




# Healing 101: Leading edge tools to activate the Healing Power of You

Take charge of your health with proven methods to heal pain naturally. It's a fact, drugs and surgery can't fix pain. Healing requires a whole-body approach to resolve dysfunctions and correct imbalances throughout the movement system. Our in-depth guide of structure and function sets the stage for restoring tissue alliance.

[Start Now](#)

 Completion time: 25 min



# Course Objectives

1

Discover the importance of 3D integrity with mobility, stability and strength throughout the chain

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2

Learn the role of tissue load and nutrition to determine your path for healing

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Understand pain mechanisms and put your brain to work for a healthier recovery

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4

Avoid the pitfalls or delay in healing due to tissue memory and tissue bluff

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5

Restore tissue alliance with graded return to activity to prevent re-injury



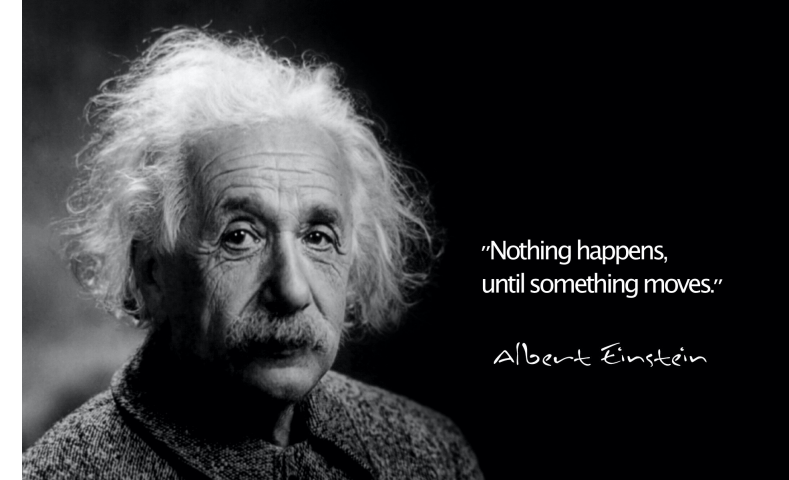
# Musculoskeletal chain

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It's all connected. Modern medicine has advanced in the management of trauma, infection, pathology and surgery (TIPS). Every disease warrants a search or strategy for a fix.

Pain requires a different approach. Musculoskeletal pain is not a disease. Any attempt to fix pain simply leads to the over-medicalization of pain with excessive reliance on imaging, drugs, and surgery.

Musculoskeletal pain does not require a fix. Instead, it demands balance within the chain which is dependent upon both tissue structure and function. Human tissue is destined to degenerate, but tissue function is the primary defense against pain and risk for injury.



## Structure

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The human skeletal chain is reliant upon loading for development. The gradual progression of motor development towards the upright postures yields significant influence on the maturity and strength of the bony system.

Change is constant. Nothing stays the same. Structural changes like disc protrusions, cartilage tears and muscle tendon degeneration is common and expected. Often these structural lesions only become painful when tissue function is no longer optimal due to an imbalance in the myofascial loops.

The myofascial chain or loops are often ignored for their role in loading the musculoskeletal chain with tensile loads which are the basis for all movement and shock absorption.



