

What's in Your Hologram?

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**Holographic
Awareness**

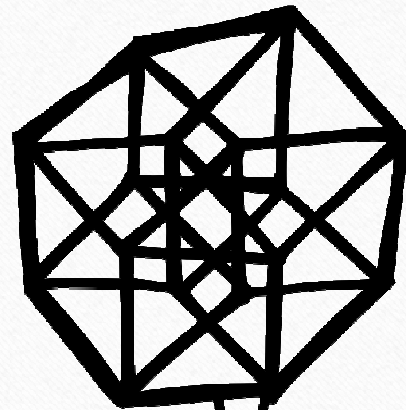
Holograms

Two or more laser beams come together to produce a full technicolor three dimensional image

It isn't there, but it is!



Human Perception = Holographic Experience

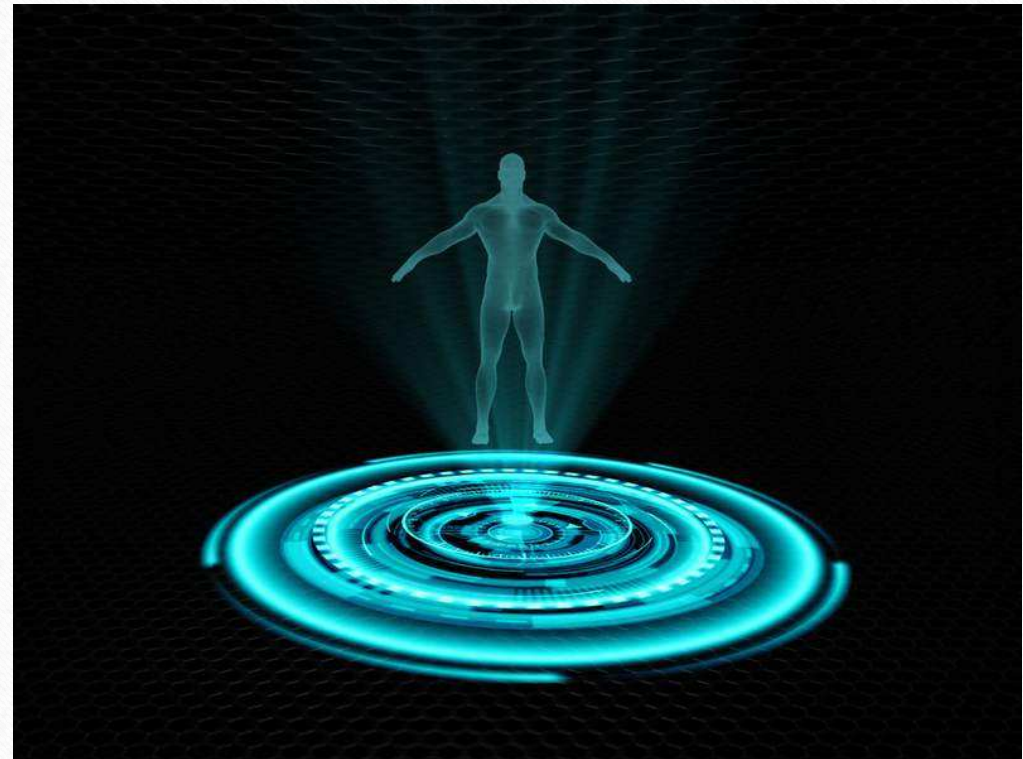


REALITY IS A HOLOGRAM

Pain is a Perceptual Experience

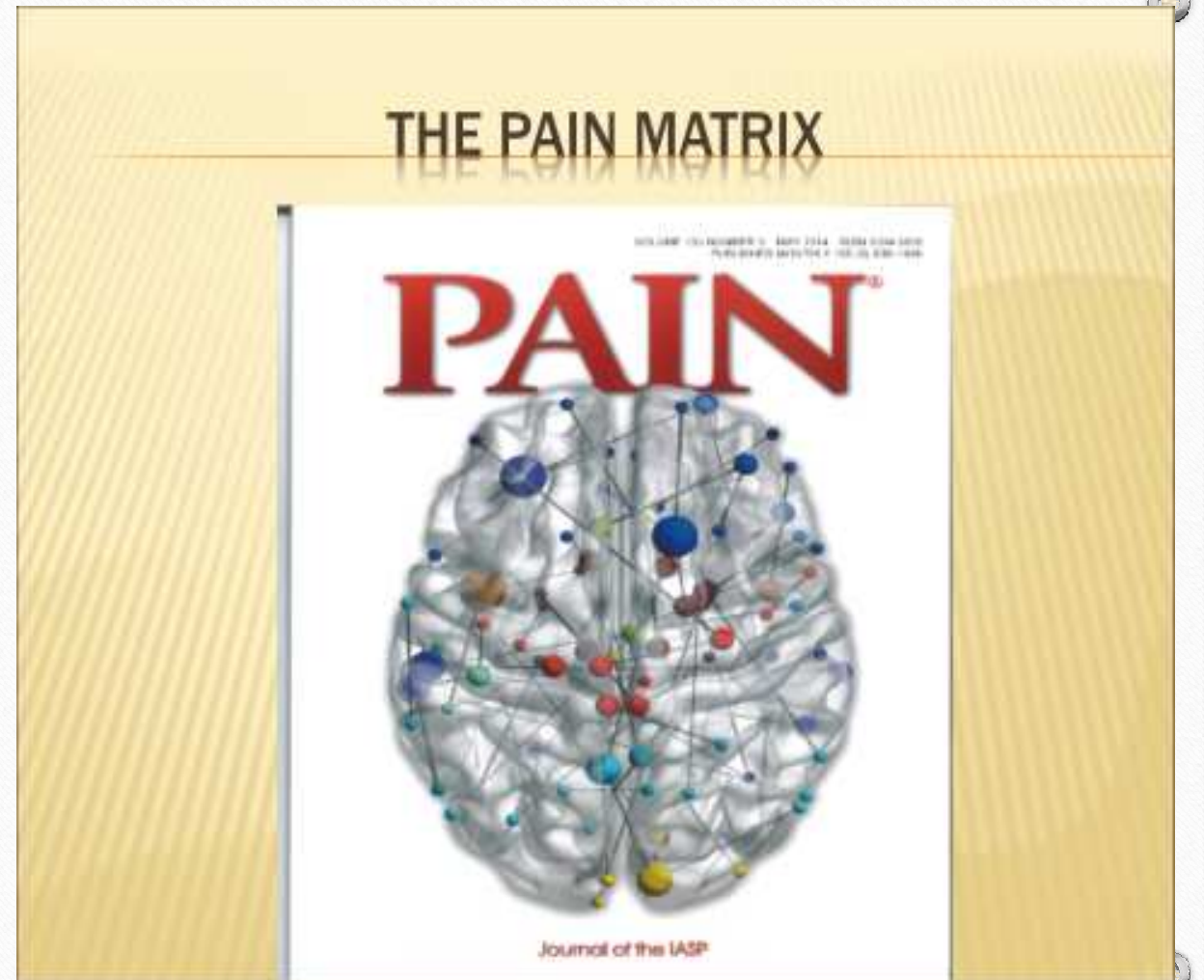
IASP definition: “...an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage“ IASP Pain Terminology.

