

Mindful Relief Fundamentals for Chronic Pain

By Tord Helsingeng / www.mindfulrelief.net

Learn more about pain science and mindfulness: www.mindfulrelief.net/articles

- You can ask questions directly in this document!
- You do not need to take notes along the way.

1. Basic pain science

Pain acts as if it is input (Descartes 1640)



Earlier, it was thought that pain worked "like a bell mechanism in a church."

The idea was that the pain comes from damaged tissue, and is reported to the brain.

In other words, pain was seen as input.

But reality does not fit the theory.



Some soldiers in World War II who came in for surgery after fighting at the front had terrible injuries, but the hospital was empty of painkillers. Therefore, they had to have surgery without any kind of anaesthesia. The soldiers reported **little or no experience of pain** from the surgery! Compared to the hell of being at the front, they were now in a safe situation, and

people cared about them.

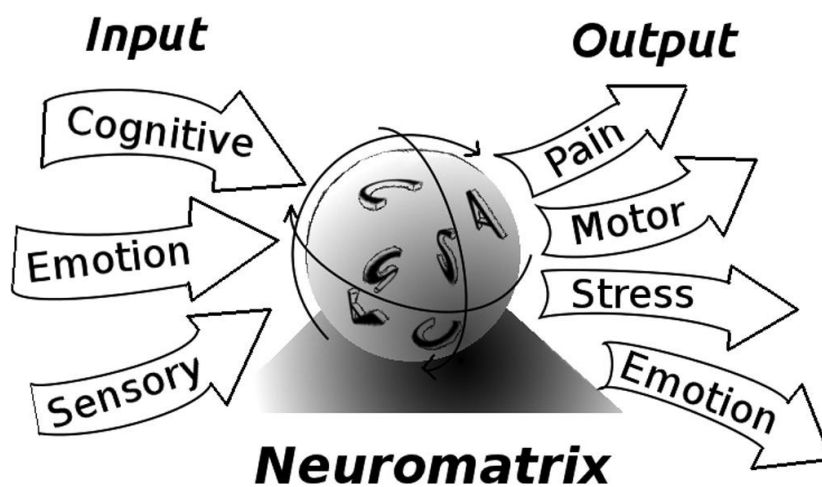
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5319646/>



'A builder aged 29 came to the accident and emergency department having jumped down onto a 15 cm nail. As the smallest movement of the nail was painful he was sedated with fentanyl and midazolam. The nail was then pulled out from below. When his boot was removed a miraculous cure appeared to have taken place. Despite entering proximal to the steel toecap, the nail had penetrated between the toes: the foot was entirely uninjured.'

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5471339/>

Today's understanding: Pain is output (Melzack 2001)



