away or cover the display so you are not distracted by the light or knowledge of what time it is = pragmatic • wash cloth / coaster to block display = low tech
Temperature	Cooler is better, ideal temperature is between 20-22°C (68-72°F). Cooler minimizes sweat loss / dehydration during the night.	fan = low tech (& is also a source of white noise)
Pillow & Bed	1/3 of your life will be spent in bed and bed and pillow quality are critical but more expensive doesn't always mean better for you.	Use pillows to adjust or control sleep posture (i.e., under your knees, by your side to prevent rolling, etc) Using an arm band with golf band to prevent you from rolling onto painful side.
Family & Roommates	Other people will have different needs and not understand what your sleep needs and sleep environment needs are.	If noise or other distractions in the household are an issue, openly discuss your needs, and those of

		others, while collaborating on how to optimize the External Sleep Environment = pragmatic
Nutrition, Medications, Supplements	Although individual tolerances vary, it is generally recommended to avoid caffeine 3-8 hrs before Bedtime. Caffeine is in the obvious sources like coffees, teas, and colas but it is also in decaf beverages, chocolate & in some headache or over-the-counter medications (as well as potentially other stimulants) Most pain medications will have a range of time in which they are effective	Caffeine and sugars need to be strategically controlled / monitored = pragmatic. Consult with a GP or Pharmacist about the medications you are taking to plan the ideal time to take them = pragmatic Check the ingredients on supplements you are taking. Sleep medications should be discussed with your GP as a consideration in addition to but not as a substitute for addressing your environment.
Hydration	Both dehydration and over/late in the day hydration can disrupt sleep through dry mouth or need to urinate through the night	Be diligent with your fluid intake early in the day and reduce fluid intake after 8pm =pragmatic
Alcohol	Alcohol may assist in falling asleep / passing out, but this back fires as isn't a healthy sleep strategy can lead to bad sleeping positions, reduces the quality of your sleep, and as the sedative effect wears off you are likely to wake up early / more often. Alcohol is a diuretic which may cause you to get up to urinate during the night	Do not drink to excess and plan for distributed sleep if 'celebrating'
Emotions	Intense thoughts or feelings can easily disrupt sleep and make it hard to fall asleep. Clinical depression or anxiety are well known to effect sleep.	Avoid emotionally charged conversation in / around bedtime = pragmatic If anxiety or depression is effecting sleep, make sure to discuss with your family doctor to elevate the role of the medication or medication changes.
Cognitive Activation	Cognitively activating activities such as emails, texting, video games, writing PROP manuals can activate the brain	Avoid cognitive activation within an hour of bed time. White noise also provides cognitive distraction to occupy thinking.

Physiological Activation	Vigorous physical activity will activate. Lack of physical activity may lead to a lack of natural fatigue.	Avoid vigorous exercise 2-3 hours prior to bed = pragmatic. A nice walk, yoga, or stretching is fine and may be a positive part of your bed time routine = pragmatic
Breathing Technique	Diaphragmatic breathing activates the parasympathetic system – primes the body for REST.	Routine of a few minutes of diaphragmatic breathing as you are ready to fall asleep.
Meditations	Guided or self guided meditations to focus on your body.	Practice a body scan, progressive muscle relaxation or passive muscle relaxation meditation.
Passive Thought Control	If our days have been busy, full or emotionally challenging, and we haven't made an opportunity for mindfulness meditation during the day, we can use this to calm thoughts at bedtime.	If an active mind continues to disrupt sleep, passively let thoughts leave as easily as they entered by refocusing on a short phrase e. g. "breath goes in, breath goes out."

The information on Sleep Stages, Circadian Rhythms and Sleep Environment was provided by Dr. Bruce Pinel, Psychologist. He provides private mental performance consulting at Rebalance^{MD} for patients recovering from injury or illness. www.drbrucepinel.ca

HEALTHY ROUTINES FOR SLEEPING

To help maximize the benefit of the circadian rhythm, try to get up at the same time everyday regardless of how poorly you slept. Having a morning routine of getting ready for the day – morning hygiene, dressing, breakfast – even if we don't have leave the house, gives the brain a signal that alerts it that is time to be active and energizes us.

Going to bed at the same every night with a bedtime wind down routine will send a signal to the brain that it is time to sleep. A wind down routine can take between 30-60 minutes and should involve avoiding blue light and calming activities. Staying up late can disrupt the natural circadian rhythm leading to poor quality sleep.

SLEEP DISTURBANCE DUE TO ARTHRITIS PAIN

Lotion is Motion – our joints, especially arthritic ones like to move. Stiffness and pain during periods of inactivity such as rest or sleep, is a common cause of sleep disruption for patients with arthritis pain. In addition to the environmental factors above, particularly planning around pain medications with your GP or pharmacist, there are some simple tips that can help if arthritis pain is causing sleep disturbance:

- Heat – such as a heating pad or bean bag
- Take a hot bath before bed
- Gentle stretches
- Progressive muscle relaxation
- Topical creams with menthol or capsaicin such as RubA535, Biofreeze, Salonpas

PROGRESSIVE MUSCLE RELAXATION

With regular practice you will increase the benefits of relaxation. Passive relaxation is a relaxation exercise that uses deep breathing and a body scan, taking about 15 to 20 minutes.

Get into a comfortable position. Close your eyes and concentrate on deep breathing for a few minutes. • Focus your attention on each body part (feet, legs, buttocks, belly, back, hands, arms, shoulders, neck, jaw, eyes, scalp). • Progressively tighten or tense up each area

Breathe into each area, connecting with the universe as you breathe out tension and breathe in relaxation. • You may wish to use relaxing music or utilize a pleasant scent such as a scented candle. • While you are relaxing, think of a special place in nature. Imagine what you see, hear, smell, taste and feel. Let yourself experience your special place through your senses. •

You may find these statements helpful by repeating them to yourself for each body part: “My.(name body part) is warm.” “My.(name body part) is heavy.” “My.(name body part) is relaxed.”

SLEEP RESOURCES

<https://mysleepwell.ca/>

Here is a wonderful article about sleep and mindfulness, with recommendations for YouTube meditations for insomnia: <https://www.lifehack.org/844530/best-guided-meditation-for-sleep>

CBT and Insomnia info: <https://www.mayoclinic.org/diseases-conditions/insomnia/in-depth/insomnia-treatment/art-20046677>

SMARTPHONE APPS FOR SLEEP

Calm – Is a mindfulness meditation app which has guided body scans, progressive muscle relaxation but also has guided sleep stories which may help ease into sleep.

Audiobooks – can be a helpful way to ease into sleep while keeping light low

INVITATION TO PRACTICE

Meditate daily for 15-20 minutes; use the progressive muscle relaxation meditation to aid sleeping

INVITATION FOR REFLECTION

Reflect on how you can optimize your sleep environment

EXTERNAL ENVIRONMENT	HOW CAN I OPTIMIZE THIS PART OF MY SLEEP ENVIRONMENT?
Noise	
Light (general)	
Blue Light(specific)	
Visual Distractions	
Temperature	
Bed & Pillow	
Planning with Family	
'travel kit' for away	
INTERNAL ENVIRONMENT	
Nutrition	
Medication	
Supplements	

Hydration	
Emotions	
Cognitive De/Activation	
Physiological Activation	
Breathing Technique	
Mental Focus	
Circadian Rhythm	
Morning & Bedtime Routine	

SESSION 5: PHYSICAL ACTIVITY, PACING, PREHABILITATION & PAIN

PHYSICAL ACTIVITY

Most patients participating in the PRO are awaiting surgery for joint replacement or other joint surgery for painful conditions. These painful conditions limit many patients' ability to be active. Many people with arthritis struggle doing their normal activities of daily living like cooking, shopping and dressing. Decrease in functioning and pain control are the main indications for surgery. Some people mistakenly believe that activity will further damage the arthritic joint and believe they cannot do any activity until after the surgery is complete.

Despite the limitations of pain and stiffness, it is still critically important to keep up some physical movement while awaiting surgery. Most of us know that exercise is important. But why is it so critical before surgery?

Activity keeps our bodies healthy in so many ways. It keeps our heart healthy, helps control blood pressure and blood sugar, keeps our muscles and bones strong and even helps regulate our sleep and moods. The dangers of bedrest are now so well known that this previously common "medical intervention" is now very rarely prescribed. People on bedrest rapidly lose muscle mass and bone density and are at increased risk for pneumonia and blood clots. Similar effects are seen in astronauts in zero gravity situations, such as on the International Space Station. The low gravity causes rapid decline in muscle and bone, and astronauts in space must exercise for 2-3 hours per day just to minimize the dramatic harmful effects of not loading their joints.

But what about people with joint pain? The first thing to emphasize is that even though movement can hurt, no further joint damage is occurring. Activity will not accelerate the damage or make surgery more difficult. In fact, the opposite is true. Maintaining some level of activity before surgery helps to maintain good muscle strength and flexibility, which make rehabilitation after surgery quicker and more complete. Improved muscle strength also takes pressure off joints and stabilizes joints. Keeping moving keeps bones strong and decreases the risk for osteoporosis and fractures. Physical activity also helps maintain a healthy weight and avoid weight gain. Research has now confirmed that regular exercise decreases the risk for arthritis and slows the progression of arthritis.

You may have heard the expression "Motion is Lotion". Joints are particularly sensitive to movement, or lack thereof. Moving a joint keeps the joint fluid circulating and is mandatory for nourishing the cartilage and bones. In fact, all the nutrition for joint cartilage comes through the joint fluid, not the surrounding blood supply. Joints that are not moved become stiffer and more restricted in their movement. This is why we have increased pain after sitting for some time and then standing or first thing in the morning. Our joint or synovial fluid become stiff during periods of rest and then needs to be warmed up again with movement so that it can do its essential lubricating function. Some stiffness in arthritis can be related to bony restrictions, but some is related to tightness of the joint capsule, ligaments, tendons, and muscles around the joint.