So it isn't there, but it is!



The Pain Hologram

The Pain Matrix demonstrates the rich interconnectedness of multiple brain areas involved in the creation of a pain perception hologram

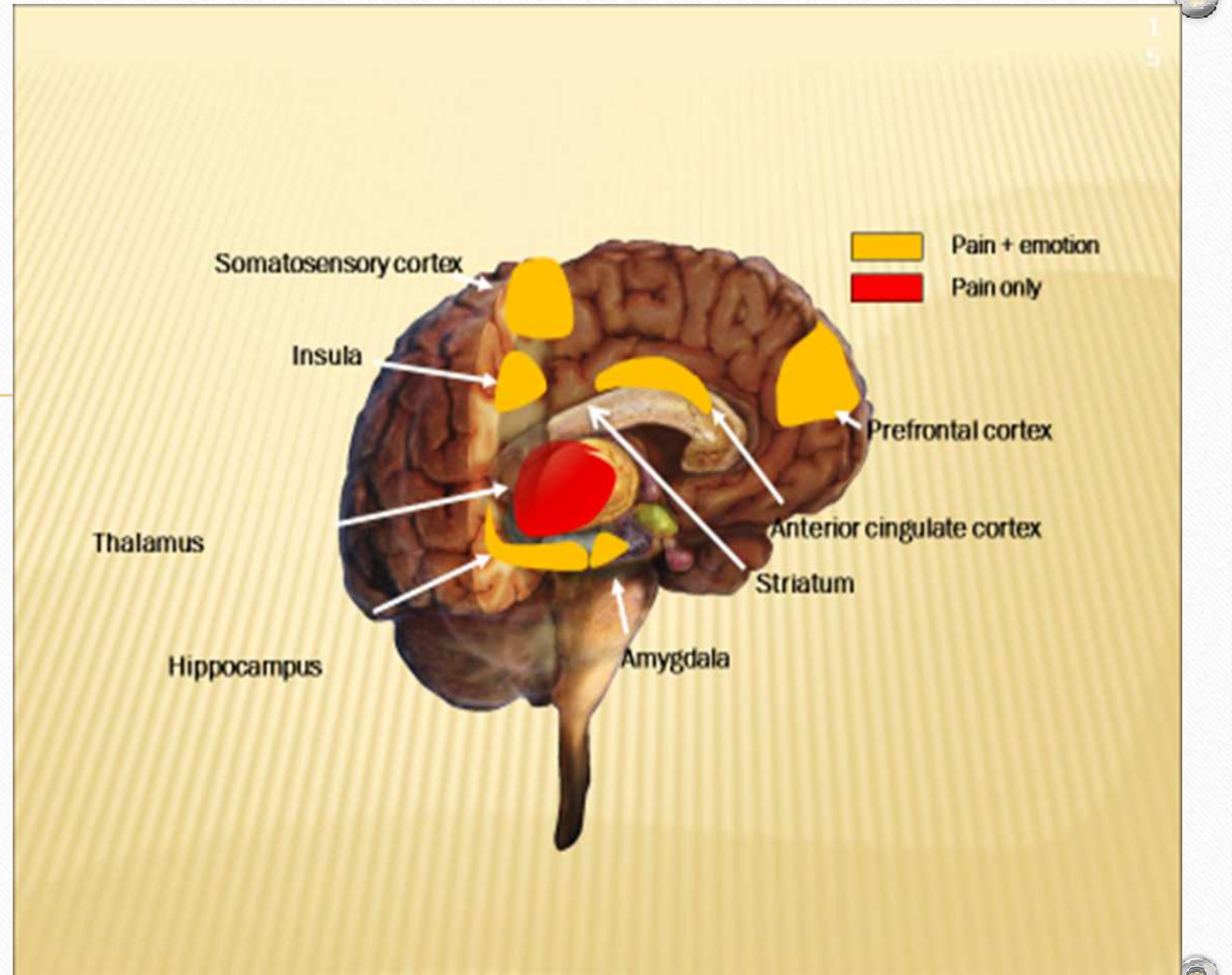


The Pain Hologram

Pain is created by a hologram with inputs from 16-18 areas of the brain

6-8 of these overlap with cognition, emotion, and memory

TAN: tonically active neurons in striatum act as switching station for cognition, emotion, and memory with majority of the output signal to the basal ganglia



Acute Pain Perception

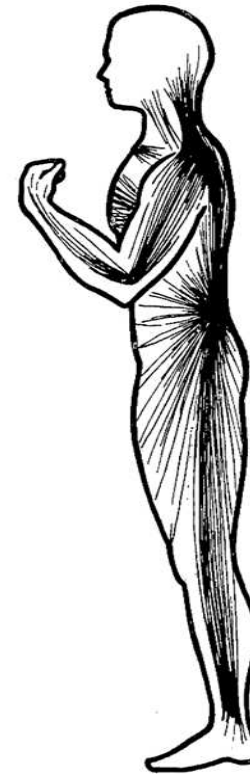
Peripheral input

Peripheral input to spinal cord “switching station”

