

Working with the Messenger: Integrating Indigenous Pain Management

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OUTLINE

- ▶ The (Medical) Definition of Pain
- ▶ An Indigenous Approach to Pain
- ▶ Incorporating Indigenous Approaches in Clinic



Walking In Two Worlds

- ▶ Objective
 - ▶ Understand the language, concepts, and strategy of the modern medical model in order to support the healing best suited for the people being treated by revitalizing and nurturing indigenous medical system, science, and methodology.



The Definition of Pain

- ▶ How do you define pain?
 - ▶ “An unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage.”

*International Association for the Study of Pain 2020
Definition*
- ▶ Nociception: the perception of pain



The Definition of Pain: More Notes

- ▶ Pain is personal
 - ▶ A person's report of an experience as pain should be respected.
- ▶ Pain is an interpretation
 - ▶ Pain and nociception are different phenomena. Pain cannot be inferred solely from activity in sensory neurons.
- ▶ Pain is memory
 - ▶ The nervous system and connective tissue of the body can store memories of trauma through pathways and signals
- ▶ Pain is cultural
 - ▶ Through their life experiences, individuals learn the concept of pain.
- ▶ Pain can be suffering
 - ▶ Although pain usually serves an adaptive role, it may have adverse effects on function and social and psychological well-being.
- ▶ Pain can be invisible
 - ▶ Verbal description is only one of several behaviors to express pain; inability to communicate does not negate the possibility that a human or a non-human animal experiences pain



Why Is Pain Important?

- ▶ Pain is a protector
 - ▶ Communication from the body to protect itself from harm
 - ▶ Alarm signal
 - ▶ "Something is wrong"
 - ▶ "Something is not safe"
- ▶ Pain is a healer
 - ▶ Triggers a fast, reflexive response
 - ▶ Instinctual response by body before the thinking part of the brain (prefrontal cortex) fully realizes what's happening
 - ▶ Rapid tissue response for healing: blood flow, rest, avoid moving, immune system, tissue repair
- ▶ Pain is a teacher
 - ▶ The brain remembers and learns
 - ▶ Reminds us of strength and capacity
- ▶ Pain is a connector
 - ▶ Promote empathy, support, caregiving



The Pain Signal

1. Transduction

- ▶ pain receptors (nociceptors) in skin, muscle, organs receive a signal—mechanical (pressure), thermal (heat/cold), chemical—and send an electrical message (signal)

2. Transmission

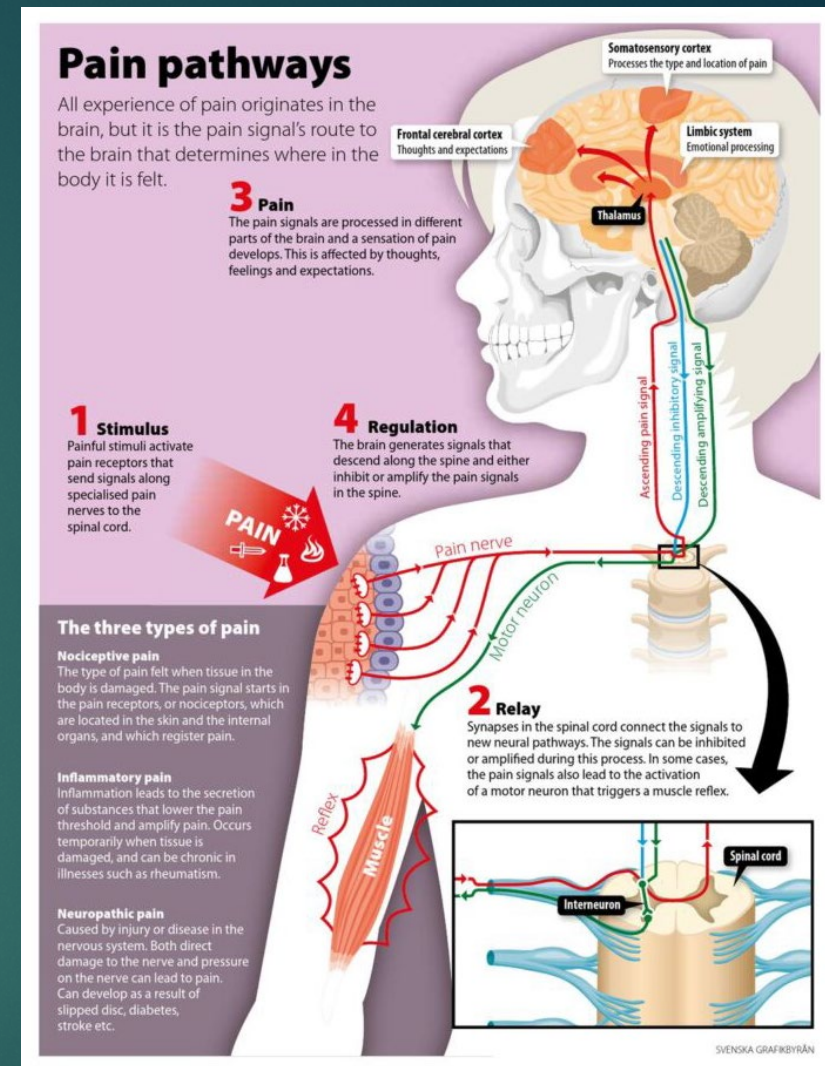
- ▶ Signal transmitted via *A-delta fibers* (fast, sharp pain) and *C fibers* (slow, dull, burning pain) to the spinal cord up to the brain

