

Know Brain = Know Gain, A Biopsychosocial Exercise

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The human body is amazing. It is a structure made up of almost 200 bones, 400 joints and 650 muscles. It is supplied by 100,000 miles of blood vessels and is supported by a vast matrix of connective tissue. How we function is governed by a dynamic network made up of two interactive parts, the Peripheral Nervous System or PNS and the Central Nervous System or CNS. Think of the sensory, motor and autonomic nerves of the PNS as what reacts first to give us critical information about the outside environment. It is the job of the brain as the primary component of the CNS to analytically process information, determine what all that input really means and decide what to do about it.

We are all hard wired to react reflexively to a perceived threat. When the human organism feels like it is in danger, it triggers an unavoidable fear response and we spring into freeze, fight or flight mode. Threats are all around us and can be verbal, visual or palpable in nature. They can be conscious or unconscious, self-inflicted or inflicted upon us. It doesn't matter how they are perceived or where they come from, our automatic protective fear/freeze/fight or flight response remains physiologically the same.

We all understand the concept that injured tissue transmits a peripheral input that registers in our brain as pain. What is extremely challenging to grasp is the knowledge that modern science shows pain to be a complex and frequently misleading but very real sensation that is both interpreted and influenced by our brain and often overprotectively exaggerated. While damaged tissue structures will typically undergo a process of healing, the memory of the pain experience will linger. The more threat, trauma and pain we encounter, the more sensitized our intrinsic alarm and warning system becomes. Visit <https://www.painscience.com/articles/pain-is-weird.php> for more information.

We are all biopsychosocial entities with pre-existing conditions. None of us have been spared at least some degree of injury, pain and recovery and we all have the scars to prove it. Yet each one of us is on a totally unique journey with our very own health history and individual story to tell.

October is National Physical Therapy month and this year's theme is "Pain is Personal and Treating Pain Takes Teamwork." Remember that immobilizing freeze response to perceived harm? Physical Therapists are uniquely qualified to evaluate and treat pain associated with movement loss. Choose a PT who knows how to safely interact with both your peripheral and central nervous systems. He or she can facilitate tissue healing and offer strategies to help you to enhance your comfort and function. Visit www.moveforwardpt.com for more information.