Spinal cord to brain

Brain to brain

Brain to spinal cord



Fascia Man
© MFR Seminars

Acute Pain Perception

Peripheral input

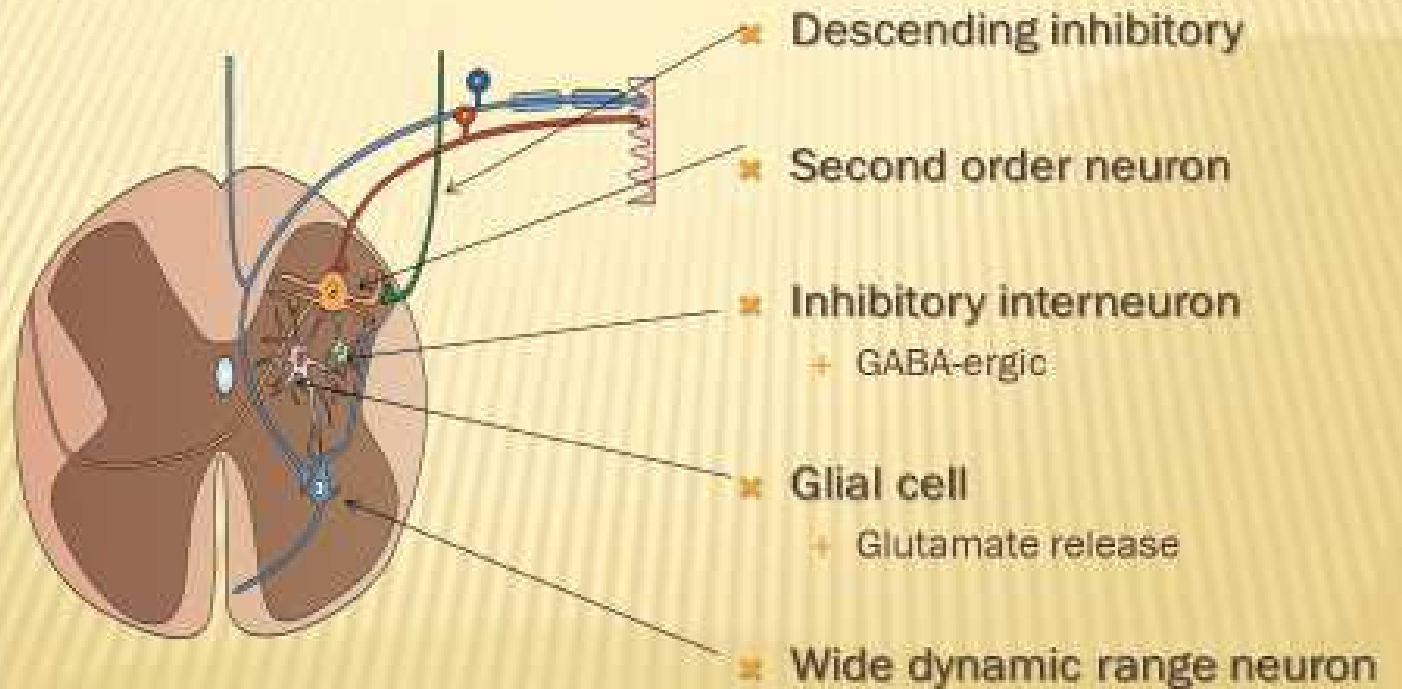
*Peripheral input to spinal cord
"switching station"*

Spinal cord to brain

Brain to brain

Brain to spinal cord

EUDYNIA: NORMAL PAIN TRANSMISSION



Acute Pain Perception

Peripheral input

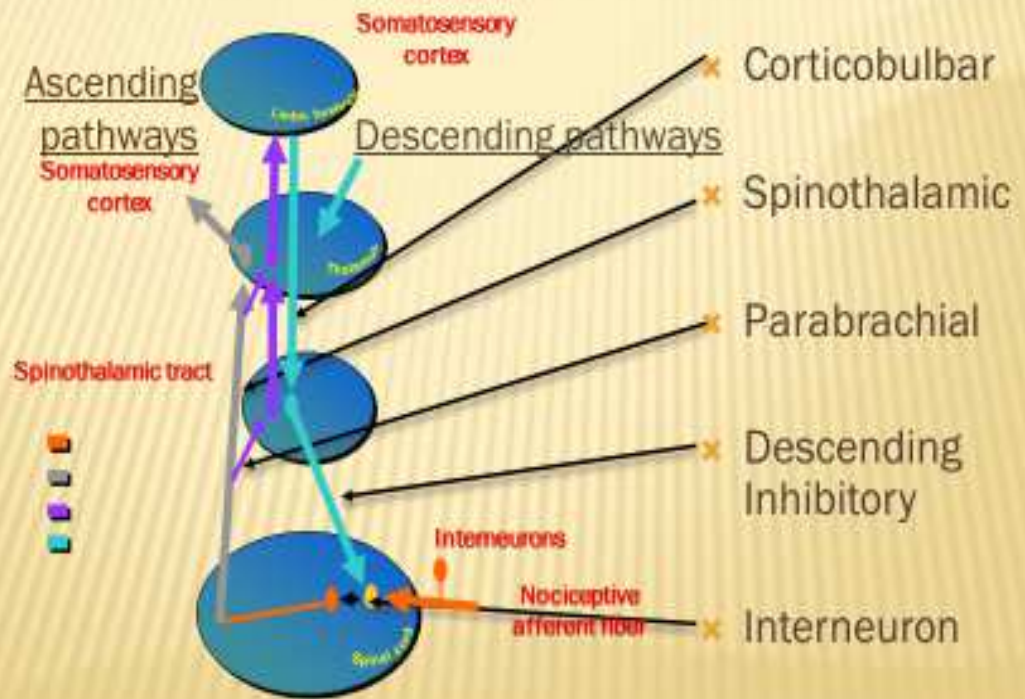
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EUDYNIA: NORMAL PAIN TRANSMISSION