3. Perception: Brain interprets signal as “Pain”

- ▶ Somatosensory cortex (location and intensity)
- ▶ Limbic system (emotional response)
- ▶ Prefrontal cortex (cognitive evaluation)

4. Modulation:

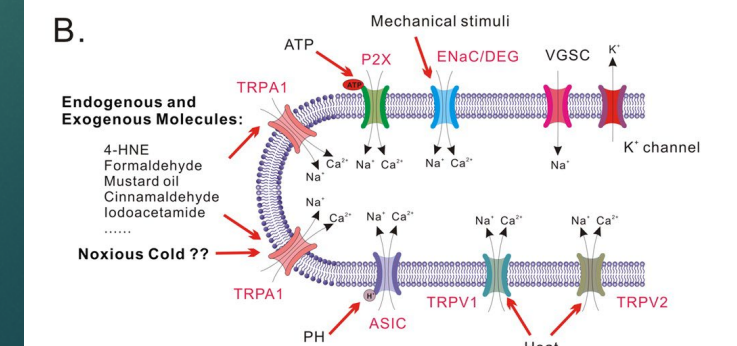
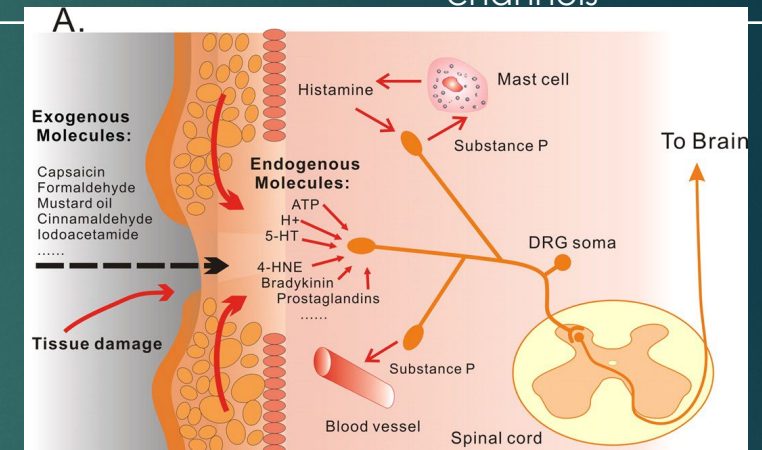
- ▶ the brain/spinal cord reacts. Descending pathways release
 - endorphins/enkephalins (endogenous opioids)
 - Serotonin, norepinephrine: block pain transmission at the spinal cord