Chapter 1—A Conceptual Framework for Understanding Pain in the Human

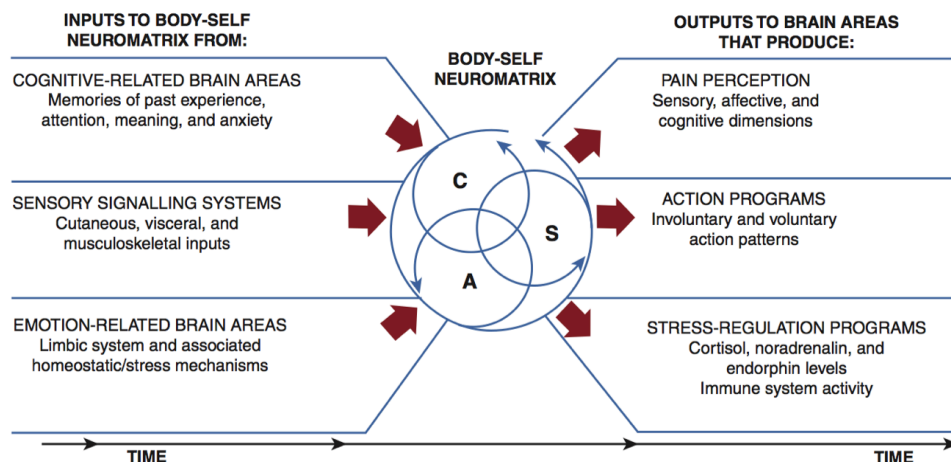


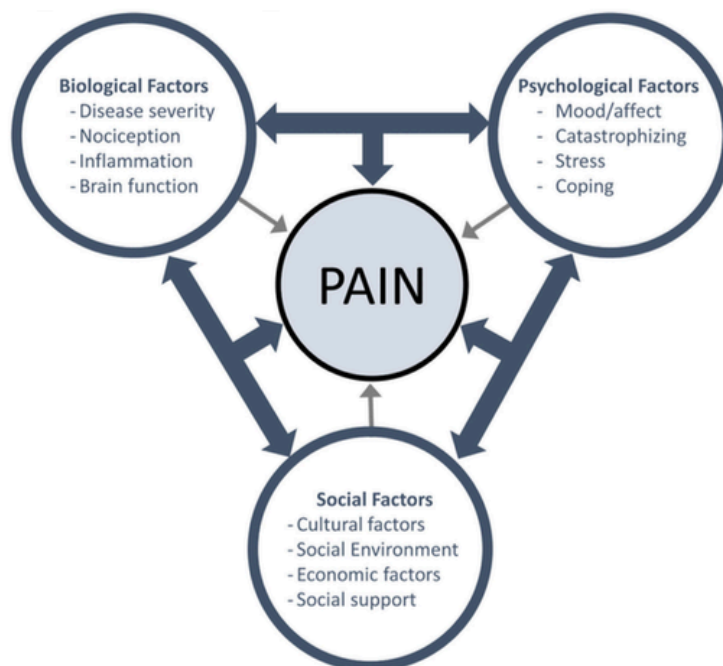
Fig. 1.3 Factors that contribute to the patterns of activity generated by the body-self neuromatrix, which is composed of sensory, affective, and cognitive neuromodules. The output patterns from the neuromatrix produce the multiple dimensions of pain experience, as well as concurrent homeostatic and behavioral responses. (From Melzack R: *Pain and the neuromatrix in the brain*, J Dent Educ 65:1378–1382, 2001.)

Conclusion

- All pain is output
- What we feel and think about the pain is crucial

○

Chronic pain has many levels: The biopsychosocial model



[Illustration by Ben Cormack](#)

Conclusion:

- Lessening pain involves the whole person and their whole situation
- All people are different and have different situations. Therefore all approaches must be tailored individually to them

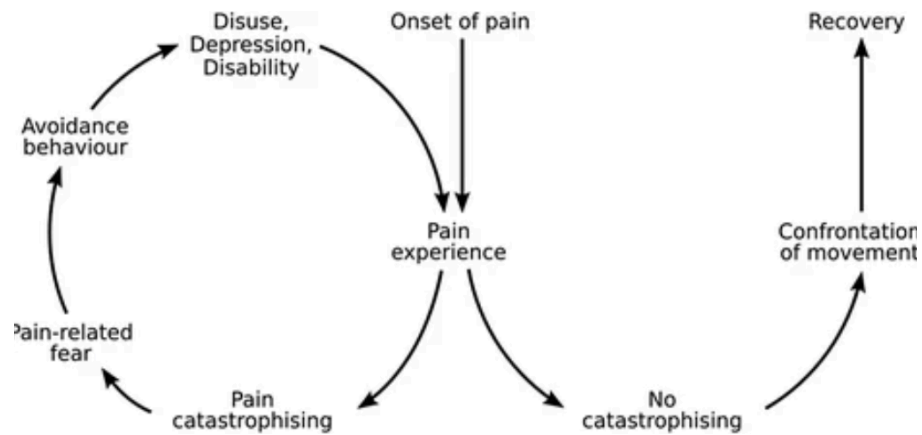
Main challenge: catastrophizing

At the cellular level, hidden from consciousness:

- Nociceptors and sensitization
 - Physical trauma causes the body to create new, more sensitive nociceptors
 - These new nociceptors are like overactive surveillance cameras with extra high alarm
 - In some cases, the pain persists for a long time. They are like an alarm lamp that lights up even if there is nothing wrong. In these cases, we can learn to deal with the pain so that it does not aggravate our lives.