Acute Pain Perception

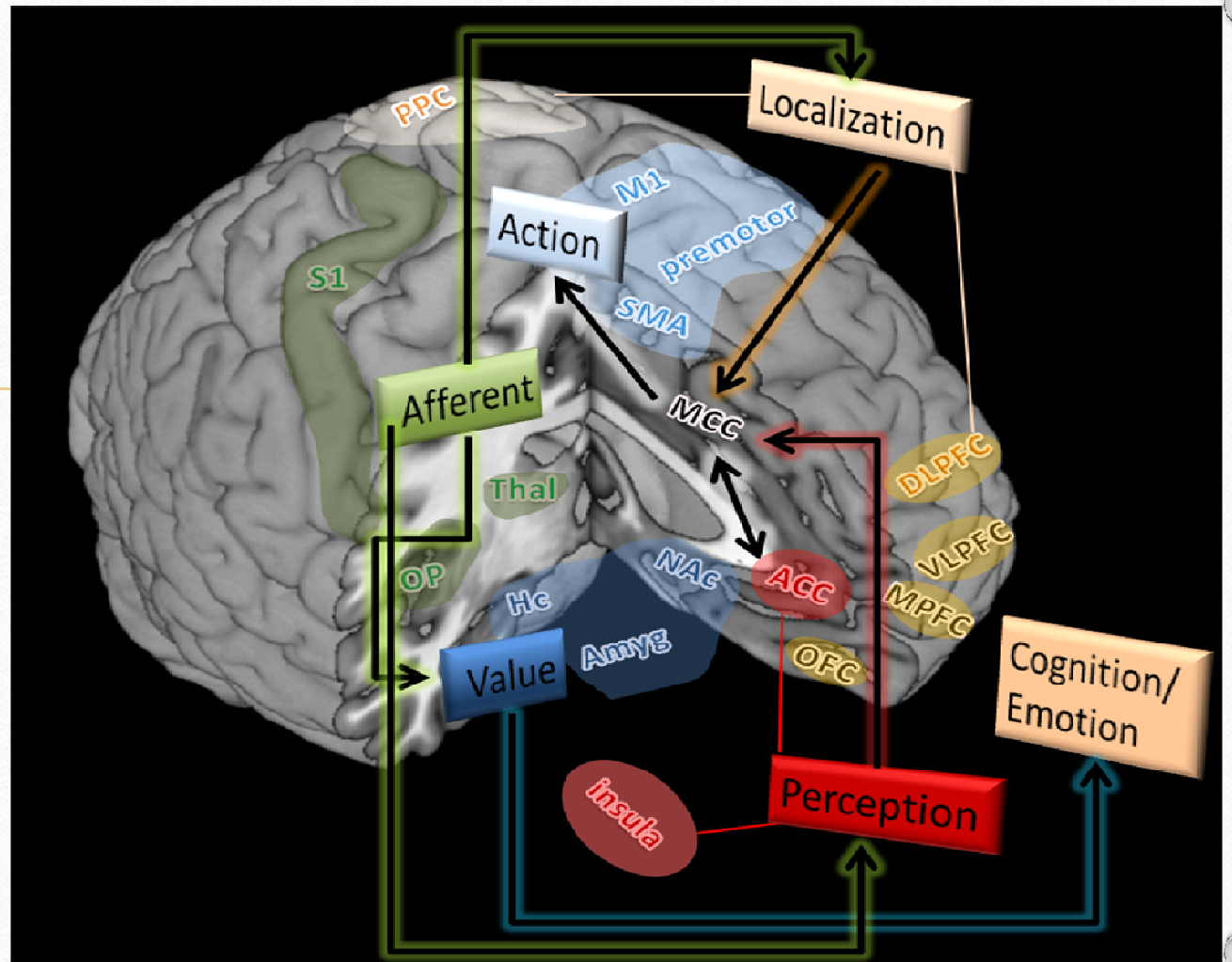
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Acute Pain Perception