And what about the pain? Exercise for arthritic joints is one of the most successful ways to decrease arthritis pain. Many studies support moderate activity decreasing arthritis pain by up to 30%. Some arthritis specific exercise programs, like the GLA:D program for hip and knee arthritis show significant benefits in pain, function, and quality of life measures. Other activities like Tai Chi also show improved pain, decreased stiffness, and improved function.

As with all the topics we are reviewing in PROP, it's important to acknowledge our stress levels and mindset around activity. We can use relaxation breathing to prepare for activity by calming our nervous system and increasing our body awareness. We can use our breath to help move through a little pain as we get started. We do not intend for anyone to try to breathe through severe pain to suddenly increase activity levels! Instead of completely avoiding the pain or harshly pushing through the pain, use your breath to gently “nudge” the edge of the pain.

Being aware of our mindset and expectations is also important. Reassurance that movement is not causing damage can be reinforced by our health care team. Acknowledge that while we may not do the activities we previously could do, there are still some things we can do, and we can build on these possibilities to improve our health.

HOW TO INCREASE YOUR PHYSICAL ACTIVITY SAFELY

An important starting point is assessing your baseline of activity. What activities of daily living can you do? These include walking around your home, personal care, meal preparation and housekeeping. What activities beyond these are you doing now? Any activity such as walking, stretching, or light weights counts. Estimate how many minutes of the day you are currently active, in approximately 10-minute segments.

Once you know your baseline, you can aim to gradually increase your activity in small manageable amounts. It is generally recommended to increase your activity by no more than 5-10% per week. If you are currently doing 10 minutes a day of walking, next week you could try 11 minutes. That doesn't seem like much, but over time it adds up. Increasing activity slowly allows your body to adjust and adapt and builds success into your routine. Avoid the perils of doing nothing, but also beware the boom and bust cycle of doing too much all at once. Be mindful of your pacing. Slow and steady is the path to success.

Which activities are best? Whichever activities you can do and enjoy! Walking is available to most people in small doses and is helpful for arthritis and other persistent pain conditions. Swimming or water exercises can be helpful by taking the weight off joints but still building fitness and muscle strength. Stationary cycling or recumbent cycling are a safe and healthy activity and may be particularly beneficial for knee and hip arthritis.

Some activities like Tai Chi, Qi Gong, and gentle yoga for arthritis help improve strength, flexibility, and balance. They are particularly helpful for managing pain.

The RebalanceMD handouts for knee and hip replacement include specific exercises that will be done postoperatively. Starting some of these before surgery will help improve your postoperative recovery. Consider consulting with your physiotherapist or kinesiologist to get advice on what exercises are best for you.

PREHABILITATION RESOURCES

This section of the manual will provide links to many prehabilitation resources and ideas about how to incorporate exercise into your life.

PHYSIOTHERAPY, KINESIOLOGY, ATHLETIC THERAPY

These practitioners are experts in body movement, exercise, rehabilitation and pre-habilitation. A consultation will allow the practitioner to identify areas of need and then develop an exercise programme for you to work on at home. This could be done in 1-2 sessions, but regularly sessions can also be very helpful for those of that struggle with accountability or need more guidance and feedback. These services are not covered by MSP and are private pay. Pick a therapist that you have a good relationship with and is convenient for you. Ask your doctor or friends and family for recommendations.

GLA:D PROGRAM

The GLA:D programme is a validated exercise programme for patients with osteoarthritis. It was developed and studied in Denmark and found to improve pain and condition. The programme is a pay for use that is usually eligible for physiotherapy extended health benefit coverage as it typically offered through physiotherapists offices. It is a 12 session, 2 sessions per week programme that your physician can refer you to or you may self-refer. See their website for current offerings and locations.

<https://gladcanada.ca/index.php/find-nearest-glad/>

KNEE-KG ASSESSMENT

Many knee exercise programmes are quite generic and will help almost all patients. Sometimes, more specific exercise recommendations are required. The KNEE-KG is a dynamic assessment of your gait and walking with external sensors that guide a therapist to develop a personalized exercise prescription to address the areas of need. This can be booked through the physiotherapy department at RebalanceMD.

<https://rebalancemd.com/kneekg/>

SELF MANAGEMENT BC

Self-Management BC is service that offers free programmes to patients in BC to help improve chronic health conditions. There are online modules, telephone based coaching, with a variety of focuses.

<https://www.selfmanagementbc.ca/>

VICTORIA AREA ACCESSIBLE TRAILS

Walking in nature provides not just benefit from walking, but nature has proven benefits for mental health and calming the nervous system. See this list of accessible trails in the Capital Regional District for some ideas of trails that are near you. Check out your local areas resources for recommendations near you.

<https://www.crd.bc.ca/parks-recreation-culture/parks-trails/crd-regional-parks/park-usage-rules/accessibility>

This link will open the pdf to the guide.

https://www.crd.bc.ca/docs/default-source/parks-pdf/userfriendly-trails.pdf?sfvrsn=9108fc9_2

EXERCISES FOR HIP AND KNEE ARTHRITIS DR. FURLAN – 30 MINUTES

This is an excellent video present by Dr. Andrea Furlan, a Physical and Rehabilitation Medicine as well as pain medicine physician from Toronto. In this video, she explains the rationale behind movement and shows some very practical exercises for both hip and knee arthritis and how and when to do them.

<https://www.youtube.com/watch?v=3imMU8D1-k4>

EXERCISES FOR SHOULDER PAIN FROM ROTATOR CUFF DISEASE & SHOULDER BURSITIS– DR. FURLAN - 30 MINUTES

Another excellent video by Dr. Andrea Furlan on rotator cuff disease exercises. These exercises may increase pain from osteoarthritis so check with your doctor to make sure they are appropriate for your shoulder if you are not sure what the cause of your pain is.

<https://www.youtube.com/watch?v=KM36zdNUzZk>

PULLING QI – QIGONG INTRODUCTION – 9 MINUTES

This is a helpful visualization, healing energy practice that is focused on the knee but could easily be changed to most affected body parts.

<https://www.youtube.com/watch?v=fJGA3E2yyvM>

INTRODUCTION TO QIGONG – 30 MINUTES

This video introduces the practice of QiGong and is a standing practice of a half hour duration. It is not arthritis focused so may not be suitable for all patients.

<https://www.youtube.com/watch?v=lyINAjEoTIs>

QIGONG FOR SENIORS – STANDING OR SEATED – 20 MINUTES

This is an introductory QiGong video that demonstrates both seated and standing versions of the practice.

<https://www.youtube.com/watch?v=MASRvOPXhZM>

TAI CHI FOR ARTHRITIS DR. PAUL LAM-50 MINUTES TOTAL

Dr Lam is a General Practitioner/TaiChi expert that gives information on Tai Chi practice for Arthritis, recommended by the Arthritis Foundation. Although this video is long, there are 6 individual lessons within the video that can be accessed individually.

<https://www.youtube.com/watch?v=tAOuEpa01j4>

TAI CHI FOR ARTHRITIS PART 2 DR. PAUL LAM – 10 MINUTES

This is the second portion of this series for arthritis and advances the practice.

<https://www.youtube.com/watch?v=fAa84WsUmno>

TAI CHI/ QIGONG INTRODUCTION – 50 MINUTES; 10 MINUTE WARM UP; 30 MINUTE PRACTICE

This is a video from BodyWisdom Yoga and Wellness that introduces very slowly and gently the arts of Tai Chi/qigong. I found the pace very manageable and the facilitator explains the movements well and slowly.

<https://www.youtube.com/watch?v=bcpeINJTDbY>

DR. AUNG – ONLINE QIGONG VIRTUAL SESSIONS

This is a medically based QiGong practice with introductory zoom sessions – scroll down to Victoria section for local times although all sessions are run virtually at present.

<http://www.aung.com/6-health/qi-gong>

CHAIRYOGA - YOGAVISTA YOGAJP YOUTUBE CHANNEL

This site shows many options of yoga, many quite specifically geared to chair yoga or yoga for aging. See this link below for their broad offerings.

<https://www.youtube.com/channel/UCd676LpOiZ2fgLK97MfiNHA>

Chair Yoga Dance Sherry Zak Morris has a large number of energetic chair based yoga dances set to uplifting and light hearted music that makes you want to move with a smile. There are many available on her youtube Channel listed above. This chair yoga dance set to “I can see clearly now” that you can follow along with made me smile and move with joy in just 3 minutes.

<https://www.youtube.com/watch?v=7mwDjzXZ7Js>

For those of you that want a longer chair yoga session with more traditional yoga teachings, this longer but gentle class allows you to deepen your practice.

https://www.youtube.com/watch?v=Qm_c9DqUJR4

HYDROTHERAPY

Movement in water removes many of the forces that we feel when moving on land. This can be a wonderful way to get that Motion and Lotion! Some pools have hydrotherapy programs or aquafit classes designed for arthritis or seniors. Please check your local community's recreation guide to determine what the local resources are. In Victoria, many patients enjoy the Esquimalt pool as it has warmer water and a lazy river that allows for gentle resistance for water walking.

PRE-HABILITATION EXERCISES TO PREPARE FOR SURGERY

After your surgery, you will be doing rehabilitation exercises as guided by your doctor, under the supervision of a physiotherapist. The rehabilitation plans have been developed and use as a standardized approach that is suitable for most patients. Different exercises will be appropriate at different times after surgery. Please don't do exercises sooner than guided by your doctor or therapist.

You can practice the exercises prior to surgery as part of your prehabilitation programme.