On a psychological level, catastrophizing leads to a tendency towards:

- Less movement
- Depression
- Shame
- Loneliness
- Seeking comfort in unhealthy habits
- Passivity in our lives



Common, and often overlooked: Post-traumatic stress disorder

Every fifth person with chronic pain suffers from PTSD ([source](#))

Symptoms:

1. Re-experiencing trauma through memories, flashbacks and nightmares.
2. Emotional numbness and avoidance of places, people and activities that recall the trauma.
3. An elevated state of nervousness that leads to one or more of these:
 - Sleep disorders
 - Concentration difficulty
 - Irritability

If you think you have PTSD, please seek help.

- There is often a social component to PTSD, so it is beneficial to speak with another human being about it, preferably a professional
- There are psychotherapists working with trauma via videoconferencing
 - [International Society for the Study of Trauma and Dissociation](#)

2. Light in the tunnel: How mindfulness helps

What is mindfulness?

Mindfulness is three attentional skills working together: concentration power, sensory clarity and equanimity ([Shinzen Young 2012](#))

- **Concentration** - the ability to attend to whatever you deem relevant.
- **Sensory Clarity** - the ability to track what's happening in the moment.
- **Equanimity** - the ability to allow sensory events to come and go without resistance, neither holding on to them nor pushing them away.

What is the purpose of mindfulness training?

- By training mindfulness, you increase the base level of the three attentional skills
- The base level of these three combined is your everyday level of mindfulness, outside your mindfulness training sessions

Equanimity - a universal key to pain relief

Equanimity: the ability to allow sensory events to come and go without resistance, neither holding on to them nor pushing them away

Related to equanimity: Acceptance, non-judgment, non-resistance, non-striving, objectivity, kindness, love.

Not equanimity: Indifference, apathy, lethargy

Increased equanimity is our main tool for reducing catastrophizing, anxiety, depression, and increasing satisfaction and having a more active life.

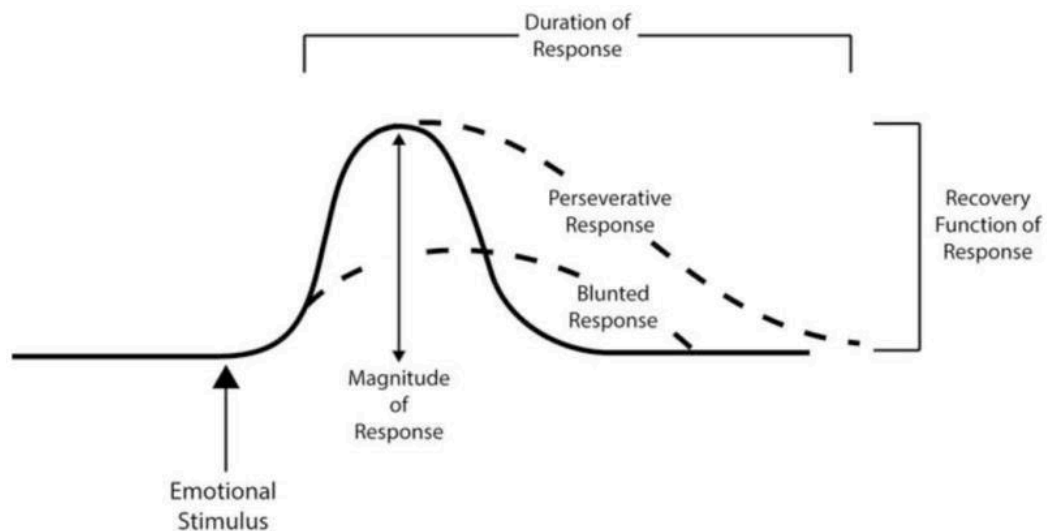
[*Moving beyond Mindfulness: Defining Equanimity as an Outcome Measure in Meditation and Contemplative Research*](#)

1. Equanimity Is An Emotion Regulation Strategy

- Equanimity involves the skillful process of maintaining calm and mental equilibrium in the face of stress and discomfort
- Equanimity can also promote a flexible mind in response to new and unexpected conditions