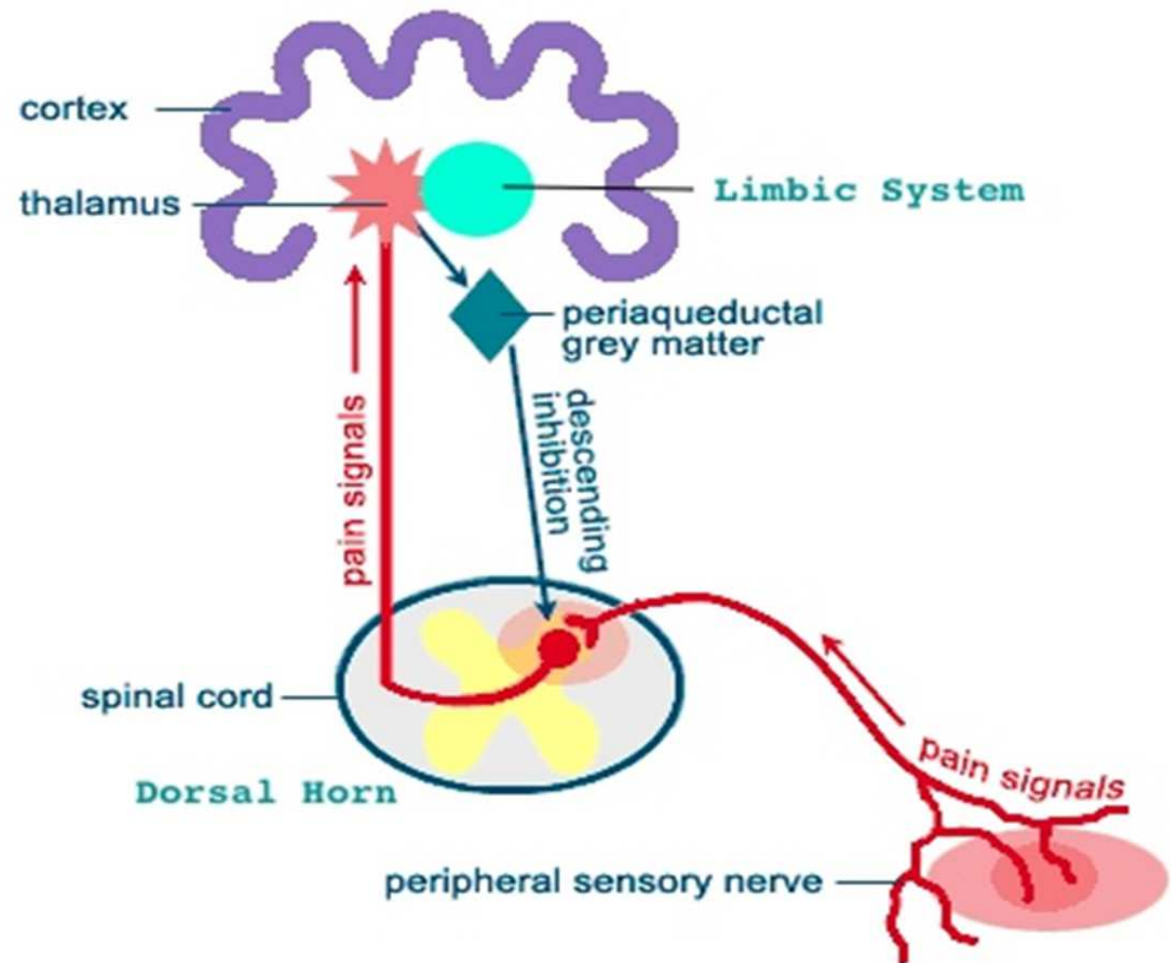
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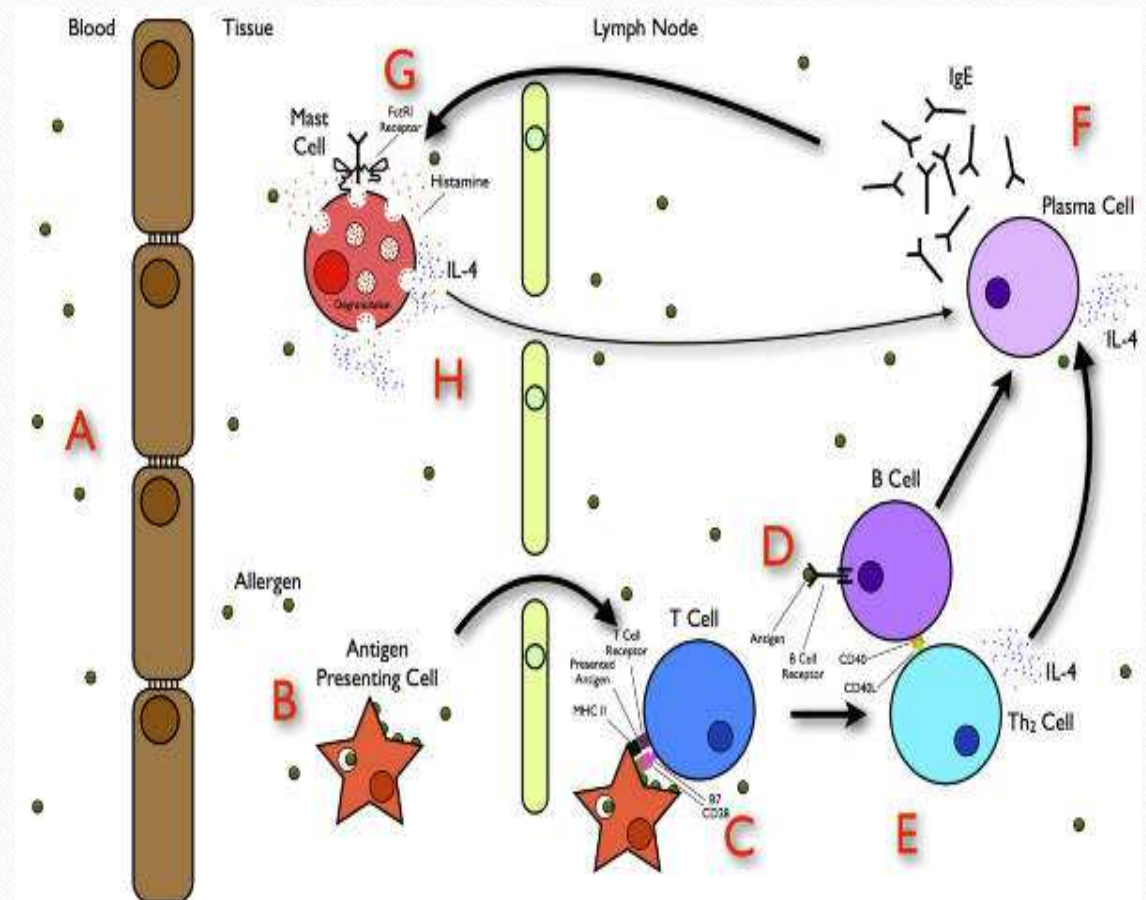
Acute to Chronic Pain

Inflammation is the real culprit, including low level inflammation

Inflammatory response can be measured and monitored

Inflammation considered the seat of most disease states

Chronic pain now considered a true disease state



Acute to Chronic Pain

Neuroplastic changes allow for **sensitization** of the system including:

Genome

Gut

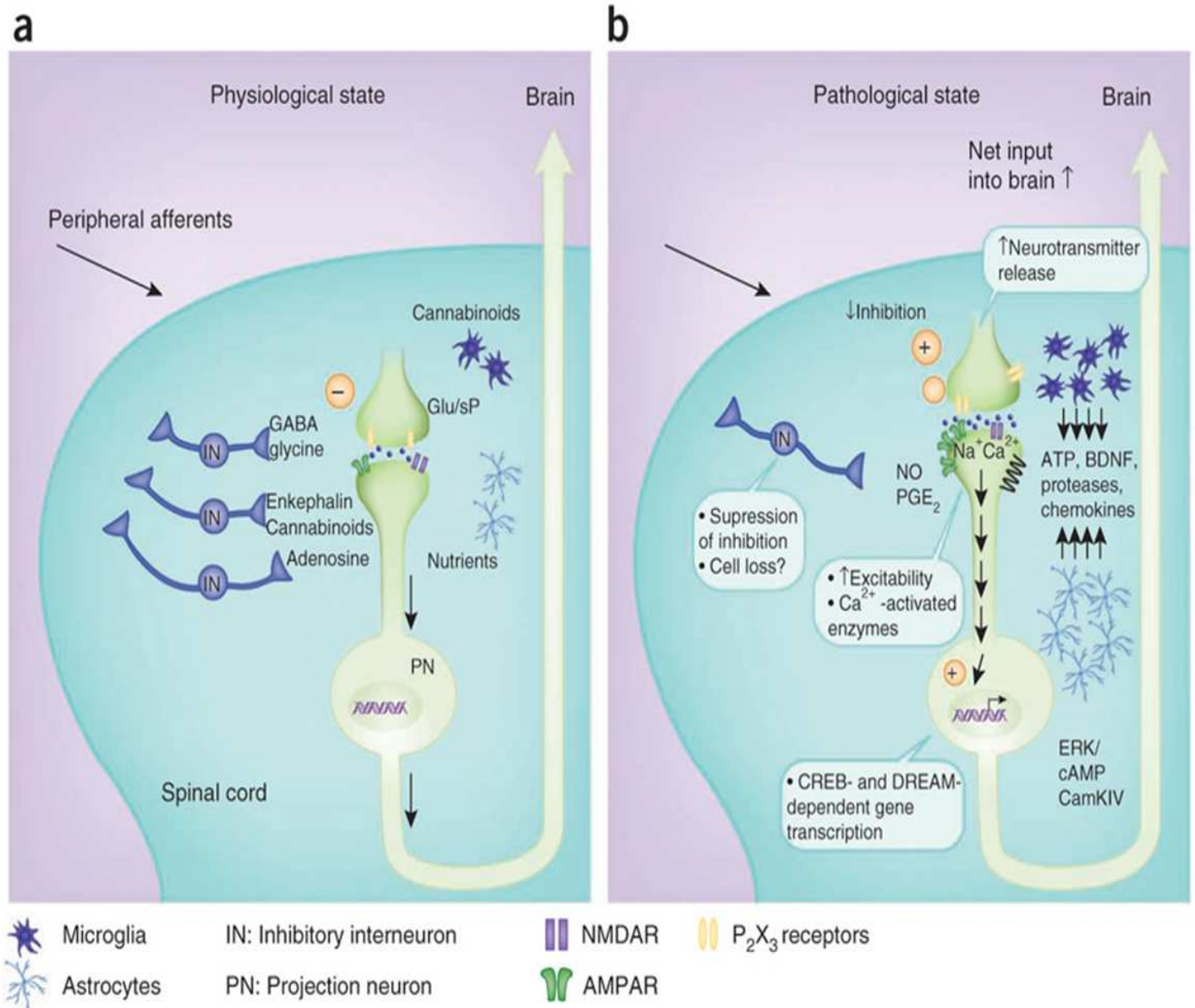
Peripheral nervous system

Fascial system

Spinal cord recruitment including a-beta fibers, more vertebral levels

Brain

What fires together, wires together



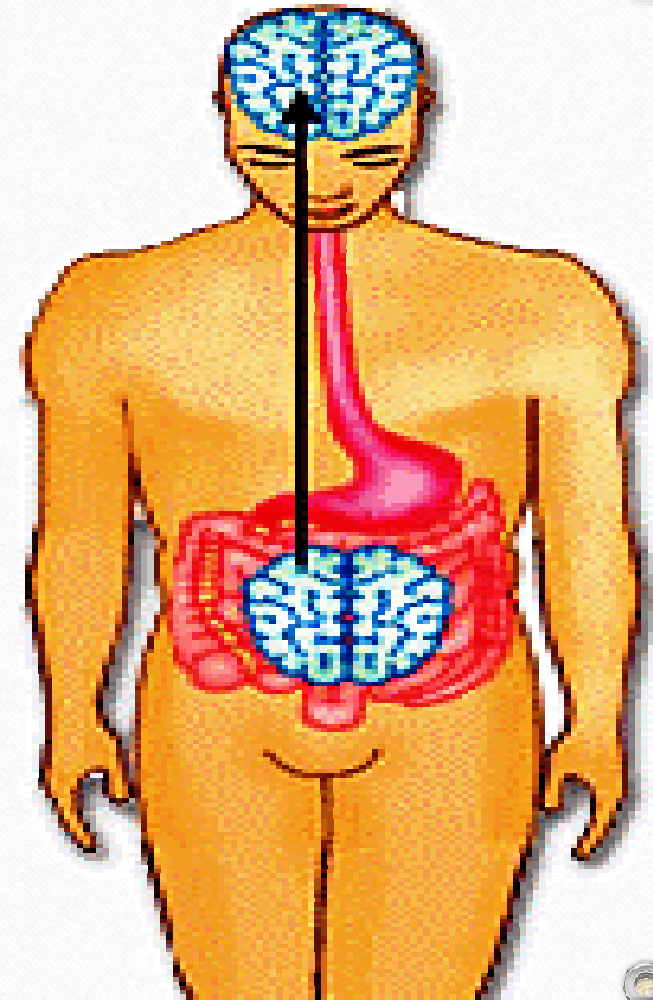
Inputs

There are multiple inputs to our pain perception. Two of the most foundational are our **gut** and our **genome**.

Research articles confirm input from the gut microbiome tells the brain what to do. This research is looking at the effects on such medical conditions as Parkinson's, dementia, depression, fibromyalgia, the arthritides, and their symptoms, including pain.

The genome has the ability to modify SNPs through **long term potentiation** (when acute pain becomes chronic) which affects gene function. These then influence the “balance” of inputs that make our holograms unique to us.

- Gut Microbiome
- Genomic SNPs



Inputs

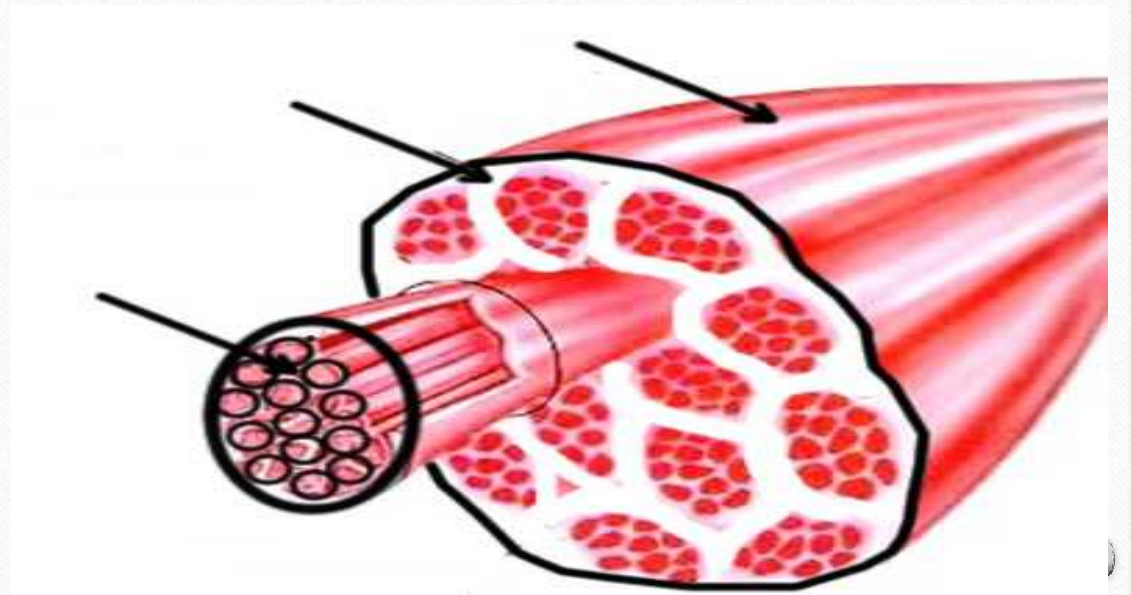
There are multiple inputs to our pain
_____ perception.