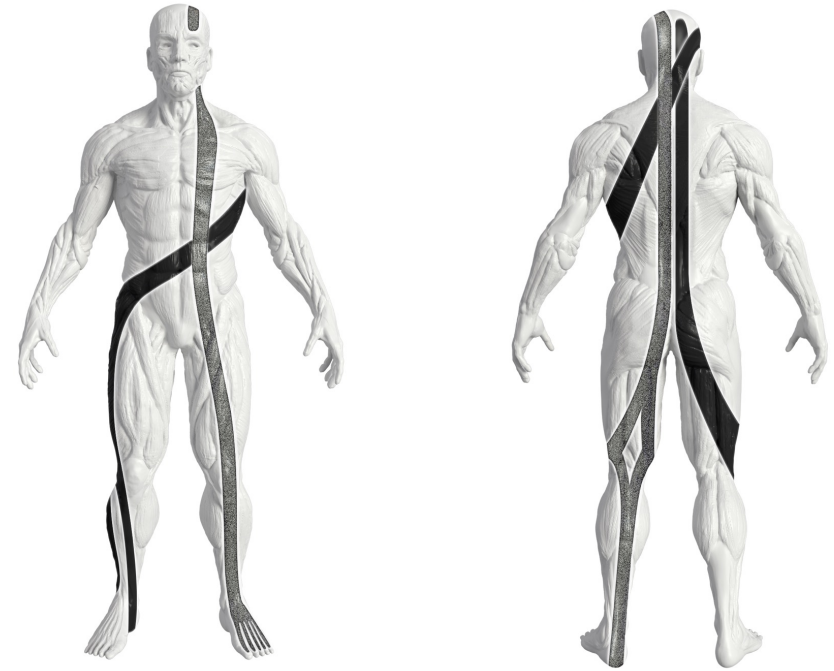
# Function

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**Interdependent:** Each myofascial loop works in unison with it's counter or opposite chain. A balance of tension between the chains is necessary to achieve optimal performance of movement

**Interconnected:** Fascial layers within and between muscles are connected though a network of loose connective tissue. Essentially the entire body is connected via fascia forming continuous layers which must have freedom of movement

**Integrated:** The myofascial system is integral to the nervous and visceral system. This is often the cause of referred pain where muscle problems can easily mimic visceral or nerve pain





# Movement Patterns

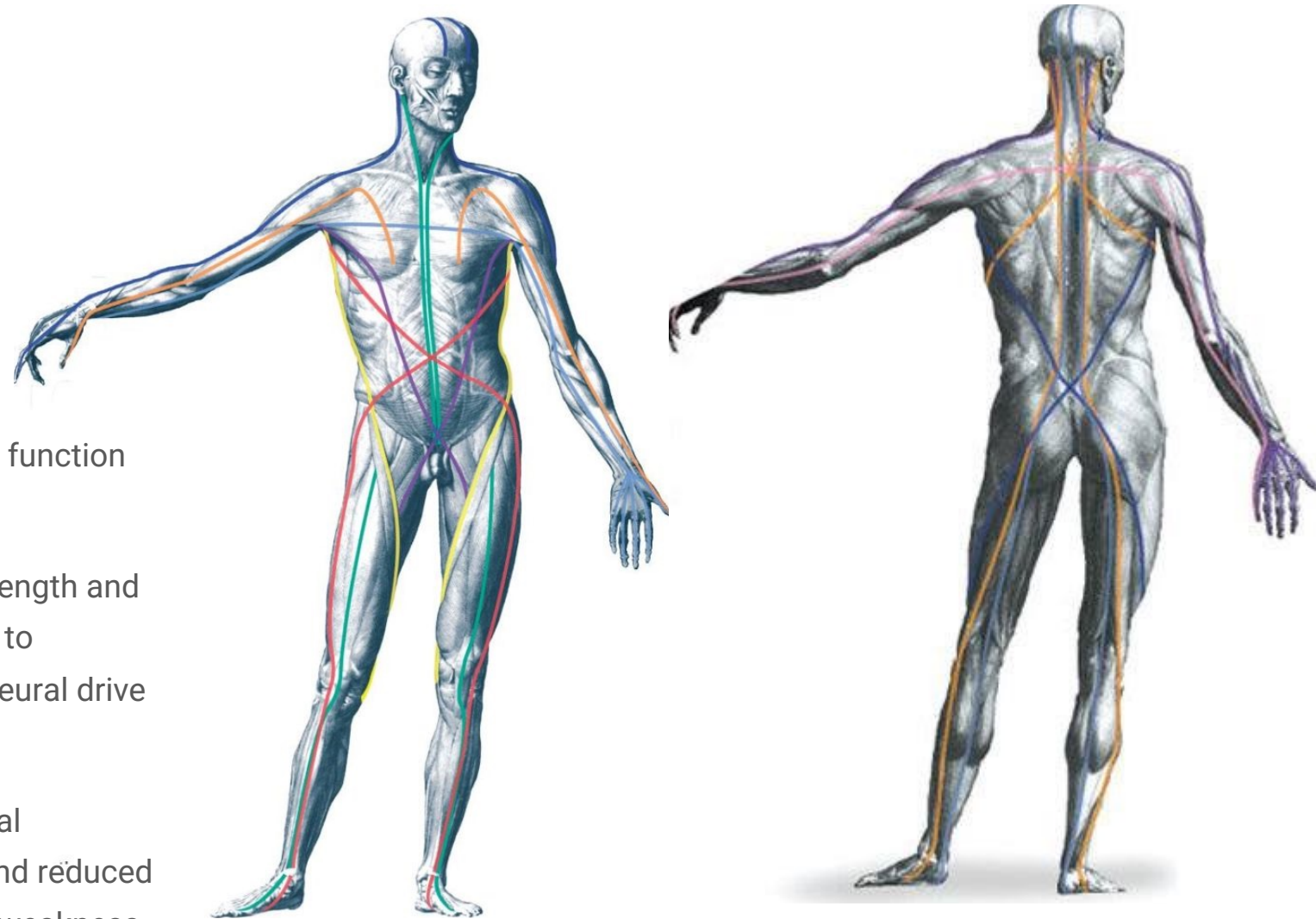
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## The Myofascial chain