FOR HIP REPLACEMENT PATIENTS

Rehab Exercise Videos for weeks 3-6 after surgery:

<https://www.youtube.com/playlist?list=PLbDntKN5EzjDWUN4db4KyBYY4VUAyhGws>

For Weeks 6-12 after surgery:

<https://www.youtube.com/playlist?list=PLbDntKN5EzjDwwCCe6O0YgByGqYoe6QJB>

For Weeks 12+ after surgery:

<https://www.youtube.com/playlist?list=PLbDntKN5EzjBskNtpYQ4mzHkB9ePKBbeZ>

FOR KNEE REPLACEMENT PATIENTS

For Week 1 after surgery

<https://www.youtube.com/playlist?list=PLbDntKN5EzjDDcPx9XfSg6ezmgBOsoDsI>

For week 2 after surgery

<https://www.youtube.com/playlist?list=PLbDntKN5EzjDyswWYc1rle-6SUZRwf55P>

For Week 3 after surgery:

<https://www.youtube.com/playlist?list=PLbDntKN5EzjDx2PHFeBANjQ6JHAKBFMQM>

FOR SHOULDER REPLACEMENT PATIENTS – SEE PAGE 11 OF THE SURGERY BOOK

<https://rebalancemd.com/wp-content/uploads/2021/02/2021-BOOKLET-Shoulder-w-pre-hab.pdf>

WALKING MEDITATION

Begin by arriving in standing position, noticing your feet on the ground and taking three deep relaxation breaths. Feeling the grounding of your feet as we prepare to walk.

Using an aide if needed, or sitting in a chair but visualizing yourself walking, plan a corridor for your meditation. It may be as short as 5 steps and then a turn.

As you begin, walk at a slow pace, being present with every step. Remembering, we are not going anywhere. Walking meditation is like any other meditation where our attention and focus is on the present moment. Begin by noticing your surroundings around you, sounds, light, temperature.

Now move into mindful awareness of your walking, noticing first the feeling of the feet on the ground. You may feel the heel as it strikes the ground, then the rolling onto the front of the foot, then the lifting of the heel and finally lifting of the whole foot as it leaves the ground. The pattern repeats. Heel strike, heel lift, swing the foot.

Your arms may be at your side, clasped behind or front, holding an aide. Do whatever is comfortable.

Some may prefer to name their steps – left foot, right, left, right.

And for others, you may choose a grounding affirmation – I am here. I have arrived.

Whatever your mindful focus is on, your mind will wander and if thoughts come, simply try naming them -for instance, planning, remembering, worrying and return the focus to your walking.

You may feel pain when you are walking. We invite you to gently explore your pain – be curious about it, notice it. Where do I feel the pain? What part of my knee? What part of my step? Can I direct my breath into the pain? If I take a longer or shorter stride how does my pain change?

PACING ACTIVITY LOG

Many patients with arthritis will report that if they ‘over do it’, they pay for it that night or the next days. Most patients will have a window of activity that they can tolerate and if the activity goes

beyond that, there will be resultant pain and stiffness. Often, when we are having a good day, we will be tempted to just 'keep going' and tackle all those tasks that were pushed aside during a flare up. This can lead to a "boom and bust" cycle of movement and often results in a pain flare up or patients 'crash' with pain or fatigue.

We need to budget how much we use our arthritic joints wisely – this is like any budget, where we plan to spend our budget on our "need-to-do" activities first. Our "want-to-do" activities may follow if there is room left in the activity budget. This may involve planning our activities over the course of a few days or a week to make sure that we don't 'blow the budget'. Most budgets involve a 'contingency' – around 10-15% of the budget to allow adjustments for unexpected expenses. When you plan your activity expenditures, make sure you leave some activity reserve unspent so that you can use it for things such as the last minute trip to the grocery store because you ran out of milk.

Arthritis has a frustrating tendency to have good days and bad without telling us in advance whether Wednesday will be a good day or a bad. Plan your budget – but expect to be flexible because your joints may not be on board with your plan for the day and you may have to adjust the plan.

Weekly Activity Log

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
12:00 AM							
1:00 AM							
2:00 AM							
3:00 AM							
4:00 AM							
5:00 AM							
6:00 AM							
7:00 AM							
8:00 AM							
9:00 AM							
10:00 AM							
11:00 AM							
12:00 PM							
1:00 PM							
2:00 PM							
3:00 PM							
4:00 PM							
5:00 PM							
6:00 PM							
7:00 PM							
8:00 PM							
9:00 PM							
10:00 PM							
11:00 PM							

INVITATION TO PRACTICE

This week we invite you to meditate for 15-20 minutes daily. Try a walking meditation or visualize a walking meditation from a seated position. Simply try a walking meditation on your way somewhere.

Continue to explore the body scan meditation to increase your bodily awareness.

INVITATION FOR REFLECTION

References have been included to educate and inspire you about safe ways to move. Start by figuring out what your baseline activity level is: how many minutes per day are you active? How many days a week? Aim to increase this by around 10% a week. Look through the resources that have been provided and explore that ones that sounded interesting to you. Make a SMART goal for physical activity, remembering some is always better than none.

SESSION 6: SOCIAL SUPPORTS & NETWORKS

WE ARE SOCIAL CREATURES

In our focus on resilience training, we have noted some of the areas that influence an individual's resilience: skills (practical things you can learn), self-efficacy (the belief that you can make positive change in your life), sagacity (or wisdom), and social supports. Having an effective social support network is one of the strongest predictors of resilience.

Numerous studies of social supports show measurable and significant effects on emotional health, physical health and even longevity. Supportive connections can decrease our blood pressure and risk of heart attacks, help cancer patients live longer, decrease the risk of dementia, minimize depression, and decrease the risk for substance use amongst many other effects. Studies of people in the “Blue Zones”, geographic clusters where people have the most longevity, consistently show the presence of strong social supports and daily positive social interactions, regardless of other cultural differences.

Beyond physical health and longevity, social connections are often the most valued parts of our lives. When we consider what is most important to us, or what we are most grateful for, people are often at the top of the list.

We are social animals, and we have evolved physically and psychologically to thrive in connection with other people. In the resources, we have linked an inspiring Ted Talk by Susan Pinker on the impacts of our social lives to our longevity.

Sometimes we tend to believe that our support network is a fixed thing, and we can't do anything to change it. However, like resilience itself, improving social interactions and optimizing our support network are attainable goals.

Social interaction refers to all the contacts you have with any people in your life, from your closest friend to a stranger you smile at in the grocery store. Many of these interactions benefit us on an emotional and physical level, with measurable effects on mood, cognition, physical health, and neuroendocrine effects such as increased oxytocin and dopamine, and decreased cortisol levels. Now more than ever, we are aware of how important social interactions are. Connecting with others may require more planning and effort, but remains key, whether we connect in person, by phone, or on a computer.

Social supports refers to those social interactions where the other person has the intention to have a positive influence on your life. There are several different types of social supports, all of which are valuable.

Emotional support is often the first type of support we consider. This is the compassionate listener who is willing to hear your emotions positive or negative. Sharing the experience of your life with someone is hugely valuable.

Instrumental support refers to the practical things that someone can do to help you. Driving you to an appointment, making a meal, fixing your computer, or bringing you groceries are all examples of instrumental support. Performing your joint replacement is also in this category!

Informational support is when someone shares information that is helpful to you. This may be your medical team explaining a health condition, a friend sharing an experience and what helped them through it, or someone advising you where to get the help you need.

Appraisal is a type of support that we don't think of as often. This is the valuable "mirroring" that those who know you well can provide. Friends may remind you of your best qualities, the skills you already possess, or even how you got through a previously difficult time. Accurate mirroring helps clarify our definition of ourselves, which helps us move forward in a positive way.

Here's a funny video contrasting emotional versus informational support:

"It's not about the nail"

<https://vimeo.com/66753575>

One challenge many of us face is using the support network that we already have. Family and friends may be willing to provide support but not even realize support is needed, or what type. Making a specific detailed request can go a long way. For example, saying "can you help with driving?" Is very different from saying "can you help by driving me to my physiotherapy appointment on April 2?"

For those who have a limited local support network, planning for support through community resources or private care is essential. Only you know what supports you need while waiting for surgery. After surgery, everyone needs to plan for supports for 4-6 weeks. You will need a driver to take you home from hospital, a driver to take you to 3-4 physiotherapy visits and 1-2 surgical follow up visits, and assistance with meal preparation and shopping. Others may need further supports such as housekeeping and personal care.

Most important is to have someone who can be your emergency backup, your "go to" person who you can call at short notice. This can be a friend, family, or hired support person.

It may be surprising, but the hospital will not set up any home care for elective surgery patients, such as joint replacements. You are required to plan for yourself before your surgical date.

Thinking of supports related to osteoarthritis challenges and surgery and examining your support network may prompt some to consider if they need to bolster their support network. Often when we are ill or feeling down, we tend to withdraw from social contact. This can contribute to others withdrawing from us thinking we don't want contact. As we become more isolated, we are more likely to have worse mental and physical health issues.

Some of this withdrawal can be related to changing identity with our changing health situation. Perhaps you are the person everyone else has leaned on, or perhaps you connect with others around physical activities that are difficult for you now.