2. Equanimity Impacts the Time Course of Emotional Responses

- Equanimity can aid in the recovery from emotional or physical stress, helping the individual return rapidly back to a state of balance.
- The timing of recovery from a stimulus is a crucial component of emotion regulation



Generic representation of a typical physiological response to an emotional stimulus. Different parameters of affective style and chronometry are depicted. The magnitude of response corresponds to the height of the response at its peak. Duration is the time from the onset of response to the return to baseline. In this example, an equanimous response involves a rapid recovery function (solid line), in contrast to one that is either low in magnitude ("blunted" dotted line) or prolonged ("perseverative" dotted line)

For example, in response to a loud noise, there may be a similar initial startle response, but with equanimity it is less likely to be followed by anxiety and the person will quickly return to their regular state

What we can expect from a mindfulness practice

When the base levels of concentration, sensory clarity, and equanimity increase, it leads to a better experience of everyday life.

Biologically

- Mindfulness is strength training for the brain
- The brain and nervous system is strengthened and changes
- Mindfulness suppresses inflammation
- Mindfulness reduces stress hormones
- Mindfulness makes it easier to move the body
- ..to name a few

Psychologically and socially

- We experience more joy and satisfaction
- We experience less pain and suffering
- We get a greater ability to change our behaviour
- We gain greater self-insight
- We get a more friendly and loving attitude

Mindfulness opens up for a more fulfilling social life by

- Increasing kindness towards oneself
- Reduce shame
- Reduce social anxiety
- Healing trauma

How do we practice mindfulness?

To do strength training, we need weights

To train attention skills, we need something to focus on.

Something to

1. Concentrate on
2. Have sensory clarity with
3. Have equanimity with

We call this a focus object or meditation object.

The focus object can be **whatever** we experience in the **senses**, or in the **mind**.

Mindfulness can be practiced in any experience

- Because we can use the senses as focus objects, we can train mindfulness in all situations
 - All meditations are mindfulness exercises that strengthen the attentional skills
 - All activities where you focus on strengthening concentration, sensory clarity and equanimity are mindfulness activities

A library of mindfulness exercises for chronic pain

Sitting practices (or lying down)

- [Friendliness/loving-kindness meditation](#)
 - develop friendliness and kindness towards oneself, others, and all sensory experiences
- Mindfulness meditation
 - Use the senses as meditation objects
 - [Focus in](#) - Mindfulness of the internal sensory experience of Feel/Image/Talk
 - attention to the emotional response to the pain
 - [Focus out](#) - Mindfulness of the external sensory experience of Touch/Sight/Sound
 - work with the direct experience of the pain, possibly focus away from it (e.g. music meditation)
 - [Focus on change](#) - Mindfulness of how sensory events change
 - notice how the sensory experience of pain, discomfort, emotions, and thoughts change
 - [Focus on rest](#) - attention to restful states in the body and mind
- Breathing meditation
 - [Long breaths \(6 per minute\), combined with Non-Directive Meditation](#)
 - [Breathing as a quick fix for stress](#)
 - [Attention to breathing](#)
- Do nothing: Non-Directive Meditation

- [Do nothing](#) - train your equanimity to a deep level
- The form of meditation that **you like best**

Practice in motion

- Mindful movement
 - Feldenkrais / Somatics
 - Yoga with a focus on inner experience
 - Mindful yoga
 - Restorative yoga (some forms of yin yoga)
 - Iyengar yoga
 - Other yoga styles, depending on the teacher's approach
 - Taichi & Qigong
- Dance
- Swimming / water gymnastics
- The physical activity **you like best** done mindfully
 - Bonus: If the activity can put you into a flow state
 - Go carefully and gradually
 - Learn how much you can train before you have a flare-up
 - [Graded exposure](#)

Practice in everyday life

1. **Micropractices / microhits:**
 - a. Short meditation practice
 - b. under one minute
 - c. [Some examples here](#)
 2. **Background practice**
 - a. doing an everyday activity mindfully
 - b. focusing more on the activity than on doing a mindfulness practice
- [Self-care activities](#)
 - When you challenge the pain (a little)
 - Example: Back pain

- <https://www.nhs.uk/conditions/back-pain/treatment/>
- When you do something pleasurable
- When you are standing in line, waiting for the bus etc.