Fascial sensitization is important input from the periphery. Can occur from physical excitation and/or “stress” only

Fascial input reaches the brain ~ 85% directly, and 15% via spinothalamic tract. It is faster than spinothalamic tract

Muscle input is the reverse, with 80-85% via spinothalamic tract

- Gut Microbiome
- Genomic SNPs
- **Fascial sensitization**



Inputs

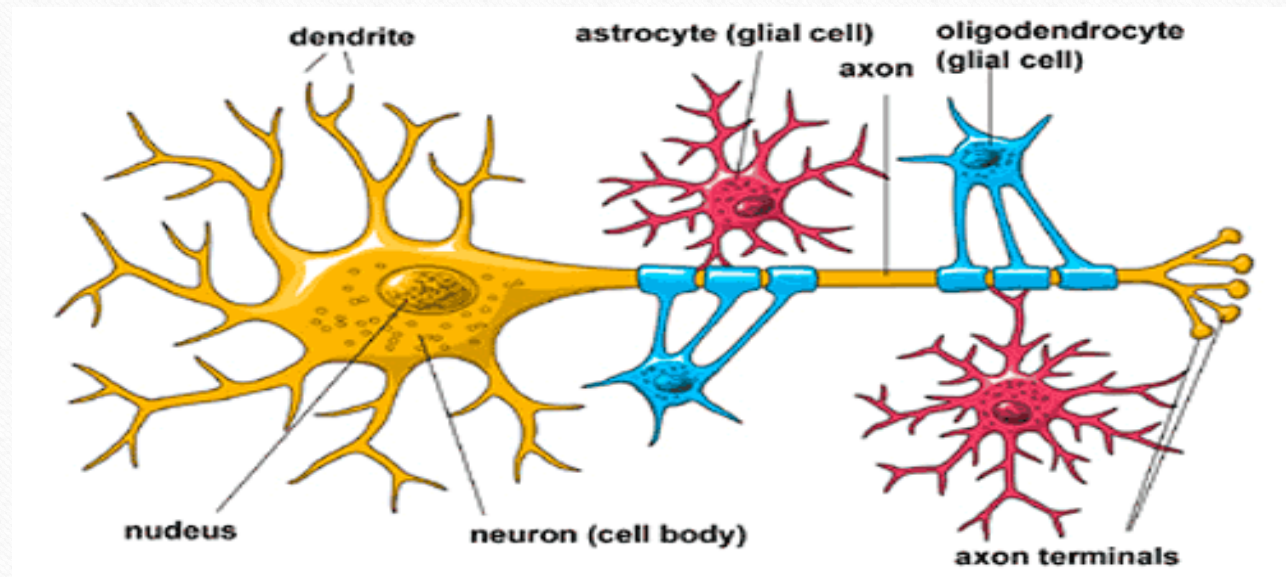
There are multiple inputs to our chronic pain perception.

Recruitment from non-nociceptive fibers, A-beta

Recruitment from higher and lower levels of vertebral afferent fibers

Enhancement of glial cells producing glutamate

- Gut Microbiome
- Genomic SNPs
- Fascial sensitization
- **Recruitment**



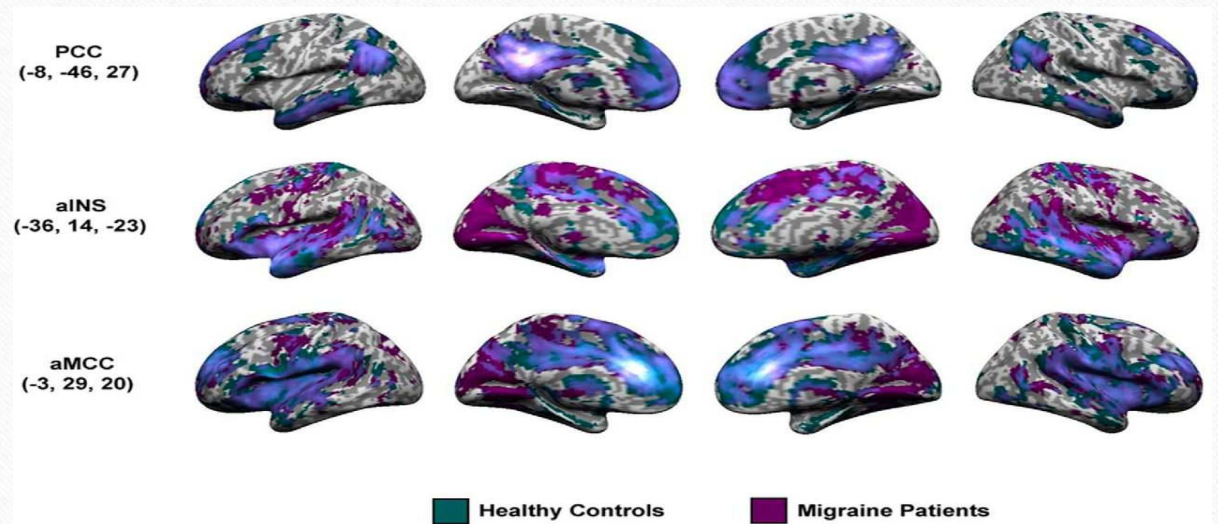
Inputs

There are multiple inputs to our chronic pain perception.

