YOUR BODY IS HELD TOGETHER BY RELATIONSHIPS

Tensegrity offers a model for understanding how tension, compression, and connection help the body manage force

The skeleton does not stand independently. Bones resist compression, while muscles, fascia, tendons, ligaments, and joint capsules contribute to an interconnected network of tension.

Movement changes these relationships from moment to moment. When force enters through the ground, a hand, or an external load, the response spreads across the system rather than remaining at one joint.

THE BODY AS A DISTRIBUTED SYSTEM

SENSE

Tissues provide information about strain, position, rate, and direction.

DISTRIBUTE

Force is shared across multiple tissues and joints.

CONNECT

Muscular and fascial continuities link distant regions.

ADAPT

The system reorganizes as position, task, and load change.

TENSION AND COMPRESSION COEXIST

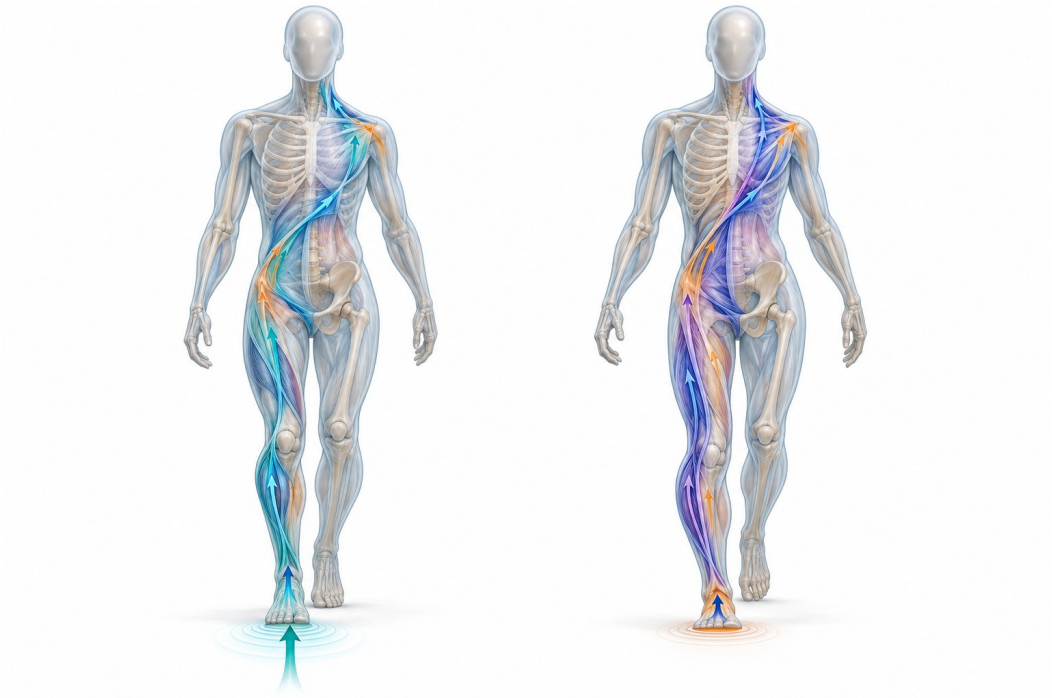
Bones resist compression. Muscles and connective tissues generate and transmit tension. Their interaction creates a stable structure that can also move, deform, and recover.

COACHING PEARL™

Human structure is resilient because force can be distributed through relationships rather than absorbed by one tissue alone.

A LOCAL FORCE CREATES A SYSTEM-WIDE RESPONSE

Walking reveals how force entering through one foot can influence the opposite side of the body



RECEIVE

The foot meets the ground and the system accepts force through changing joint and tissue relationships.

DISTRIBUTE

Muscular and fascial connections help spread mechanical demand across regions.

REORGANIZE

The nervous system adjusts motion and muscular tension to meet the task.

WHY THE PAINFUL AREA MAY NOT TELL THE WHOLE STORY

The symptomatic tissue may carry excessive demand because motion, timing, or force distribution changed elsewhere in the system.

