

### Pain is a Message.

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We do not have "pain cells" but we do have cells that register potential threats. These "threats" can be mechanical (pressure, sharpness, etc.), chemical (inflammation), or thermal (hot/cold). These cells send input to the spinal cord and brain and our brain decides how much of danger this input is and may send pain as a message to change our environment. Listen [HERE](#) to leading pain scientists discuss pain!

2

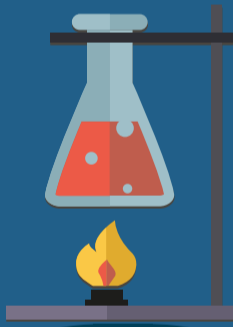
### Messages can get turned up or down.

Pain is a message to protect us from a true or perceived threat. Some threats may trigger pain in the absence of tissue damage (if you've ever got into a hot tub too fast, you may have experienced this!). Pain is easily modifiable; for example just by telling someone this "thing" will hurt, we see increased pain (and vice versa). Or if we add a red light to a stimulus, it registers as *higher* pain. We see pain decrease if someone just *thinks* they are getting medicine for their pain, etc. This works the other way too...ever seen people walk across hot coals?? Same idea. Here is a great Ted Talk on "[Why Things Hurt](#)" by Lorimer Moseley.



### Sensitization.

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Sensitization is the process where in a normal setting, X amount of stimulus produces Z amount of pain. When someone has been experiencing pain for a long time, we see the system become more sensitive or in other words, now only 50% of X will trigger Z amount of pain. Part of a successful strategy to decrease sensitization is to add small, progressively increasing doses of X to improve tolerance. Just like anything we would want to build a tolerance to in life, we need to expose ourselves to an experience in small well-tolerated doses. This is exactly how an Allergy Doctor would build immunity to an allergy...ever heard the saying to eat local honey? Same idea. [Here is a great blog post on sensitization!](#)

1 unit of X (stimulus) =  
1 unit of Z (pain)

#### **sensitization**

.5 units of X (stimulus) =  
1 unit of Z (pain)

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### Pain is not a bad thing.

Pain is part of being alive. It may feel like you are the only one experiencing pain but currently, it is estimated that millions of people are experiencing low back pain for example. Pain is a message about our environment, just like being hot or cold or hungry. This is a normal (albeit unpleasant) part of being a human but the system can become over-productive. Pain does not equal harm (although it certainly can). Want to talk about your pain with a PT? We offer [FREE](#) phone consultations, we are happy to help!