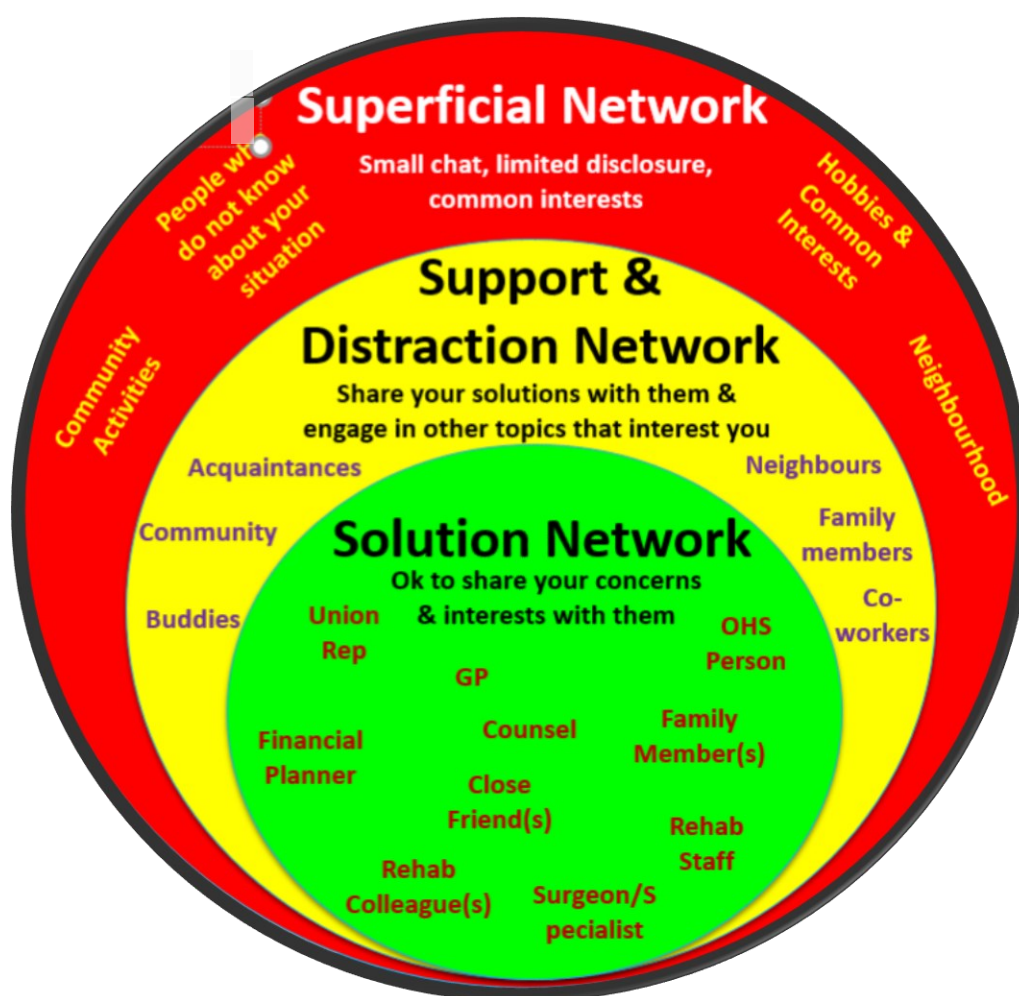
The session will address some of these issues and encourage you to consider that you are not your illness, and you are not your pain. Joint pain may be a part of your life, but it is not your whole life. What do you value in your life, and how can you expand on that? How can you navigate communication that acknowledges the health challenges you face, but allow space for there to be more than that in your life?

As you consider what you value, what you enjoy, and what interests you, consider expanding on these areas. Connecting with others over shared interests can be a great way to build your

support network. Even with pandemic restrictions, clubs are available for every area of interest, whether it is classic cars, gardening, learning to draw, sing or try a new instrument. Supporting your community can be a way to feel good about what support you offer others and connecting with new people at the same time. Volunteering is always needed, and acts of kindness (random or otherwise) have a positive impact on both parties.

Reaching out to ask for help is difficult for many of us. Consider instead reaching out to offer support: "I was thinking of you. I hope you are doing well." This is a much easier opening and may allow a natural opening for someone to ask how you are. We can practice and learn to skillfully manage talking about our illness/injury to make these interactions positive connections.

UNDERSTANDING YOUR SOCIAL NETWORKS



People in My Solution Network	People in My Support & Distraction Network	People in My Superficial Network

RESOURCES FOR LEARNING MORE ABOUT THE IMPORTANT OF SOCIAL CONNECTION TO RESILIENCE

ARTICLE FROM BERKELEY UNIVERSITY

This article describes how social supports impact your resilience.

https://greatergood.berkeley.edu/article/item/four_ways_social_support_makes_you_more_resilient

BOOKS:

Social Intelligence: The New Science of Human Relationships, Daniel Goleman

This book describes the notion that it is not enough to simply manage one's own emotional life. We also need to foster our connections with others. In short, social intelligence is about the ability to accurately "read" other people around us, as well as our social context – and act accordingly. Goleman shows that the way we engage with our social environment has profound consequences not just for our external success. It also improves physical and mental health.

The Blue Zones, Dan Buettner

This book describes the lifestyle patterns observed in the 'Blue Zones' geographic areas in which observes patterns of longevity area well beyond other parts of the world.

<https://www.bluezones.com/2016/11/power-9/>

Ted Talk Susan Pinker:

https://www.ted.com/talks/susan_pinker_the_secret_to_living_longer_may_be_your_social_life?language=en#t-950136

WEBSITES

<https://www.heretohelp.bc.ca/wellness-module/wellness-module-3-social-support>

HealthlinkBC guidance on social supports and support groups.

<https://www.healthlinkbc.ca/health-topics/uq4350spec>

BC SENIOR'S GUIDE:

This is a general guide to many of the unique aspects of aging that includes a wide variety of information on what supports exist and how to access those supports.

<https://www2.gov.bc.ca/gov/content/family-social-supports/seniors/about-seniorsbc/seniors-related-initiatives/bc-seniors-guide>

PRACTICAL INFORMATION ON GETTING ADDITIONAL SUPPORTS

Your navigator or surgeon's office will be able to provide you with a list of resources should you require external support. These are contained in the NJP Community Resources booklet. These are pay for use services and include services such as short stays at assisted living or nursing homes, home care, meal support, transportation assistance, pet care services, housekeeping. Please ask your navigator for further information on this list and identify areas in which you think you may require additional supports that your friends and family won't be able to do for you.

WALKING MEDITATION

Begin by arriving in standing position, noticing your feet on the ground and taking three deep relaxation breaths. Feel the grounding of your feet as we prepare to walk.

Using an aide if needed, or sitting in a chair but visualizing yourself walking, plan a corridor for your meditation. It may be as short as 5 steps and then a turn.

As you begin, walk at a slow pace, being present with every step. Remembering, we are not going anywhere. Walking meditation is like any other meditation where our attention and focus is on the present moment. Begin by noticing your surroundings around you, sounds, light, temperature.

Now move into mindful awareness of your walking, noticing first the feeling of the feet on the ground. You may feel the heel as it strikes the ground, then the rolling onto the front of the foot, then the lifting of the heel and finally lifting of the whole foot as it leaves the ground. The pattern repeats. Heel strike, heel lift, swing the foot.

Your arms may be at your side, clasped behind or front, holding an aide. Do whatever is comfortable.

Some may prefer to name their steps – left foot, right, left, right.

And for others, you may choose a grounding affirmation – I am here. I have arrived.

Whatever your mindful focus is on, your mind will wander and if thoughts come, simply try naming them -for instance, planning, remembering, worrying and return the focus to your walking.

You may feel pain when you are walking. We invite you to gently explore your pain – be curious about it, notice it. Where do I feel the pain? What part of my knee? What part of my step? Can I direct my breath into the pain? If I take a longer or shorter stride how does my pain change?

METTA MEDITATION

Loving kindness or metta meditation was introduced in Session 2 where we offered to metta to ourselves. In this session, we will expand the metta mediation to offer metta beyond ourselves. You may use the phrases below or substitute with other phrases that resonate with you.

“May I be free from fear.”

“May I be free from stress or from physical or mental suffering.”

“May I be strong, healthy and vital.”

“May I take care of myself with ease.”

“May I be happy.”

1. Focus your attention and awareness on the energy these words represent. Offer this metta to yourself first, and practice this until it feels natural and easy.

2. Once the metta to yourself feels easy, expand your circle of loving kindness to include beings in your life who you have easy feelings of affection and love. Family, friends, children, pets, etc. Continue to offer the same energy and words to these beings. Practice until this feels natural and easy.

3. Expand the circle in the same way to people you feel neutral about- peers, acquaintances, etc. Practice again until it feels natural.

4. Now practice metta with people who have challenged you in your life. Again, imagine an image of the person and offer metta. Sometimes this will begin as just words, because of the past strong emotions around this person or persons. Begin here.

5. Continue to expand this circle of metta to include any beings, human or otherwise. Metta does not depend on time or space and so offer this loving kindness whether the person is alive or not.

Metta Meditation is perhaps one of the most powerful practices for our time. It nurtures a sense of forgiveness and compassion which allows ourselves and others to heal and to flourish.

FORGIVENESS MEDITATION

Anger, hurt and resentment can cause suffering to ourselves long after the moment of feeling wounded. Forgiveness Practice is traditionally used at the beginning of Metta, and towards the end of your sitting meditation, as a means of loosening our emotional attachment to this suffering, to these wounds.

We often carry lots of emotional energy in these wounds and offering ourselves and others these words of forgiveness can release and heal this emotion.

Be gentle with yourself as you practice this important meditation. As Marianne Williamson offered “There is no peace without forgiveness”.

1. Begin with forgiveness. Within your head, repeat the affirmation,

“I forgive myself for any harm I may have caused, intentionally or unintentionally to myself or others in my life”.

Then “I forgive others for any harm or suffering they may have caused me, intentionally or unintentionally”.

“May I be forgiven for any harm I may have caused, intentionally or unintentionally”.

2. After forgiveness, allow love and well wishes to fill your heart and head.

Track 6 www.bcalm.ca

INVITATION TO PRACTICE

This week we invite you to meditate for 15-20 minutes daily. Return to the Metta Meditation and add the Forgiveness Meditation to build your own self-compassion. Practice the SOBER breathing space to use during a stressful encounter.

INVITATION FOR REFLECTION

References have been included to educate and inspire you about social connections and their value. Please work through these two exercises on self identity and your social networks examining the various support networks that you have and your various identities and values.

SELF IDENTITIES EXERCISE

If we hadn't met you at PROP, where else might we have met you or what else might you be doing?

This can be related to work, family, hobbies, social groups, volunteering, interests,

Who Am I?	
What My Other Roles?	
What My Other Responsibilities?	
What Other Identities?	
What are my hobbies?	
What are other social groups I belong to?	
What are my family roles? Volunteering? Friends?	

ACKNOWLEDGEMENTS

Our thanks to Dr. Bruce Pinel (www.drbrucepinel.ca), Sports Psychologist for his expertise and guidance in the preparation of this material.