Unidimensional: These workhorses of the tension sequences (myofascial chains) perform the basic function of bending and straightening the skeletal chain

Power: Able to generate significant force due to length and orientation of chain. Tends to stiffen in response to weakness in other chains due to high density of neural drive and primitive reflexes

Compressive: Overactivity (stiffness) in the sagittal sequence leads to excessive joint compression and reduced mobility. Balance of tension requires addressing weakness in other planes of movement (Frontal or Transverse)



# Sagittal

# Movement Patterns

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The Myofascial chain

Bidimensional: The guidewires of the tension sequences manage position and awareness throughout the body.

Reinforce ligament support of agile joints

Endurance: Slow and steady muscle chain designed to maintain equilibrium and balance

Fatigue: Overactivity in the frontal sequence leads to impaired postural and reduced awareness requiring greater effort from other chains to perform movement. Stiffness in this chain typically indicates weakness in the opposite side



# Frontal

# Movement Patterns

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The Myofascial chain

Multidimensional: The tension mechanisms of controlled motion and combined movement patterns. Rotation myofascial chains allow us to maneuver with skill and minimal joint loading

Responsive: Able to respond quickly to joint loading and assist with shock absorption. A tension basis for movement requires 3D strength to create a stable platform which is mobile and agile

Tension: The only system capable of reducing compressive force and limiting joint loading. Stiffness in this chain typically indicates weakness in an adjacent link along the same plane of movement



# Transverse



# Tissue Nutrition

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## Structure meets Function

The movement system is simply a part of the whole human body. There are 10 systems which make up the human body and each can be defined by a balance of structure and function.

To understand the health of any system we must appreciate its structure and function. For instance, the health of the cardiovascular system is based upon the structural integrity of the heart and blood vessels while the function is determined by blood pressure and pulse. Why is it that we fail to realize that the movement system is more than just the tissue structure? If we want to fully appreciate the health of the movement system then we must appreciate its function.

The primary function of the movement system is to absorb loads. Everything we do and every movement we perform creates tissue loading. The entire movement system is engineered to withstand and absorb loading. This is the reason tissue nutrition (blood and nerve flow) is critical to allow both soft and hard tissues to manage and attenuate loads. Failure to withstand normal tissue loading can lead to overload and pain.

# Absorb

# Tissue Overload & Ischemia

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## Structure meets Function

Tissue overload can occur due to a functional imbalance anywhere in the musculoskeletal chain or within a particular movement pattern.

- Strength is necessary to produce torque and withstand loading. It doesn't require muscle bulk but it is dependent on the ability of muscle and fascial segments to work in unison to withstand both internal and external tissue loading.
- Stability is a vital component of ensuring minimal effort is required to perform simple movements while supporting loading. Failure to keep joints and tissues aligned and centered can easily lead to excessive shear or stress causing tissue overload.
- Mobility is necessary to achieve basic activities and complex tasks. It's more than just being flexible. Instead it's more related to the slide and glide between tissues which allows blood and neural support to flow which maintains the health of the entire movement system.

The most common causes of tissue overload are Weakness, Instability and Stiffness (WIS) whereby these functional imbalances create a loss of tissue nutrition and predispose degenerated tissues to inflammation and ischemia which leads to musculoskeletal pain.