CONTEXT CHANGES THE PATTERN

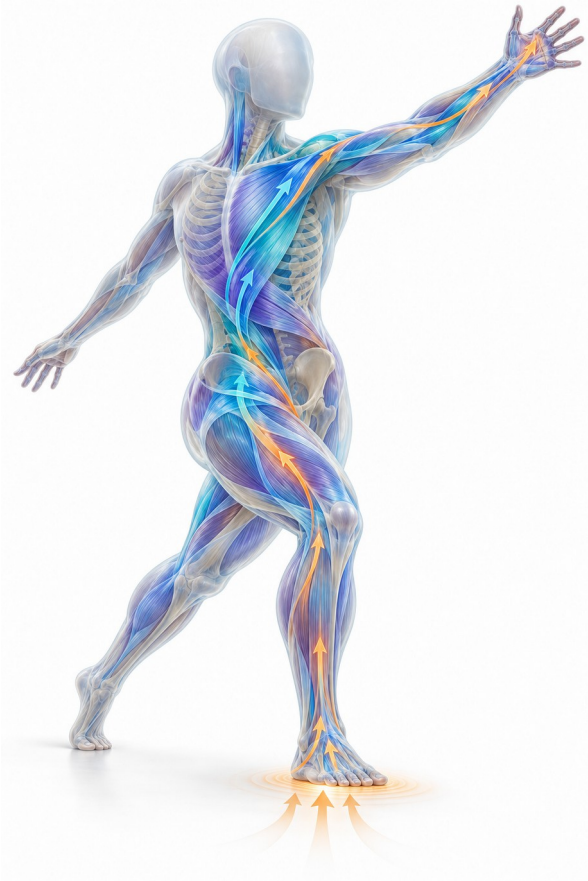
Footwear, surface, stance, direction, speed, fatigue, and external load can alter how force travels.

CLINICAL PEARL™

The site of symptoms may identify the tissue under greatest demand, not the only region shaping that demand.

COACH THE RELATIONSHIP, NOT JUST THE REGION

Principles guide strategy. The individual response guides technique.



WHAT THIS MEANS FOR COACHES

OBSERVE BEFORE ISOLATING

Identify how the feet, hips, pelvis, trunk, and arms share the task.

START WHERE FORCE ENTERS

Consider the ground, an external load, momentum, and the chosen driver.

CHANGE ONE DRIVER

Adjust stance, reach, direction, range, rate, or load.

FIND THE THRESHOLD

Use the largest challenge that preserves the intended response.

REASSESS GLOBALLY

A useful local change should improve the whole task, not only one measurement.

THE SYSTEM REORGANIZES AROUND EACH CHANGE

A change at one link alters motion, tension, sensory input, and mechanical demand throughout the network.

TOMORROW MORNING™

CHOOSE A MEANINGFUL TASK

Use a step, reach, lift, or rotation that matters to the client.

CHANGE THE DRIVER

Alter reach direction or height and observe how the network responds.

WATCH DISTANT REGIONS

Notice what changes away from the area receiving attention.

CHANGE THE BASE

Compare bilateral, staggered, and single-leg positions.

ADD OR REMOVE LOAD

Determine whether the system can distribute the new demand.

PROGRESS WITH SUCCESS

Increase complexity while movement quality and confidence remain.

COACHING TRUTH™

A local technique may change symptoms. A systems strategy asks why that tissue carried the demand.

THE SCIENCE BEHIND THE INSIGHT

Tensegrity helps explain distributed support and force transmission, but it remains a model rather than a complete description of human function

WHAT THE RESEARCH SUPPORTS

FASCIAL CONTINUITY

Anatomical and histological evidence supports connective-tissue continuity within and between many muscular regions.

MYOFASCIAL FORCE TRANSMISSION

Experimental evidence shows that muscular force can be transmitted through pathways beyond a single tendon and its insertion.

MECHANICAL ADAPTATION

Connective tissues remodel in response to repeated mechanical loading, available recovery, and the biological environment.

SCIENTIFIC BOUNDARIES

A MODEL, NOT A LITERAL BLUEPRINT

The human body does not meet every engineering definition of a pure tensegrity structure.

CONTINUITY DOES NOT PROVE CAUSATION

An anatomical connection does not establish that one distant structure caused a symptom.

INDIVIDUAL RESPONSES VARY

The same task can produce different movement and loading strategies in different people.

SYMPTOMS ARE MULTIFACTORIAL

Mechanical relationships matter, but tissue health, sensitivity, history, and context also influence symptoms.

COACHING TAKEAWAY

Assess how the person distributes force across the task.

Restore useful motion where it is limited. Develop control within that motion. Then integrate the new option into meaningful movement.

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ABOUT BOB FANELLI

Bob Fanelli, M.S., FAFS
Applied Biomechanist • Exercise Physiologist • Movement Educator

Bob integrates exercise physiology, kinesiology, applied biomechanics, and movement education to help people understand and develop human capability.

PROFESSIONAL ATTRIBUTION

COACHING PEARL™ ***Tensegrity changes the question from "Which structure is responsible?" to "How is the whole system sharing the demand?"***