General guidelines

There are two basic types of practices : turn towards (e.g. discomfort) and turn away

- In the beginning and for some people it can be useful to *turn away* from discomfort
- For some people, *turning towards* pain and discomfort brings faster results
- Sometimes, in intense pain, turning towards is the only option
- Practices that work as turning away for some people, may trigger discomfort and trauma in others

Precautions for post-traumatic stress disorder

1. Find a practice that works for you
 - Practices that *turns away* is often helpful
2. Learn to adapt you practice
 - Slower tempo
 - Take breaks
 - Shorter sessions
3. Work together with a trauma-informed therapist and/or meditation teacher

Learn more:

[Trauma-sensitive mindfulness: PTSD and meditation](#)

Loving-kindness / friendliness meditation

One of the meditations that give the most apparent results in everyday life is what is often called loving-kindness meditation. In the ancient Indian language Pali it is called mettā, in Sanskrit maitrī. I prefer to call it friendliness-meditation.

Recommended teachers of loving-kindness meditation: Sharon Salzberg, Rob Burbea, George Haas.

When we practice friendliness as a meditation exercise, we do as in the other meditations in the meditation path [Nurture positive](#). We actively create positive emotions, and we make an effort to think positive thoughts.

The classic way to do friendliness meditation is to practice friendliness towards other people.

This friendliness spreads not only to others. We train our attitude and reframe what we experience as negative. With this new frame, we experience the content of the frame differently.

We can use friendliness meditation to work with

- unpleasant experiences
- other people's bad sides
- your own bad sides
- unpleasant memories
- diseases
- pain
- negative emotions
- negative thoughts

A lot of research has been done on metta-meditation, and it gives very specific results: Reduction in [stress](#), [chronic pain](#), [PTSD](#) and [migraine](#) and [increased gray mass](#) in brain areas that are responsible for regulating emotions. An interesting [study](#) shows increased positivity and experience of social connection after only seven minutes with new meditators.

Classic friendliness meditation

There are many ways to do friendliness meditation, and here is a variation of a [classic version](#) that I think comes via Sharon Salzberg.

During the meditation, you try to create the feeling of friendliness in the body, while you say kind words and create an inner positive image of the person. This is how you fill all your inner senses (feel/image/talk) as much as you can with positivity and kindness.

Many people think this is a technique that seems a bit artificial when we first try it, and I thought so at first too. But it does not take long before we notice how it affects us and those around us.

You may also find that the friendliness meditation is challenging as a technique. Many people find it difficult to create inner images, and the same goes for emotions in the body.

Remember then that the most important thing you practice in this meditation is your friendly attitude. Just the fact that you make an effort by practicing friendliness builds this attitude.

At the same time, because it requires active effort, this is a great concentration exercise. And it will be able to bring you into the deep and satisfying states we call the [jhanas](#).

Instructions

Sit comfortably. Let the sitting posture also be friendly to the body.

1.

Say the following sentences to yourself, while creating the inner image of yourself accordingly. You can let the good qualities of security, joy, health and peace appear as facial expressions, body posture, imagine situations you have experienced, etc.

Say to yourself,

"May I be safe" - and see yourself in your mind feel safe.

"May I be happy" - and see yourself be happy

"May I be healthy" - and see yourself be healthy and well.

"May I be peaceful" - and see yourself being peaceful.

2.

Imagine someone that is very easy to like. Traditionally, the suggestion is a good friend who has done you a favor, but it can also be a child or an animal.

Say to yourself

"May you be safe" - and imagine your friend feeling safe.

"May you be happy" - and see your friend be happy.

"May you be healthy and well" - and see your friend be healthy and well.

"May you be peaceful" - and see your friend be peaceful.

3.

Imagine a friend or other person that you are not quite as close to, but still easy to like.

Say to yourself

"May you be safe" - and see for your friend feeling safe.

"May you be happy" - and see your friend be happy,

"May you be healthy" - and see your friend be healthy and well.