SESSION 7: PRE & POST SURGICAL NUTRITION

In this session, we will focus on some of the specific nutritional needs around surgery and how optimize your nutrition for surgery. Relationships with food, diet, nutrition, weight gain, weight loss – these are all complex topics beyond the scope of this session. We want to give you information about your nutritional needs around the time of surgery and some practice advice about how to make sure those needs are met. As with all areas of surgical optimization, we can use mindfulness techniques to increase our awareness of what our body needs in each moment and to help us make skillful choices, with self-compassion, kindness, and an acceptance of imperfection.

WHY IS NUTRITION IMPORTANT AROUND THE TIME OF SURGERY?

Operations or surgery are a major stress to the body. This stress increases the demand for the body's nutrients and energy. We commonly divide these nutrients into three groups: proteins, carbohydrates and fats. These nutrients have different roles in the body but will all be used in greater quantities to help your body recover from the stress of surgery.

For instance, proteins are critical for the development and maintenance of muscle mass, but also importantly to make antibodies and other immune proteins. If our protein intake or stores are low, our bodies will lose muscle mass or our immune systems may be compromised. This can lead to problems with wound healing or infection as well as make recovery and rehabilitation from surgery more challenging as our muscles will be weaker. Other issues like increased fatigue or low energy are common in low protein states. In order to meet the body's increased need for protein, we need to make sure that we have adequate protein in our diet both before and after the surgery.

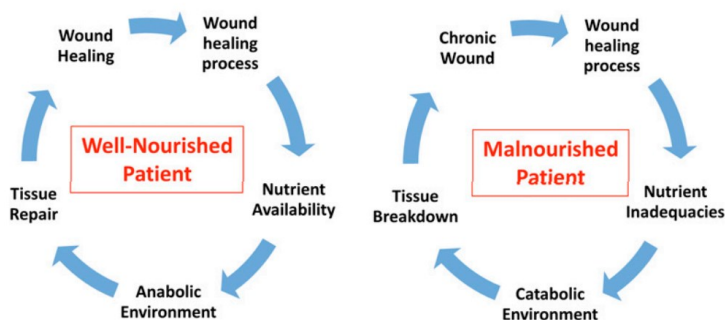
At the start of this programme, you were asked to do a nutrition screening questionnaire that asked:

- Have you lost weight over the last SIX MONTHS without trying to lose weight?
- Have you been eating less than usual for more than a WEEK?

If you answered yes to both of the questions, you may be at risk for malnutrition, and should undergo further nutrition screening. Malnourished people are at higher risk of complications from surgery and worse outcomes. You can call 8-1-1 and ask to speak to a Registered Dietitian, or talk to local outpatient dietitian about your nutrition if you think you are at risk.

Fig. 2

The normal phases of wound-healing in a well-nourished patient and a malnourished patient.



JBJS REVIEWS 2019;7(5):e3 · <http://dx.doi.org/10.2106/JBJS.RVW.18.00056>

CAUTIONS REGARDING NUTRITION INFORMATION

Patients with Diabetes: Should NOT carbohydrate load prior to surgery; Should carefully monitor blood sugars and review diet changes with their physicians. Optimizing diabetes control before surgery will significantly improve surgical outcomes. You may be asked to review your diabetes management with your GP or a internal medicine specialist before surgery.

Patients with Kidney or Renal Disease: Should discuss any changes in diet, such as increasing protein intake, with their physician. Some patients with chronic kidney disease need to restrict their protein intake.

RECOMMENDATIONS FOR PRE & POST SURGICAL NUTRITION

PROTEIN

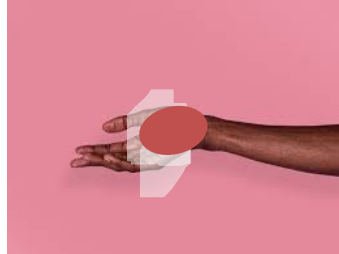
Protein intake should be optimized before surgery, especially in the 1-2 weeks before surgery and for 2-6 weeks after major surgery for most patients. If your body is feeling stressed, that's a cue that it needs protein!

For those that are interested, there are recommendations on protein intake based on your body weight. Protein intake of 1-2g of protein/ kg of body weight per day is recommended as a target, pre and post-surgery. For instance, if I weigh 175 lbs, I can divide by 2.2 to give me a weight of 80 kg. Multiply 80kg by 1 and 2 to find a target range between 80- 160 g of protein a day.

Our bodies can only effectively absorb and process a maximum of 35 g of protein at a time. If you eat more than 35 g of protein at one meal, your body will use around 35 g and the remainder will pass out of the body in the urine. As such, to meet the daily guidelines for protein intake, aim to include one source of protein at each meal and snack. A target of 25-35 g of protein per meal is a great way to do this.

How to know what 25-35 g of Protein Looks Like?

A typical serving size for a source of protein such as animal meats, eggs or legumes is around the size of your palm or deck of cards. For nuts, a serving size is around ¼ of a cup.



High Protein Foods

It is very helpful to understand what foods have a lot protein. These foods have a high amount of protein per serving.

- Animal meats: Chicken, turkey, beef, pork
- Seafood: Fatty fish (salmon, tuna, herring, trout), white fish, shrimp, shellfish.
- Legumes: kidney, white, black, and cannellini beans, chickpeas, lentils, peas, peanuts.
- Soy: Tofu, edamame beans
- Dairy: Greek yoghurt, cottage cheese, milk
- Eggs
- Nuts and seeds: Almonds, hazelnuts, pumpkin seeds

How Do I incorporate Protein into my Meals throughout the Day?

Planning to incorporate protein into each meal may be a change from your regular diet. Pick foods you enjoy that are high in protein to make this an enjoyable change. Try leaving out high protein snacks within sight so that they are easily available.

- Breakfast: Omelets, scrambled tofu breakfast wrap, natural peanut butter on toast, cottage cheese/ plain Greek yogurt with pumpkin seeds and berries.
- Lunch: Sandwiches with meat, vegetarian wrap with hummus or bean spread, Buddha bowl with edamame beans & chicken or fish.
- Snacks: Trail mix, roasted chickpeas tossed in chili seasoning & lime, cheese slices.
- Dinner: Meat-starch-veg dish, lentil rice, chili (vegetarian or beef).
- Smoothies: Add protein powder or Greek yoghurt to a smoothie. This can be sipped throughout the day.

What About Protein Supplements?

There are many commercially available protein supplements that you can use to increase your protein intake, should you struggle to meet protein needs with whole foods. Some products are marketed as 'meal replacements'. These meal replacements tend to be quite calorie dense. Please read the labels carefully to see how much protein is in the product. Products like "Ensure Plus" or "Boost Plus" have both extra protein and calories.

Protein powders are widely available also to use to increase your protein intake. Often these powders are added to smoothies or made as a standalone shake and are a good source of lean protein. Whey protein is generally well tolerated but there are many other sources such as pea protein powder. Some people find protein powders can upset their stomach, cause gas or other digestive complaints so you may have to try some different kinds until you find what agrees with you. You can also add protein powders to some baking recipes. There are many options!

Key Points on Protein:

- Optimize protein at least 1-2 weeks before surgery, 2-6 weeks after surgery
- Aim for protein at each meal throughout the day in a serving size around the palm of your hand for animal products or legumes, ¼ cup for nuts or seeds

CARBOHYDRATES

Carbohydrates or “carbs” are the foods that many of us love and associate with comfort food – like bread, noodles, pastries, baked goods and other starches and sweets. Carbohydrates can bring additional nutrients to the table as well, like the fibre, vitamins and minerals found in whole grains, fruits and dairy. Our bodies use carbohydrates as immediately available sources of energy in the form of sugars.

During recovery from surgery, our bodies will also need carbohydrates as a source of energy. This is particularly true immediately after the fasting period before surgery. You will receive specific advice from your surgeon, hospital or preadmission clinic about when to fast before surgery. Many patients will be told to have nothing to eat or drink after midnight the night before surgery. This is to make sure the stomach is empty to reduce the chances of complications from anesthesia.

This puts our bodies into a low energy state, right before a major stress. Instead, we can help prepare our bodies for this stress by carbohydrate loading prior to surgery. Drinking 2 glasses of juice (e.g. apple, cranberry) or a commercial pre surgery complex carbohydrate product such as Precovery, for instance at 10 or 11 pm before going to bed the night before surgery, can help our body have sugars available to use after surgery. This can help with post-surgical nausea and vomiting also. Carbohydrate loading is not recommended for patients with diabetes.

MICRONUTRIENTS

Other nutrition factors to consider are micronutrients. These includes vitamins and minerals that are present in our food or supplements.

Vitamin D

Vitamin D is an important vitamin for strong bones and many other body functions. Vitamin D is a vital micronutrient to reduce the risk of osteoporosis, or thin bones, which are more likely to fracture or break. Vitamin D is synthesized in our skin when exposed to sunlight. Because of lower light levels at our latitude in the Northern Hemisphere, most of us need a Vitamin D supplement. We recommend taking a Vitamin D supplement of 1000-2000 IU/day.

Calcium

Calcium is also important for bone strength and to reduce the risk of osteoporosis. Supplements have frequently been recommended, but recent evidence suggests dietary sources of calcium may be more beneficial and safest. Common dietary sources of dietary calcium are dairy (e.g. milk, yoghurt, cheese), dark leafy greens (e.g. kale, spinach, bok choy, chard) and almonds or almond milk. Aim for dietary calcium intake of 1200 mg per day. You can figure out what your calcium intake is using this calcium calculator available from Osteoporosis Canada.

<https://osteoporosis.ca/bone-health-osteoporosis/calcium-calculator/#page-1>

Iron deficiency and Anemia

Anemia is low blood hemoglobin. Hemoglobin is the protein that carries oxygen in the blood. Anemia can be risk factor for worse surgical outcomes. During surgery, you will lose some hemoglobin through blood losses, so we want to make sure that you start with a normal hemoglobin. Iron deficiency is a common cause of anemia. Joint replacement surgery patients will have screening bloodwork before surgery and advised if you have anemia.