Chemical Signalers of Pain

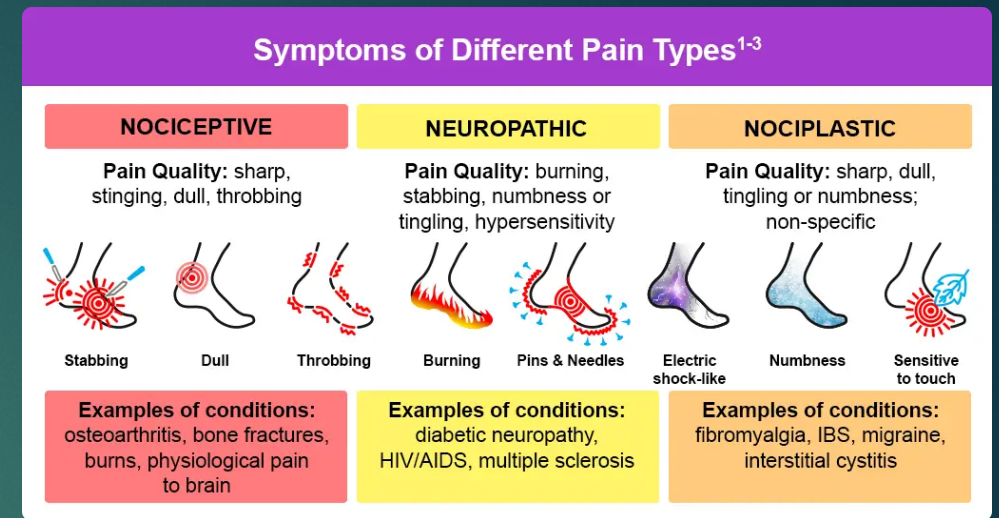
- ▶ **Prostaglandins**
 - ▶ make pain receptors more sensitive
- ▶ **Bradykinin**
 - ▶ activates pain receptors, makes tissue leaky (inc. vascular permeability)
- ▶ **Substance P**
 - ▶ released by nerve endings of pain receptors, increase blood flow and release of histamine (inflammation)
- ▶ **Histamine**
 - ▶ activates and makes pain receptors more sensitive, causes itch/burn sensation
- ▶ **Serotonin**
 - ▶ released by platelets, sensitizes/activates pain receptors

Pain Type	Trigger	Key Signalers
Nociceptive	Tissue damage	Prostaglandins, bradykinin, serotonin, histamine, ATP, H ⁺
Inflammatory	Inflammation	TNF- α , IL-1 β , IL-6, NGF, prostaglandins, bradykinin, serotonin
Neuropathic	Nerve injury/dysfunction	Glutamate, Substance P, CGRP, BDNF, cytokines, ATP, sodium channels



Medical Types of Pain

- ▶ Nociceptive Pain
 - ▶ Tissue damage
 - ▶ Somatic: skin, muscles, bones, joints
 - ▶ Sharp, aching, throbbing
 - ▶ Visceral: internal organs
 - ▶ deep, hard to localize
- ▶ Inflammatory Pain
 - ▶ Substances that amplify pain signal/Lower pain threshold
 - ▶ Arthritis, infection, autoimmune
 - ▶ Swelling, redness, warmth, tender
- ▶ Neuropathic Pain
 - ▶ Nerve injury or disease
 - ▶ Neuroptahy, neuralgia, sciatica, stroke
 - ▶ Burning, shooting, electrical



- ▶ Nociplastic Pain
 - ▶ Pain without clear tissue or nerve damage; central sensitization=altered neurologic processing
 - ▶ Fibromyalgia, IBS, chronic migraine, chronic pain syndromes
- ▶ Somatoform Pain
 - ▶ Pain without clear tissue or nerve damage; strongly associated with psychological factors
 - ▶ Pain associated w/trauma; Thought to be a physical experience of the uncscious psychological expression of stress/distress
 - ▶ Fatigue, headaches

