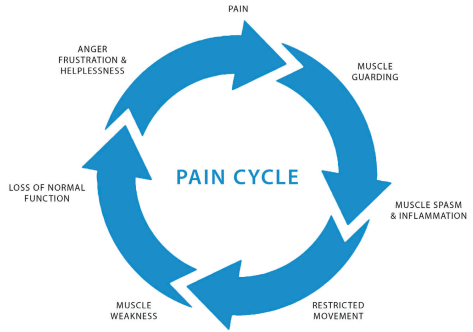


## Fear of pain cycle needs to be defused

Most musculoskeletal pain that becomes chronic could easily fall into this vicious cycle depicted in the drawing. The cycle of chronic musculoskeletal pain can become compounded by many factors, but let's take the original awareness of pain itself, as the signal that tissue has been injured. Keeping it simple, let us further assume perfect health and tiptop shape (before this occurred) leaving chronic disuse, poor posture and a weak, poorly aligned core, out of our example.

In a strained soft tissue injury, local pain signals our brain almost immediately, initiating muscle guarding as a protective manoeuvre. Next comes the additional cascade of sensations that arrive when our muscles spasm in response, as we continue to move other parts of our body, even while protecting our injured area. Very quickly we become conscious of how interconnected our movements actually are. The body settles into a posture that effectively guards and protects the injured area. Meanwhile, inflammation sets in with other action on the cellular level, like a janitorial crew rushing in to deal with a mess that the body recognizes shouldn't be there. The body is very efficient in this manner, and local clean-up is its initial priority.

The relief that this immediate restricted movement gives us actually lights up some of the pleasure centres of our brain, as we feel the rush of ease that initial immobility can bring. We quite naturally restrict our movements and hold the injured part tenderly. This can quickly and unconsciously become habitual. Muscle weakness then develops, and we subsequently find ourselves losing functional capacity, which limits what we can do. Once we arrive in this spot, frustration is a natural response. How can such a minor injury make our day so difficult?

One of the biggest difficulties people run into is that their brain is evolutionarily wired to avoid pain. Avoidance leads to further restriction of mobility and subsequent emotions of anger, frustration and helplessness and, naturally, further immobility and subsequent defeat. These responses are neurobiologically derived and may even be outside of conscious awareness, depending upon how ramped up the process becomes. The cycle can quickly feed upon itself, leading to more pain, more restriction, further atrophy and its insidious effects on the rest of the body. To top it off, our brain habituates to the situation and tells us, this is our new normal, get used to it, I'll get the body to compensate for it. Other muscles can take the load. Before we know it, we are stubbornly set into a complex pattern of compensatory muscle firing that keeps the action going, but in a somewhat limited or limiting manner. Other sites of mild distress signals begin to pop up, and these too become habituated. Eventually, distress will accumulate, and we will be forced to take notice and start seeking a solution, visiting professionals who are trained to help. The bigger issue is most of us are not trained or educated to know and understand how to help ourselves. We don't even perceive ourselves as major players in the path to resolving our own pain.

When it comes to chronic pain, we are living in interesting times. The science of pain is marching ahead, spurred on by what modern methods of neuroimaging have to reveal. The tragedy of the current escalating opioid epidemic is a wake-up call for all of us. Clearly, narcotics are not the solution to chronic pain, especially for pain that is self-limiting and a manifestation of the body's own healing mechanisms. Taking a pill is not the solution in the many situations where an individual's active participation in tending to, strengthening and healing, is what is most essential. NOTE: WE ARE NOT REFERRING TO devastating injuries or illnesses that have developed into complex pain syndromes, where narcotic medications and high-level anaesthetic interventions are required and maybe even essential to live. For people who find themselves living with conditions such as fibromyalgia, or complex pain syndromes, the simplified pain cycle described is part of the picture but likely amplified by many other factors. What we know now, is that immobility in general, and/or relying solely on pharmaceuticals, are definitely not the right solution. We understand from the downside of brain plasticity how new pathways can amplify pain. Mastering our experience of pain requires active participation and engagement in the process of rewiring. It means taking responsibility for what is under our control and finding the support that we need. Regardless of individual circumstance, this is where we all meet. Sorting things out and returning to health and vitality requires education about how our body is designed and an attitude of engagement rather than passivity or defeat. Sometimes professional and/or skilled support is imperative, but basic skills of connected, aware movement are always in order.

### How the Tool Kit helps work with chronic pain

Remember how Amy's early experience with her dysfunction included an arsenal of professionals to get her out of pain and defaulting to them when pain overwhelmed her? As she healed through Pilates and taught others in pain, Amy's mission became to share her knowledge on how to look after bodies and stay out of trouble between, and after, sessions with rehab professionals.

- When her piriformis was so tight that she could hardly get off the bike or horse or chair, she would do a specific release on the balls because she understood what was happening to her body. The knowledge and release became easily accessed, reinforced by a felt sense, or deep muscle memory.
- She learned that if that was tight, it was going to affect something somewhere else as well.
- Instead of always "shutting down," taking painkillers or getting helpful IMS needling, she learned a little repertoire that she could initiate and work on and keep her mostly out of trouble.
- And then she built on that repertoire, growing her knowledge base.
- Throughout this process she learned about her body biomechanics and begun to deeply understand how her musculoskeletal system worked and then gradually applied her knowledge to all her activities.