Agile

# Myofascial Tangles

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If you have musculoskeletal pain, it does not mean you are broken or damaged. Even if imaging (x-ray or MRI) shows some structural problem it's impossible to properly assess the health of the movement system if the function is ignored. When it comes to the movement systems, looks truly don't matter. Function is everything and it's the primary determinant for how tissue loads are balanced.

Musculoskeletal pain is more related to dysfunction or tangles in the myofascial chain caused by WIS. Pain is the product, but WIS is the problem. Find and correct the problem to allow the pain to truly heal. This corrective approach to improving function can achieve pain relief despite the presence of structural problems like degeneration and simple wear and tear of structures.





# Neural Matrix

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Protective: Survival is the basic response to any threat. The neural drive will access the most efficient and readily available movement pattern to protect against harm. Unfortunately, even when the threat of injury is resolved it's typical for the protective pattern to persist

Task Oriented: It's nearly impossible to think or instruct your way out of a protective pattern. Novel and challenging tasks must be performed to reactivate a balance of movement patterns

Adaptable: Ability to adapt to a changing environment requires a removal of threats and awareness of movement rather than fear of injury

# Pain Patterns

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Pain is multifactorial and complex. It rarely comes from a single source nor is it isolated to the tissue. Pain must be perceived before it exists. Working through pain does not give you a high pain tolerance.

Understand why you are having pain. Is it the tissue input or the neural matrix output? Often it's a combination of both

Reduce the fear of pain. Anxiety and fear are not conducive to healing. We can't guard against injury, instead we must prepare and fight for survival. Tissue strength, joint mobility and stability are the keys to avoiding injury

Train the brain to recognize less pain. Easier said than done. It takes practice and steady reassurance to regain confidence with movement and functional awareness based upon the tasks rather than the pain

# Brain Games

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No pain, no gain. Pain is no longer a threat, it's simply an opportunity to begin the process of recovery

I no longer feel pain, I only feel .... (stiffness, weakness, load, position)

Say no more. Adhere to a strict limit on how you tell others about your pain. Only discuss pain with medical providers

Use activity and social relations as a prescription for pain relief. Avoid increasing pain medication without advice from medical provider



# Balance and stability of the neuromusculoskeletal chain.

## The systems which make it possible

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1

Articular chain is the mechanical framework for movement. Structure relies upon support from neuromuscular chain. Change is constant

2

Myofascial chain is the functional machine to guide movement and control joint loading. Compensatory patterns increase tissue loading

3

Neural matrix is the brain and all its connections which direct movement and receive vital information on threats

# Remobilize

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Range of motion: Slow and steady progression of movements to regain full motion.  
Perform at least 5x a day for 5min

Activation: Prolonged isometric exercises to activate weak segments. Perform 10reps  
for 10sec each

Pumping: Gradual progression of aerobic activity with varying degrees of support.  
Practice throughout the day

Goals: Full motion and progressive aerobic activity to resolve inflammation and  
ischemia

# Reload

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Controlled motion: Practice coordinated and skilled tasks. Make it fun and challenging to avoid protective pain patterns. Perform at least once a day for 5min

Strength: Progressive resistance (low load, high reps) in mid-range of motion. Perform a set of 3-4 exercises for 25 reps each

Balance: Progressive challenge to balance with varying support. Combine with controlled motion to increase difficulty

Goals: Progressive strength and balance to withstand normal tissue loading



# Recentralize

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Return to work: Get back to work or activity as soon as possible. Delay in return increases risk for disability and depression. Reduce the risk for re-injury with recognizing the potential workplace hazards and limiting your exposure

Athletic readiness: Start slow and remember that a certain level of fitness is required to resume activities such as running, swimming or cycling

Sports participation: Test yourself and be prepared to practice at a level below optimal performance. Don't compete until you have excelled at practice tests

Goals: Ready for action and reduced risks for re-injury or pain flare-ups

# Healing Tracker

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Set Goals: Be realistic and realize your limits. Make the most of your recovery by successfully accomplishing each phase of rehab. Set reasonable goals for return to work and some form of athleticism which will lead to improved fitness

Establish milestones: List 3 attainable milestones for each goal. Get help from a skilled and competent therapist if recovery is delayed or plateaued

Track progress and be prepared to adjust program to meet goals. Consider a group fitness or gym based routine to increase program variability