Chronic Pain

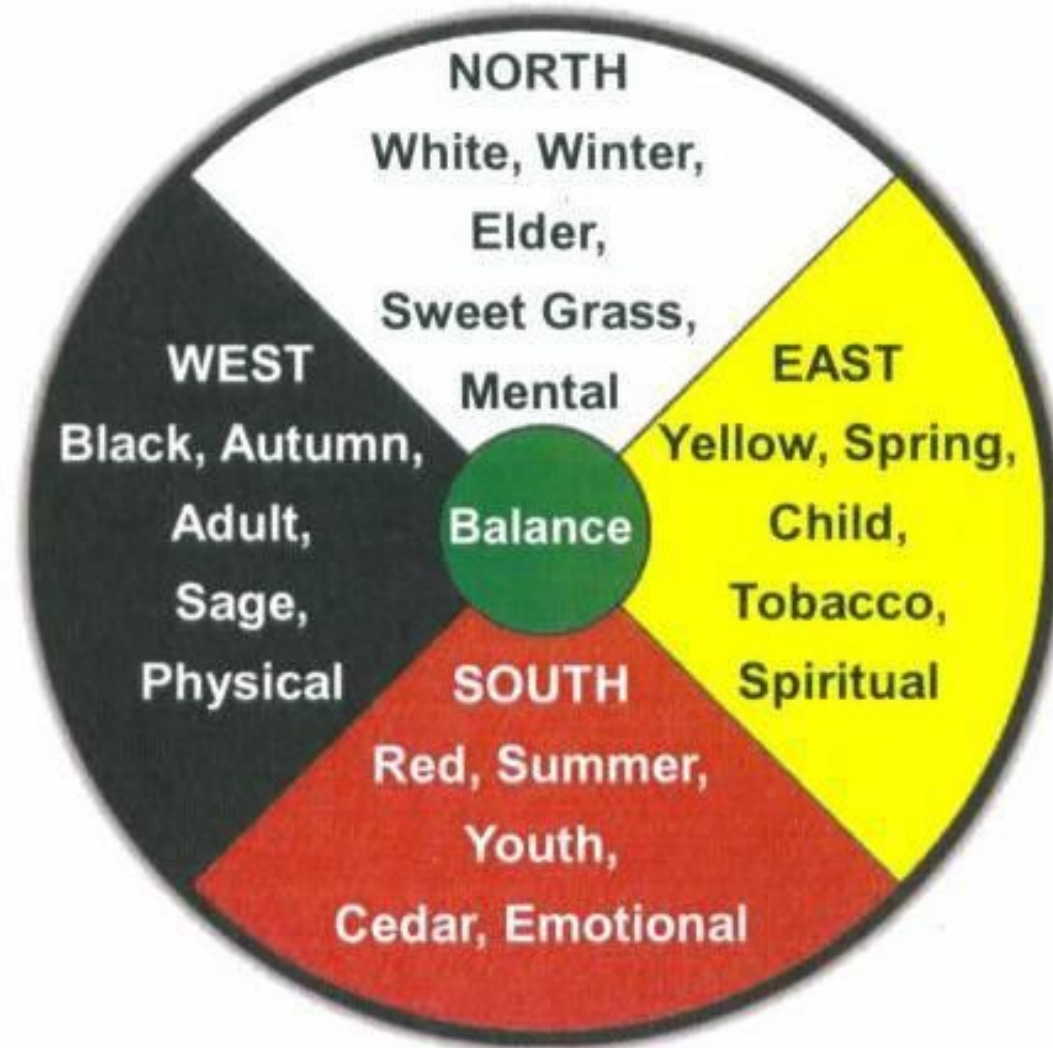
- ▶ Proper Healing Was/Is Blocked
- ▶ System Dysregulation
 - ▶ Pain becomes self-sustaining
 - ▶ Pain signal continues when there is no tissue damage
 - ▶ Inflammatory markers stay elevated/active
 - ▶ Increase substance P—nerves now trigger pain and inflammation on their own
 - ▶ Natural endorphins decrease/less effective
 - ▶ Less able to suppress pain signals
 - ▶ *Central sensitization*: spinal cord/brain cells become hypersensitive to pain signals
 - ▶ *Neuroplasticity*: Cognitive and emotional reactions to pain magnified
- Things that didn't use to trigger pain can now trigger pain



