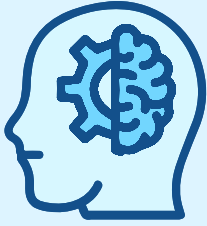


# Pain is Made by the Brain



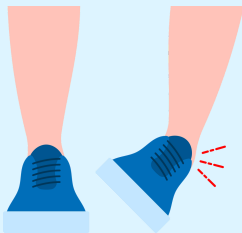
## Pain is a Decision by the Brain Based on Perceived Threat

If your brain thinks you're in danger, it often makes pain to:

- protect you
- get your attention/get more information
- get you to change something



It used to be believed that a body part that was injured made “pain signals” and sent them to the brain. Now it's understood that an injured area only sends “danger signals” alerting the brain to potential damage. It's up to the brain to decide if it needs to make pain to protect you.



## Consider an Ankle Sprain in 2 Different Environments:

Rolling our ankle is a very common injury that puts a more-than-typical pull on some ligaments (tissues that connect our bones together). In both instances, the ankle sends “danger signals” to the brain.

### Scenario 1: Playing sports with friends in a safe environment

The brain takes the “danger signals” from the ankle along with information from the environment (eg is it safe?), the brain's knowledge base, past experience, memory, beliefs, culture, etc. to decide if it is under threat  
Brain's Decision: It will most likely MAKE PAIN to stop you from playing any more sports since there is a threat of further tissue damage if you don't stop.

### Scenario 2: Running away from a hungry lion (dangerous, obviously)

The brain receives the same thing as in scenario 1: the “danger signals” from the ankle. Then it considers its knowledge, history, and environment to decide if it is under threat.  
Brain's Decision: It will most likely NOT MAKE PAIN because, although there is a threat of further damage to the ankle, there is a BIGGER threat in stopping: being killed by the lion. Once the bigger threat is neutralized, then the brain will most likely make pain in your ankle to get you to attend to it.