"May you be peaceful" - and see your friend be peaceful.

4.

Imagine a neutral person, someone you do not know very well but see often. For example, someone behind the counter at the store. Or maybe a colleague or neighbor.

Say to yourself

"May you be safe" - and imagine the person feeling safe.

"May you be happy" - and see the neutral person be happy.

"May you be healthy" - and see the neutral person be healthy.

"May you be peaceful" - and the neutral person be peaceful.

5.

Imagine a complicated person, someone you have a difficult or challenging relationship with. Maybe someone you get angry, scared or sad about. In the beginning, feel free to choose someone who is not very challenging for you. Eventually you can choose more challenging people.

Say to yourself

"May you be safe" - and imagine the complicated person feeling safe.

"May you be happy" - and see the complicated person be happy.

"May you be healthy"- and see the complicated person be healthy.

"May you be peaceful" - and see the complicated person be peaceful.

6.

Imagine your kindness as a force field emanating from your body, waves or rays embracing an increasingly larger space. This field grows bigger than the room you are in, the whole neighborhood, the whole city, the whole country, the whole continent, the whole world, etc.

Say to yourself

"May you be safe" - and imagine everyone as safe.

"May you be happy" - and visualize them as happy.

"May you be healthy" - and visualize them as healthy.

"May you be peaceful" - and visualize them as peaceful.

7.

Go back to step 1 and finish with yourself

About the sentences

You can adapt the sentences you say to yourself to what you need.

- **Repetition.** Say each sentence several times.

- **Volume.** Maybe you say the sentences mentally, or perhaps you say them out loud.
- **Emphasis.** Maybe you say the sentences gently, or you find that you need more strength: "May! You! Be! Peaceful!"

Customize the words to your style

If you prefer, you can choose other words. For example, instead of "healthy", you may want to use "strong". Instead of "peaceful", you may want to use "live with ease".

Start where it is easiest

Many people find it difficult to be friendly towards themselves, but much easier to experience it when they think of someone else. If this applies to you, feel free to start with someone else. But remember to include yourself as well.

You can also move very slowly through the different stages. Maybe you just do friendliness meditation on a friend and yourself for a few days, and then expand to a neutral person. And maybe you stick to these for a few days before moving on to also bring in a difficult person.

Customize the images to the people

When you imagine people who are easy to love, try to imagine their faces and the facial expressions they have. If you find it difficult to imagine difficult people, try to *not* imagine their faces and see if it makes a difference.

Feel inward

Although the attitude is the most important, the friendliness meditation becomes even stronger and goes even deeper if you work with the feelings in the body.

When you meditate, notice - what kind of qualities do the friendly emotions in the body have? You do not have to use words, but try to have as much sensory clarity as you can with feelings and emotions.

Also, explore - what do you need to do to keep the feelings the same or make them grow? Do you need to practice equanimity with disturbing thoughts and emotions? Or relax a bit more? Or maybe you need to repeat the sentences with more strength? Or rest into more silence?

Remember that you are training attention skills

In kindness meditation, we do not let the thoughts and feelings of the moment be exactly as they are, as we do in other forms of mindfulness meditations, such as *Focus in* and *Focus out*. We are actively trying to change them. Nevertheless, as in all other mindfulness training, we also train to increase the basic level of concentration, equanimity and sensory clarity.

- **Concentration** is greatly strengthened by saying the right sentences, imagining inner images, and focusing on creating emotions in the body.
- **Sensory clarity** is increased by having as clear a perception as you can of the inner images and emotions. If you are distracted, sensory clarity also helps you to return to your technique.
- **Equanimity** is strengthened by leaving distractions and negative emotions and thoughts in the background, even if the meditation is in the foreground.

Friendliness meditation and PTSD

Friendliness meditation can have a good effect on PTSD, but it can be experienced as destabilizing to cultivate friendliness towards people that are complicated. If this happens to you, read more about how you can slow down the reaction in the article on trauma-sensitive mindfulness.

Try to do friendliness meditation as a micro-practice

This practice is especially good to do as micropractice, as part of daily life and when you are with other people.