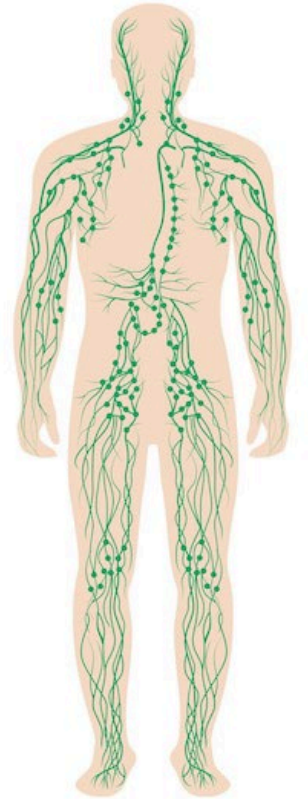
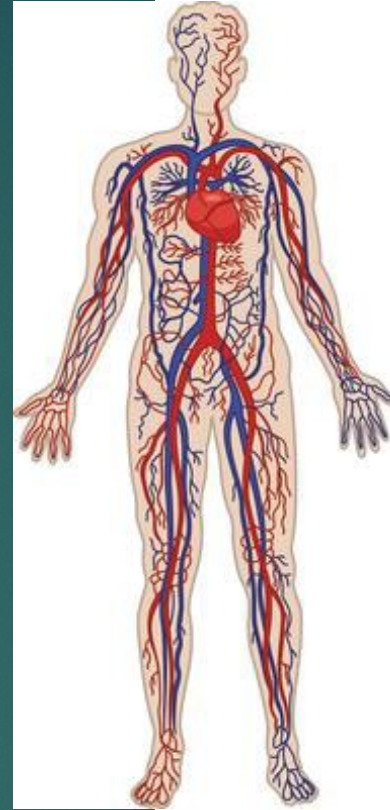
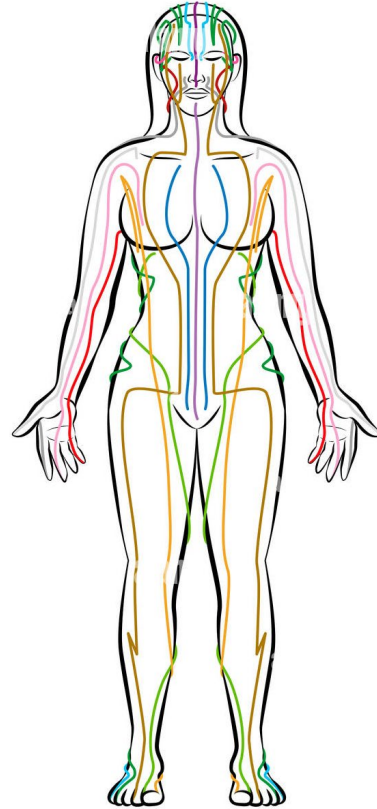
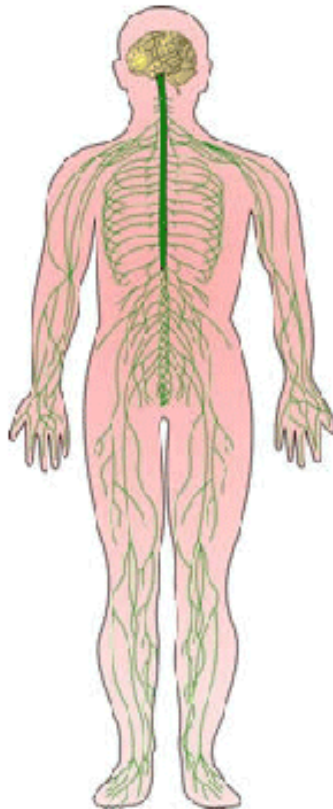
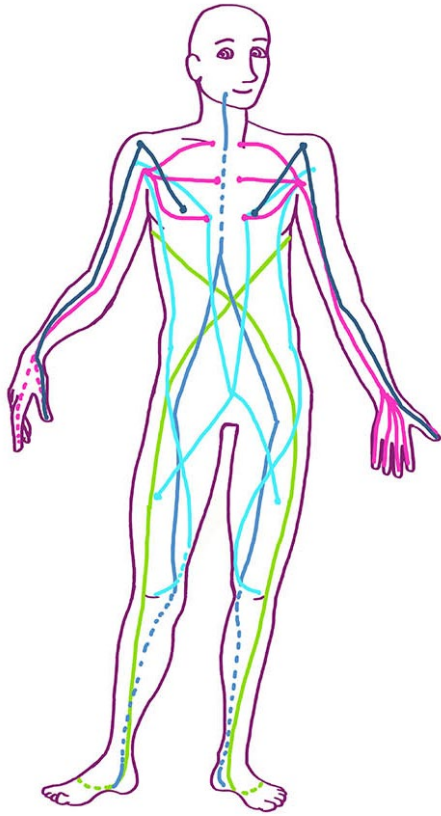
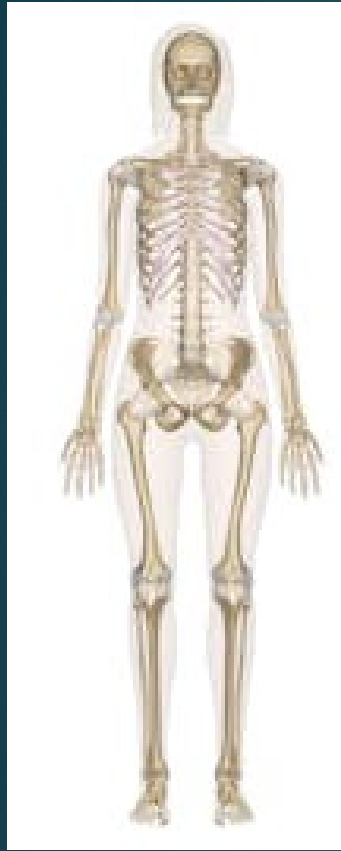
An Indigenous Approach to Pain