Foods high in iron include:

- Red meat, pork and poultry
- Seafood.
- Beans
- Dark green leafy vegetables, such as spinach
- Dried fruit, such as raisins and apricots.
- Iron-fortified cereals (oatmeal, cream of wheat), breads and pastas.
- Peas.

Fiber

Fiber is perhaps the most underrated part of healthy eating. Getting enough fiber in your diet helps you feel full for longer, promotes healthy gut bacteria, decreases your risk of colon cancer, and decreased constipation. Most North Americans get substantially less fiber than recommended. Guidelines recommend 14g fiber per 1000 calories taken in. Most of us get about half of that. Increasing your fiber intake around surgery is helpful to reduce constipation. It is common to get constipation around the time of surgery because of opioid medications and reduced physical activity and hydration. Fiber and hydration work together to help promote regular bowel habits. Remember to increase your fiber intake gradually to reduce the chances of gas or bloating as your body adjusts to the fiber. Fiber needs water to be effectively absorbed so adding a glass of water with your fiber will increase the benefit.

Many whole fruits and vegetables are high in fiber. Bran and oats are grains with higher fiber. Legumes such as lentils, beans and peas are very high sources of dietary fiber.

This list from the Mayo Clinic gives an overview of fiber content of some common foods.

<https://www.mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating/in-depth/high-fiber-foods/art-20050948>

Anti-inflammatory Foods

Much has been written lately about anti-inflammatory foods. Sometimes certain specific foods are promoted or discouraged. Overall balance of healthy foods is more important, and more attainable. Some foods are particularly associated with increased inflammatory markers in the blood. Simple or refined sugars, processed meats such as deli meats, and any highly processed foods are the most significant culprits. Minimizing intake of these foods will make you healthier and may also decrease pain associated with arthritis. In broad terms, healthier choices will include whole foods and meal balance.

PRACTICAL TIPS & TRICKS FOR NUTRITION AROUND SURGERY

Mindful Practice:

- Tune into your energy patterns: When do you have the energy to make a multistep meal; when is your energy level low and you something simple is best?
- Have balanced options ready that do not require much preparation.
- Make a list of 'go to' meals so that you don't have to think about the nutrition when your energy is low
- Make your "best meal" when your appetite is strongest

Planning:

- Batch cooking: Can you make multiple servings of one meal at one time to save on cooking later? Can you freeze portions so that you just need to reheat?
- Meal delivery services: There are a number private companies and organizations that offer prepared fresh meals that can be purchased, picked up or delivered. These include options like Chef on the Run or Meals on Wheels. Examples are listed in the Community Resources Guide available from Rebalance^{MD}.
- Grocery delivery services: Most grocery stores have delivery services available. It can be helpful to practice using the apps prior to surgery so that you have your shopping lists set up to make the process easier.
- Prepare meals when you have the most energy throughout your day.

- Friends & family love to help in practical ways. Is there someone in your Solution or Support Network that could help with making meals, shopping or delivery of food?

MINDFUL EATING

Most people would agree that healthy eating is good goal. Sorting out what that looks like can be more complicated than it initially seems. We are bombarded by conflicting nutritional recommendations, fad diet information, and advertising images encouraging us to eat whatever is being sold. In addition, most of us have a variety of emotional associations with eating quite apart from hunger and our bodies basic needs. We eat to celebrate, socialize, appease, comfort and for the pure enjoyment of food. Our eating patterns can be disrupted by pressure to look a certain way or be a certain size or by using food as coping mechanism for stressors in our lives.

A gentle approach to nutrition promotes healthy eating for every weight. No foods are labelled as good or bad, and everything can be included in moderation. We can use techniques of mindfulness to increase awareness of what our body really needs in any moment, and how our body responds to different foods. We can also look at our thoughts about food and how these thoughts influence our emotions and behaviors around food.

Mindful eating is similar to other mindfulness: being present and aware in our food choices, why we are eating and how we are eating. When we are famished and our hunger signals are very strong, it is much harder to make a skillful food choice. Just like when we are very angry, it is much harder to have a skillful response. However, mindful eating is a skill we can practice without the high stakes of striving for “perfection. Find what mindful eating strategies work best for you. The SOBER breathing space meditation (discussed below) can be used just as effectively when making a food choice as it can be used in a traditional stressful situation. Another simple mindful eating practice involves putting your hand on your belly before you eat. Do you feel your hunger here? Actual physical hunger is felt in your belly. Emotional hunger may be felt in your heart/chest or in your face and jaw.



MINDFUL EATING EXERCISE

If you've heard about mindful eating but aren't sure where or how to start, here are instructions for a brief mindfulness eating exercise.

The following exercise is simple and may only take a few minutes

Find a small piece of food, such as one raisin or nut, or a small cookie, anything that you feel like consuming. You can use any food that you like. Eating with mindfulness is not about deprivation or rules. To decide what food is calling you, consider what taste (salty, sweet, sour, savoury, bitter), experience (spicy, zesty, cozy), temperature (warm, cold, hot), and texture or mouthfeel (smooth, crunchy, crisp, chewy, crumbly) you would like to enjoy. Take inventory on how you are feeling (emotions, hunger, distractions), set an intention for this exercise, snack or meal.

Begin by exploring this little piece of food, using as many of your senses as possible.

First, look at the food. Notice its texture. Notice its color.

Now, you can explore the food with your sense of touch. What does this food feel like? Is it hard or soft? Grainy or sticky? Moist or dry?

Notice that you're not being asked to think, but just to notice different aspects of your experience, using one sense at a time. This is what it means to eat mindfully.

Before you eat, explore this food with your sense of smell. What do you notice?

Take a bite. Notice the sensory experience of chewing and tasting. You may find yourself chewing slowly. You may try closing your eyes for a moment to focus on the sensations of chewing and tasting, before continuing.

Notice the texture of the food; the way it feels in your mouth.

Notice if the intensity of its flavor changes, moment to moment.

It isn't always necessary to eat slowly to eat with mindfulness. Although, you may find it's helpful at first to slow down, in order to be as mindful as you can.

Now, take another bite.

How does this bite compare to the first? Is this food meeting the criteria you set at the beginning of this practice?

After swallowing, notice any aftertaste. Do you enjoy it?

Now that you've had a few bites, what do you enjoy about this food? What would you do differently next time? If you have had this food before – did you notice anything different about it with this mindful practice?

Using a mindfulness eating exercise on a regular basis is **ONLY ONE PART** of a mindfulness approach to eating. The liberating power of mindfulness takes deeper effect when you begin to pay mindful attention to your thoughts, emotions, and bodily sensations, all of which lead us to eat. Mindfulness (awareness) is the foundation that many people have been missing for overcoming food cravings, addictive eating, binge eating, emotional eating, and stress eating.

MINDFUL OR INTUITIVE EATING RESOURCES

Interested in learning more about mindful or intuitive eating? Here are some resources:

The Mindful Eating Workbook: Simple Mindfulness Practice To Nurture a Healthy Relationship by Vincci Tsui

The Mindful Dietitian www.themindfuldietitian.com.au

The Intuitive Eating Workbook: Ten Principles for Nourishing a Healthy Relationship with Food

SOBER BREATHING SPACE

The SOBER breathing space is a useful mindfulness tool when faced with a stressful situation or one in which you are best served to respond thoughtfully. Ideally, one can step away from the situation and take a few minutes before responding. Sometimes, stepping away is not practical. However, taking less than 10 seconds, to Stop, very quickly observe that this is a situation which requires a skillful response, taking 1-2 breathes and then proceeding has already allowed you to respond instead of react.

- S- Stop: In a stressful situation, remember to stop and begin by taking 2-4 deep relaxation breaths
- O-Observe. Observe the sensations in your body, mood, emotions.
- B-Breath. Settle your attention on your breath for 1-2 minutes.
- E-Expand. Expand your attention to the rest of your body and experience.
- R-Response. Respond (vs react) mindfully, with awareness of what is needed in the situation and you can best skillfully speak or act

NUTRITION RESOURCES

Island Health Nutrition Services: Island Health has nutrition and dietitian services that can provide group or individual assessment and counseling on nutrition and diet. These resources vary over time and vary depending on what part of the island you live. Particularly with the COVID pandemic, services are variable. Your primary care provider or specialist physician can make a referral if there are specific nutrition concerns to address such as diabetes or under nourishment.

8-1-1: HealthLink BC Dietitian is available to take your call from 9am to 5pm. Simply Dial 8-1-1

Canada's Food Guide has developed practical, easy recipes that can serve as inspiration for delicious, healthful meals.

<https://food-guide.canada.ca/en/recipes/>

INVITATION TO PRACTICE

This week we invite you to meditate daily for 15-20 minutes and practice these meditations:
SOBER Breathing Space
Mindful Eating Meditation

INVITATION FOR REFLECTION

Examine your current nutrition. Do you have risk factors for being malnourished? Examine your diet and identify sources of protein. Consider planning some recipes that appeal to your palate and are sources of protein. Thinking about the pre surgical and post surgical period, can you do some meal planning that emphasizes high protein content meals that you enjoy that you can easily prepare or freeze in advance?

ACKNOWLEDGEMENTS

Other thanks and gratitude to Erin Harrison and Kiley Ketchum, Island Health Registered Dietitians for their expertise and assistance in developing this content.

SESSION 8: YOUR PRESURGICAL OPTIMIZATION PLAN**OUR SKILLS, TOOLS AND SUPPORTS MOVING FORWARD**

Throughout our sessions, we have covered a variety of topics that will give you the information needed to help you prepare yourself as best as you can for your surgery. We hope that the mindfulness and cognitive behavioural therapy tools will assist you in using that information to make choices skillfully, to make choices that serve your wellbeing. Some areas of our lives will benefit from more optimization than other areas. For instance, if you are sleeping well and awake feeling rested and with energy for the day ahead, you need not change anything. If it ain't broke, don't fix it. Other areas will need more of your attention, but be mindful of changing too much, all at once. When making changes, we recommend you prioritize or selectively choose one domain to optimize. We have included the SMART goals work sheet also, as a reminder of how to set not just a goal, but a SMART goal.