Brain sensitization

What fires together,
wires together

- Gut Microbiome
- Genomic SNPs
- Fascial sensitization
- Recruitment
- **Brain sensitization**



Changing chronic pain

Change the hologram, change the pain

Reverse neuroplastic changes

RETRAIN THE BRAIN

Physical changes can include:

modalities, such as heat, ice,

electric stimulation,

massage,

pharmaceuticals, laser,

movement ie, Pilates,

myofascial release (JBMFR),

exercise/reconditioning,

Yoga, Tai Chi



The Role of Laser

Altering mitochondrial dysfunction

Increasing ATP for cell function

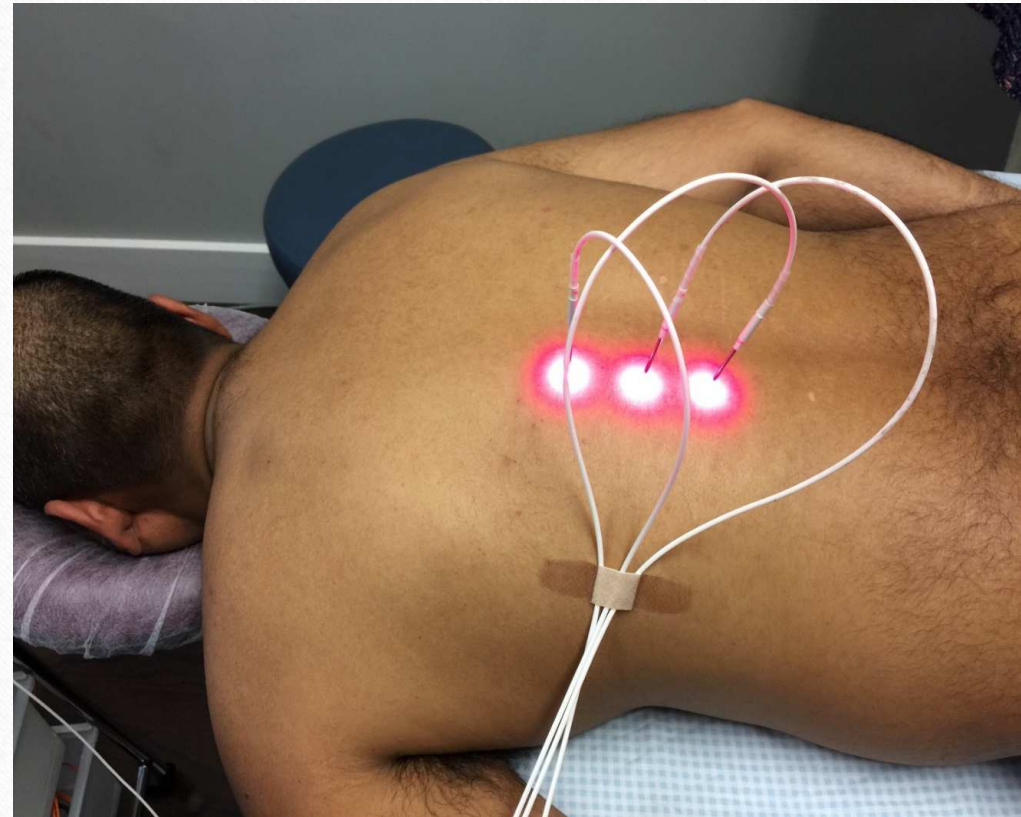
Altering acupuncture meridian
function

Reversing neuroplastic sensitization

Establishing normal cellular function

Reversing inflammatory states

Muscle, nerve, blood cells, fascia



Changing Chronic Pain

Change the hologram, change the pain

Reverse neuroplastic changes, esp TAN

Mental changes can include: _____

meditation

hypnosis

eye movement desensitization and reprocessing (EMDR)

cognitive-behavioral techniques

patient education

family involvement

self soothing

giving and receiving love



EMM
ROY

Changing Chronic Pain

Change the hologram, change the pain

Reversing neuroplastic changes

Nutritional changes

repair leaky gut

establish healthy microbiome

eat low glycemic load foods

high fiber content

keep inflammation down

organic fruits and vegetables

modified Mediterranean diet

supplements



Putting it all together

Chronic pain is the disease state itself

Each person's pain is unique to them

The laser inputs to each hologram is
specific to that person

We can treat those holograms by multiple
paths

Laser can become one strength in the
battle against chronic painful conditions

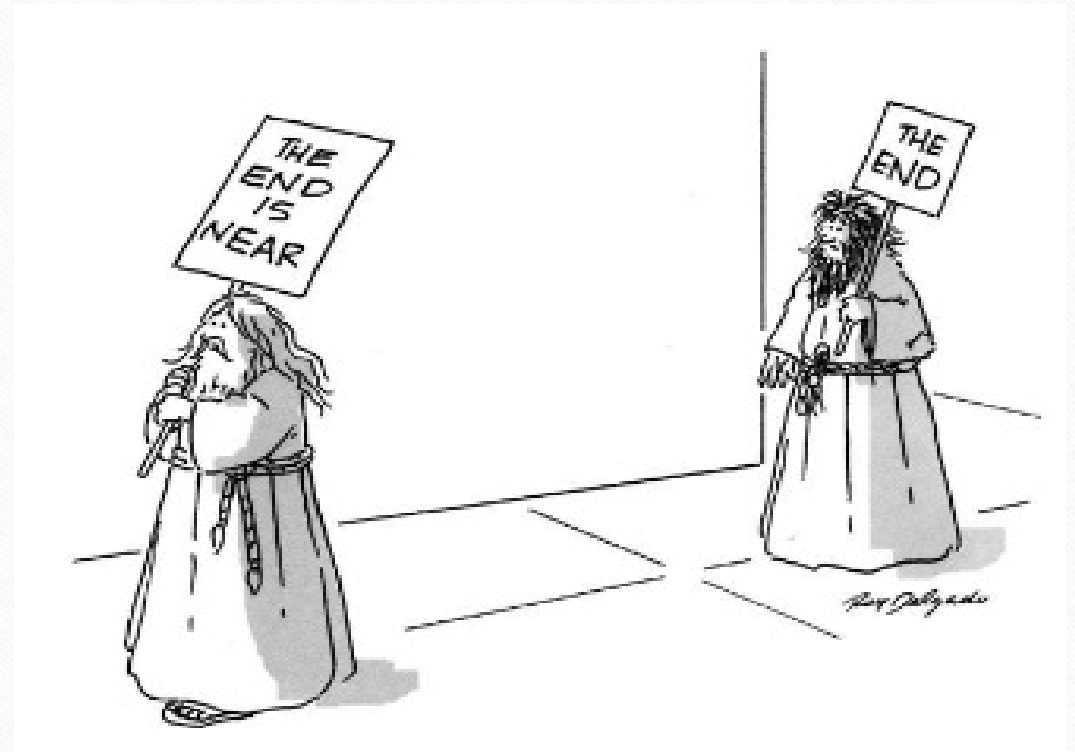
What fires together, wires together

What fires apart, wires apart



Thank You for Your
Attention

Questions??????



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