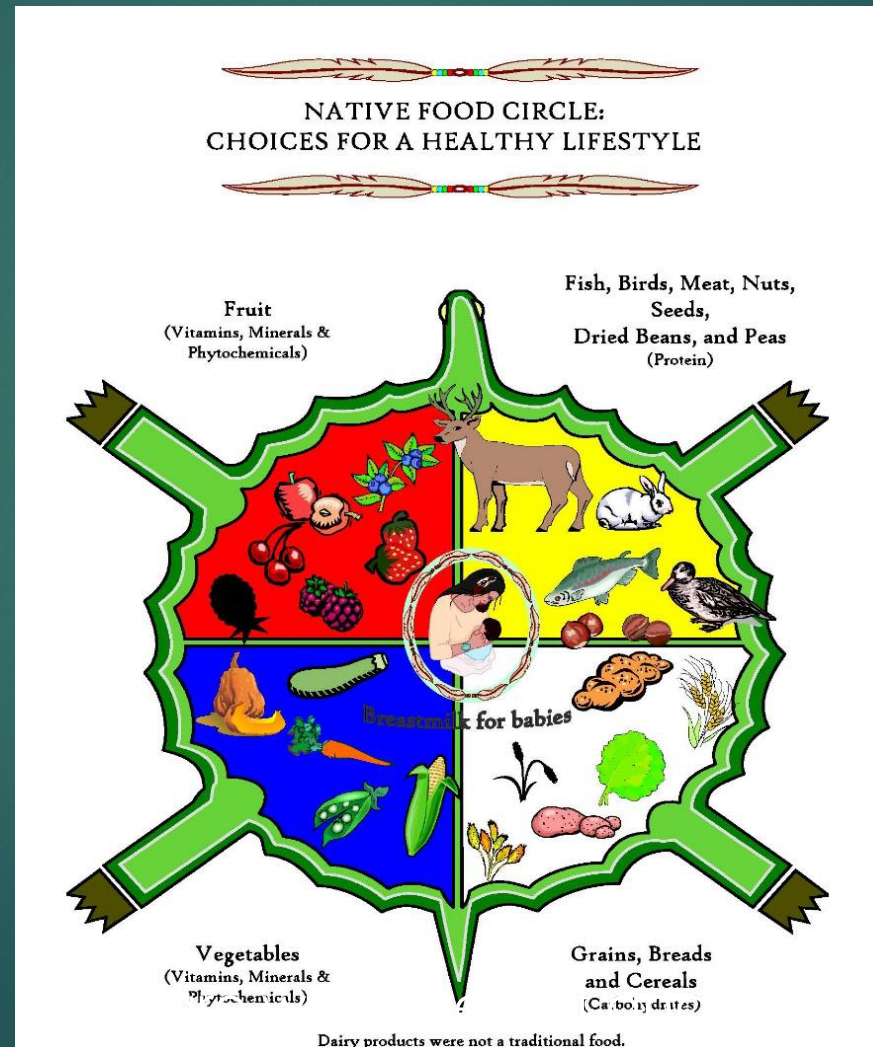
Ojibwe Medicine Wheel







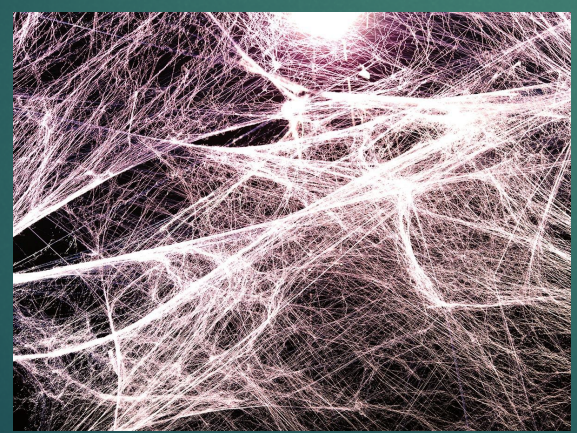
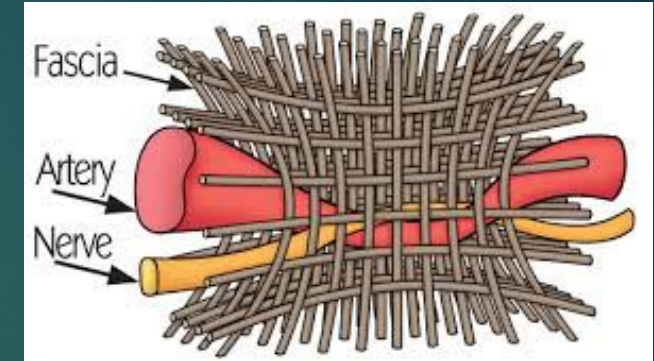
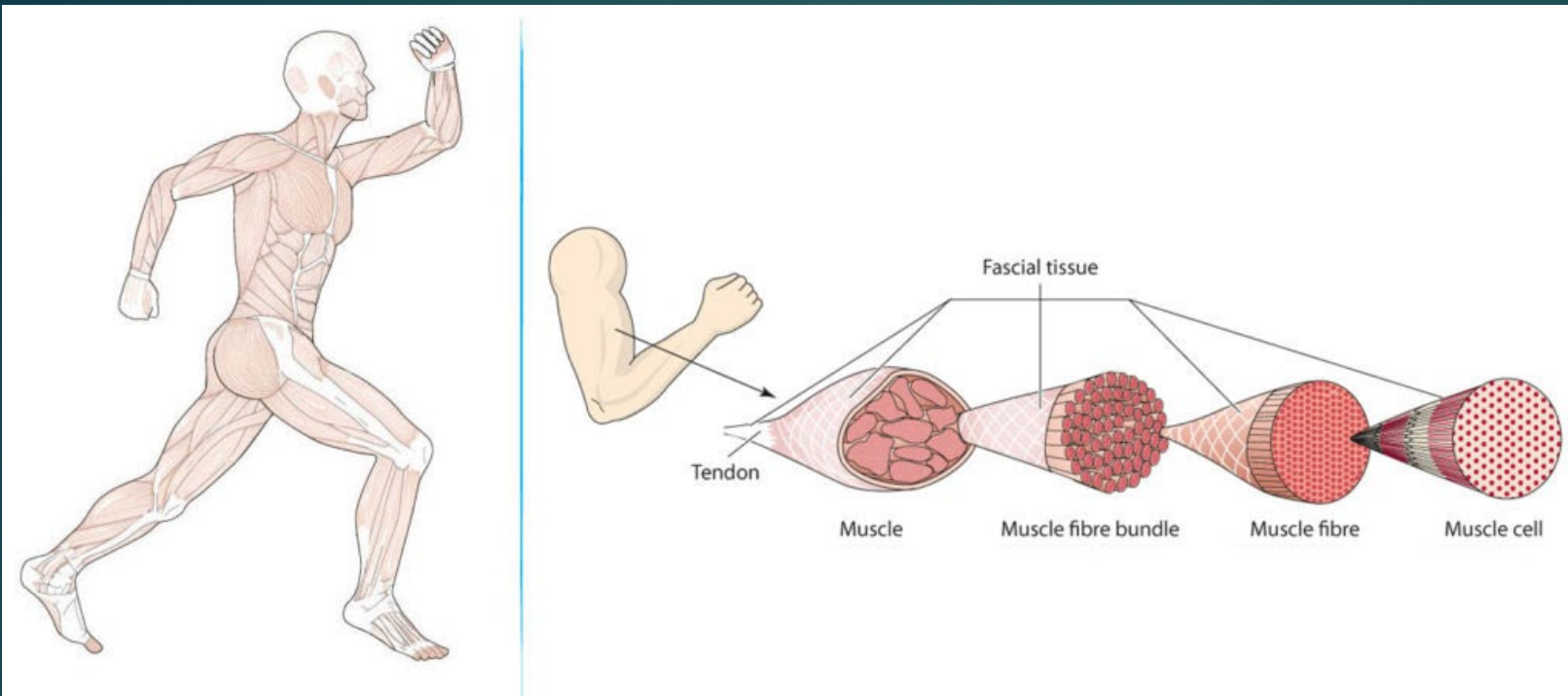
An Indigenous Diet is Anti-Inflammatory



Body work

- Humans have done body work as long as they have had bodies.
- Traditional massage, bone setters, sobar
- The body stores memory in nervous system and fascia (connective tissue)