In this manual, we have also listed all the areas of resilience and presurgical optimization we have covered. We think of these as tools. We all have our favourite tools to use and different situations call for different tools. If we use a tool frequently, we become very skilled with that tool and when we need it, it is easy for to call upon it. Please take some time to develop your personal toolkit that will help you through your surgical journey. Practice the tools that have served you well so that they come easily to you.

Finally, as a supplement we have included a broad guide to some of the medications that you may encounter during both before and after surgery. This information is meant as a general guide and always, we would ask you to review any medication changes with your health care providers.

FINAL THOUGHTS

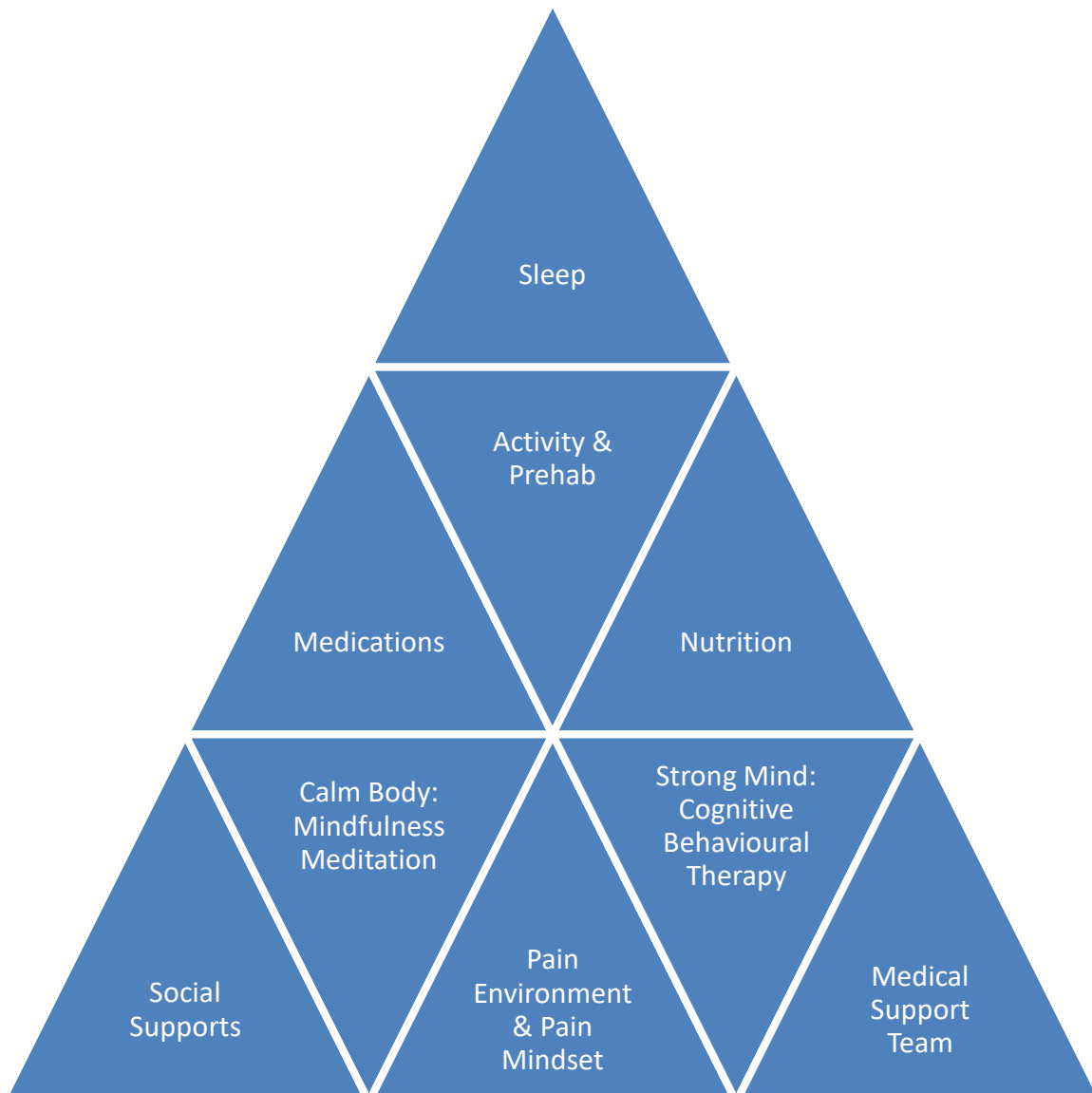
Thank you for joining us for the Presurgical Resilience Optimization Program and we wish you a smooth and safe surgical journey. We hope this program and manual have better prepared you for surgery and moreover, empowered you to be adept to respond to any challenge. No matter how resilient we are, we will all have times when we struggle and need support or inspiration. The skills that you have built through this programme will serve you in any time of need. We hope they serve you well.

“You can't go back to the beginning and change the beginning, but you can start where you are, and change the end”. C.S. Lewis

“Yesterday, I was clever, so I wanted to change the world. Today I am wise, so I am changing myself. “ Rumi, Persian Poet

Dr. Karen Johnsson and Dr. Sonja Mathes

PROP DOMAINS OF PRESURGICAL OPTIMIZATION



PROP Domains of Presurgical Optimization

Evaluate your own optimization across the domains. What areas need more optimization than others? What is the most important change for you to make? What areas are already optimized?

Calm Mind & Body: Mindfulness Meditation

Strong Mind: Cognitive Behavioural Therapy

Pain Environment & Pain Mindset

Sleep

Physical Activity & Prehabilitation

Pre & Post Surgical Nutrition

Social Supports

Medications

Medical Support Team

Other Personal Domains

SMART GOALS

Specific: What do I want to achieve?

Measurable: How will I know if I have achieved it?

Attainable: Is this a realistic goal? How will I get there?

Relevant: Why is this important to me?

Timely: By when or when will I do this?

MOUNTAIN MEDITATION

This mountain meditation is a helpful meditation for drawing strength in times of challenge or stress. It invites it you to draw from the permanence, the strength, the immutability of the mountain.

Bring your awareness to the sensations of your breath, and the gentle rhythm it is creating within you. “Letting it be, just as it is.” Each inhale and exhale announcing the next.

Expand your awareness to the sensations of your body. Sitting upright and with dignity — bring your attention to the surface beneath you and the support it provides. Root your body into its strength and become aware of your connection to it — complete, whole, and in this moment, you are grounded by its unwavering resolve.

As you sit there, visualize a grand mountain, whose peaks pierce smoky clouds and continue upward where the air is clear and the view is endless. A mountain with slopes that are both jagged and gentle; supported by a vast foundation, rooted deep in the bedrock of the earth. This mountain is a monument to all that is solid, grand, unmoving, and beautiful.

Are there trees? Does snow blanket its lofty heights? Perhaps waterfalls cascading as mist into an open sky?

However it is — let it be as it is: a perfect of creation.

Be this mountain, and share in its stillness.

Grounded in your posture, your head its skyward peak, supported by the rest of your form, granting you an awe-inspiring perspective of the landscape before you, behind you, and about you, which flows from your center into the distance horizon.

Be this mountain.

And take on its stability as your own. From the top of your crown, down your neck, and into the balance of your shoulders, like cliffs, descending into your arms and forearms, and coming to rest in the valley of your hands.

Be the mountain.

Your feet, legs, and hips its base — solid and rooted beneath you — a foundation, extending up your spine and abdomen: A core of stability.

A mountain, which witnesses the sun travel across the sky, casting light and shadows and colors across its consistent composure. Moment by moment, in the mountain’s stillness, the surface teems with life and activity: Snows melt, streams run down its face, trees and flowers bloom and die and bloom again as the wildlife returns and departs with the seasons.

Be the mountain, who will be called beautiful and inspiring, and dark and ominous, and knows that it is all of those things and less.

Be the mountain — which sits and sees how night follows day and back again. Which knows the sun by the warmth it brings on rising, and the stars by the way they show in a darkened sky.

Through it all, the mountain sits. Aware of the changes that each moment brings, around it and to it. Yet it remains itself. Still, as the seasons flow one into the other, and the air swirls from hot and cold, and the weather turns from tame to turbulent. Some so treacherous as to tear at its surface.

Still — none of this concerns the mountain, whose serenity is housed within, and cannot be disturbed by fleeting furor.

In the same way, as you sit in meditation, you can learn to experience the mountain as a means to embody the same centered, unwavering stillness and groundedness in the face of all that changes in your life — over seconds, and hours, and years.

Like the mountain you will experience the changing nature of your mind and body, and of the world around you. You will have periods varying in intensity — of darkness and light, of activity and inactivity, and moments that fill your life with color.

Through it all, be the mountain, and call on its patient strength and stability within you. Let it empower you to encounter each moment with mindful composure and compassionate clarity.

<https://www.youtube.com/watch?v=3Kg-Z8RliAI>

Jon Kabat-Zin's words adapted and reproduced from

<https://www.psychologytoday.com/ca/blog/my-brothers-keeper/201709/be-the-mountain-guided-meditation>

RESILIENCE TOOLS

MINDFULNESS AND MINDFULNESS MEDITATION:

One Breath
 Diaphragmatic Breathing
 Body Scan Meditation
 Walking Meditation
 Grounding Breath
 54321 Meditation
 Progressive Muscle Relaxation
 Metta Meditation
 Forgiveness Meditation
 SOBER Breathing Space
 Mindful Eating
 Mountain meditation
 3 Minute Breathing Space

CBT SKILLS:

Thoughts, Feelings, Actions Triangle of Experience
 Recognizing thought distortions
 Stop Spot Swap
 Avoid Avoidance
 Smart Goals

SLEEP:

Optimize your internal environment
 Optimize your external environment
 Meditations for Sleep

PAIN:

Pain mindset: knowing about pain reduces pain
 Recognizing what Dials up your Pain & How to Decrease the Danger in me signals
 Recognize what Dials down your Pain & How to Increases the Safety in me signals
 Meditations for pain
 Pacing of Activities to Avoid Boom & Bust Cycle

PHYSICAL ACTIVITY AND PREHABILITATION

Education about the pain-relieving effects of motion – Motion is Lotion
 Benefits of Presurgical Stretching & Strengthening to Ease Recovery
 Presurgical Exercise Options
 Review of Post Surgery Rehab Exercises to Prepare for Post operative Physiotherapy

MUSIC:

Relaxation playlist: to increase safety and promote relaxation
Activation playlist: to increase energy and promote movement and Energy

SOCIAL SUPPORTS

Identifying your Solution Network & Distraction Network
Fostering & Building Relationships in other domains of your life
Community Resource Information for those requiring additional supports

PRESURGICAL NUTRITION

Understanding the Stress of Surgery and how Nutrition Can Help
Understanding the importance of Protein, Carbohydrates and Fibre around the time of Surgery
Planning Meals for the Pre and Post Surgical Periods that will meet Nutritional and Functional Needs

MY RESILIENCE TOOLBOX		
TOOL	WHY THIS TOOL?	WHEN WILL I USE IT?

PROP MEDICATION INFORMATION SUPPLEMENT

Often multiple medications are required when you are dealing with pain and surgery. Sometimes they work better in combination. Other times, medications can have negative interactions with each other. Specific health issues can influence medication use as well. Please take this information as a general guideline to give you some baseline knowledge of the medications that you may encounter along your surgical journey. Please be sure to get information specific to your situation from your health care providers.

A few words about pain medication: more is not always better! It may be tempting to just take more and more medication while waiting for your surgery. There are some important precautions to consider. Please discuss medication use with your family doctor, nurse navigator, pharmacist, or surgeon for advice regarding your specific situation.

ACETAMINOPHEN (TYLENOL)

Acetaminophen (Tylenol) is a nonspecific pain reliever that is generally safe to use up to 3- 4 g (3000-4000mg) total dose per day. People with liver disease or those that drink heavily are the exception. Acetaminophen has a small but measurable effect on arthritis pain. Regular dosing, rather than waiting until the pain is bad, may provide more relief. Many combination medications such as muscle relaxants, opioid combinations (e.g Tylenol # 3, Tramacet), and cold remedies also contain acetaminophen, so use caution to not exceed your total daily dose. Most people can safely use acetaminophen extra strength 500 mg two tablets up to four times a day, or acetaminophen arthritis formula 650 mg two tablets up to three times a day. The arthritis formulation is the same drug but is extended relief so should provide a longer benefit of around 6-8 hours. This can be helpful for overnight pain relief.

NSAIDS: NON-STEROIDAL ANTI-INFLAMMATORY DRUGS

Anti-inflammatory medications include over the counter drugs such as ibuprofen (Advil, Motrin) and naproxen (Aleve) and other prescription medications such as celecoxib (Celebrex), diclofenac (Voltaren) and others. They are often referred to as NSAIDS, pronounced “en-saids” for Non-Steroidal Anti-Inflammatory Drugs. NSAIDS generally have a better effect on arthritis pain than acetaminophen. They also have more potential side effects. There are many different NSAIDs and none is superior to the other. However, different patients get different benefits and you may need to do some trial and error. You should never take two different NSAIDs at the same time.

The potential side effects of NSAIDs include risk of cardiovascular disease, like heart attacks, stroke or high blood pressure, a reduction in kidney functioning and serious stomach ulcer bleeding. NSAIDs must be avoided in people with a history of bleeding stomach ulcers, significant kidney disease, or serious heart disease. Patients on blood thinners like warfarin or other anticoagulants should not take NSAIDs because of the risk of bleeding. The risk of side effects increases the longer you take the NSAID, the more you take and the older you are. We often talk about taking the least effective dose for the shortest amount of time to reduce those

risks. Many people tolerate NSAIDs very well with no side effects and find them to be a very helpful option for pain control.

If you are taking an NSAID regularly, even if it is “over the counter” like Advil or Aleve, you should let your family doctor know so that you can discuss the potential side effects and be monitored if needed.

TOPICAL CREAMS AND OINTMENTS

Many topical creams and ointments are available which can be helpful to ease arthritis pain. They work best on joints that are close to the surface, such as in the hand or knee. Menthol and camphor formulations give a sensation of cooling or warmth which can ease pain. Capsaicin is derived from chili peppers and blocks pain signals. It can take a week or two to start to work.

Topical NSAID formulations, such as diclofenac or Voltaren can also be helpful. Topical NSAIDs can be purchased over the counter or prescribed as compound in higher dose strength. Because most of the medication works locally, side effects from oral use are decreased. A small amount of the medication is absorbed to your whole system however, and side effects can still occur.

All topicals can only be applied to healthy intact skin. Skin irritation can occur, and occasionally can be severe. If you are uncertain about use of topicals, please discuss with your doctor.

NARCOTIC OR OPIOID MEDICATIONS

Strong painkiller medications include codeine, tramadol, morphine, hydromorphone and oxycodone. These are opioids and are the same class of medications associated with the current opioid overdose epidemic.

New research shows that while opioid medications are helpful for acute pain, such as for a brief period after surgery, they are much less effective in pain that lasts longer. In patients taking opioids for several months, studies have shown that pain-relieving effect of chronic opioids is no better than the benefit from acetaminophen and anti-inflammatories.

In addition to their limited benefit when taking regularly, opioid drugs have many side effects and can cause serious harms including complications. Some of these side effects are well known, like constipation, nausea, bowel obstruction, sleep apnea, dizziness, confusion and increased falls. Other side effects are less well known but serious like an increased risk of fractures, new or worsening depression and anxiety, heart complications including heart attack, hormone effects including sexual dysfunction, and immune suppression. These are in addition to the serious risks of accidental overdose and addiction.

The reason opioids become less effective with regular use is because your brain will quickly make more opioid receptors, so now more drug is needed to get the same pain control effect. This is called opioid tolerance.

When patients are taking opioids regularly before orthopaedic surgery, studies support trying to reduce opioid doses even before the surgery. This results in significant decreases in

postoperative complications. Any changes in opioid medication dosing, increases or decreases, should be discussed with your doctor to minimize the risk of complications. Patients who have been regularly taking opioids may have withdrawal symptoms if they stop or decrease the dose too suddenly.

After surgery, you will receive opioid medication by mouth. You may receive both a long acting opioid and a short acting opioid. Most patients will receive only a short acting opioid, commonly hydromorphone (Dilaudid) or tramadol/acetaminophen combination (Tramacet). Long acting opioids, such as hydromorphone contin (Dilaudid CR) take a little longer to 'kick in' and provides pain control in the background and the short acting opioid can be used for 'break through pain' if the long acting opioid isn't providing enough relief. Often, you will here talk of 'staying on top of the pain'. We want you to treat your surgical pain early, before it gets to a 7,8,9 or 10/10. Once your pain is severe, it is hard to get on top of and we find patients are playing catch up and this can lead to needing more opioids than if your pain had been treated sooner and kept your pain in the 4-6/10 range.

OTHER PAIN CONTROL MEDICATIONS

Other medications are sometimes use not as direct pain relievers, but for pain modulating effects. They can help any type of pain and are especially helpful for nerve type pain. gabapentin (Neurontin) and pregabalin (Lyrica) are pain modulators and are often used after surgery in combination with other medications. Precautions to consider include sedation and dizziness. Both of these medications are usually started at low doses and increased until an effective dose is reached. There are other medications that can be used to modulate pain, such as tricyclic antidepressants such as amitriptyline and nortriptyline. These drugs are rarely used for depression currently, but at very low doses, they are helpful for chronic pain, nerve pain and to aide sleep. Duloxetine (Cymbalta) is another type of antidepressant than is helpful for persistent pain.

CANNABIS: CBD

Many people wonder about using cannabis for pain relief. Current research evidence on cannabis for musculoskeletal pain is quite limited and does not support cannabis use. Further studies are underway. Since cannabis is not regulated like a drug, concentration of the different components of CBD versus THC are highly variable, and not reliably reported. There are also a wide variety of cannabinoids found in various CBD preparations and they may have variable effectiveness. Cannabis use is associated with increased risk of heart attacks, panic attacks and paranoia, and worsening mental health outcomes. Cannabis is also addictive and about 10% of users are susceptible. Some people do find some benefit, however. If you are using cannabis, use compounds with higher CBD content and lower THC content. Start very low and go slow to avoid complications. Topical CBD creams and oils appear to be quite safe and may offer benefit in some patients.

CRYOTHERAPY: ICING

Another superficial treatment that many people find helpful is icing. Intermittently icing your joint can decrease pain and inflammation in a safe way. You can ice your joint for up to 20 minutes at a time and repeat several times per day. Many people find benefit from a cryotherapy or cold therapy machine, especially after surgery. These machines provide very effective cooling in pad that well molded to the painful joint.

JOINT INJECTIONS

Joint injections can be helpful to temporarily reduce pain, but they must not be done into the joint that is going to be replaced within 3-6 months of the joint replacement surgery, as this increases the risk of infection. Injections can give relief from acute flares of arthritis pain and can help delay the need for surgery in some patients. Types of injections include cortisone, viscosupplementation (hyaluronic acid) such as Durolane, Monovisc or Synvisc, or PRP (platelet rich plasma). Patients who have been offered joint replacement surgery may have already tried these injections or discussed them with their surgeon as treatment options to help reduce pain while waiting for surgery.

BLOOD THINNERS TO REDUCE THE RISK OF BLOOD CLOTS

After surgery, medications will be given to decrease the risk of blood clots in the legs or lungs. The type of medication and duration of use depends on your specific situation. Most commonly, you will be prescribed ASA (aspirin) to take once daily for 6 weeks. Because ASA can be hard on your stomach, you will also be given another medication to protect your stomach from the ASA, such as pantoprazole (Pantoloc). In some situations, you will be placed on a different medication which may be either a pill or an injection. This will depend on your personal risk of blood clot.