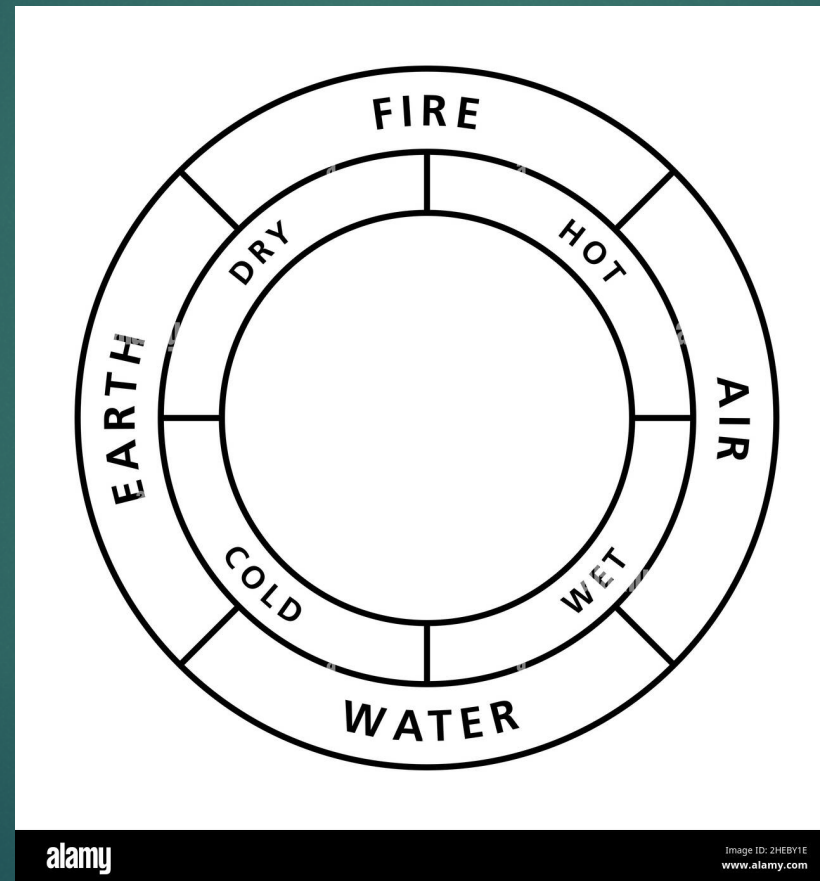




Body work and movement

- ▶ Stretching
- ▶ Walking
- ▶ Swimming
- ▶ Gardening
- ▶ Massage
- ▶ Other local options?

Health is Balance



Plan Medicine for Body Support

- ▶ Antispasmodic and Analgesic herbs
 - ▶ Osha (bear root)
 - ▶ Yarrow
 - ▶ Sagebrush (artemisia)
 - ▶ Valerian
 - ▶ Cottonwood
 - ▶ Arnica
 - ▶ Mint





Developing a Healthy Relationship with Pain

- ▶ Understanding the Timeline of Pain
- ▶ Understanding the Role of Pain
 - ▶ A companion in the car, not the driver
 - ▶ Pain as a Protector, Teacher, Healer, Connector
- ▶ Setting Boundaries with Pain
 - ▶ Reclaiming our power



Plant Medicine for Mental Support

- Nervines
 - Have an effect on the nervous system
 - Can be relaxing, stimulating, hypnotic, antispasmodic, antidepressant, tonic
- ▶ Valerian, Dogwood
- ▶ California poppy, passionflower, skullcap, motherwort, blue vervain, chamomile, hops, kava, lavender
- ▶ Sweet grass, oats, sage



Indigenous Activities for Mental Wellness

- ▶ Activities that relieve stress, lower cortisol, cultivate dopamine, cultivate connection to nature/creation/others, release oxytocin, promote circulation, boost serotonin, improve parasympathetic tone, decrease inflammation, regulate blood sugar, regulate brain waves
- ▶ Outdoor Activities
 - ▶ Walks
 - ▶ Gathering
 - ▶ Hunting
 - ▶ Harvesting
 - ▶ (food, medicine, materials, sacred items)
- ▶ Cultural Connection
 - ▶ Family Gathering
 - ▶ Storytelling
 - ▶ Games
 - ▶ Beading, Jewelry Making
 - ▶ Making Traditional Clothes
 - ▶ Celebration





Emotional Processing

- ▶ Processing the Grief of Pain
- ▶ Releasing Trauma
- ▶ Somatic Processing
- ▶ Finding Emotional Safety



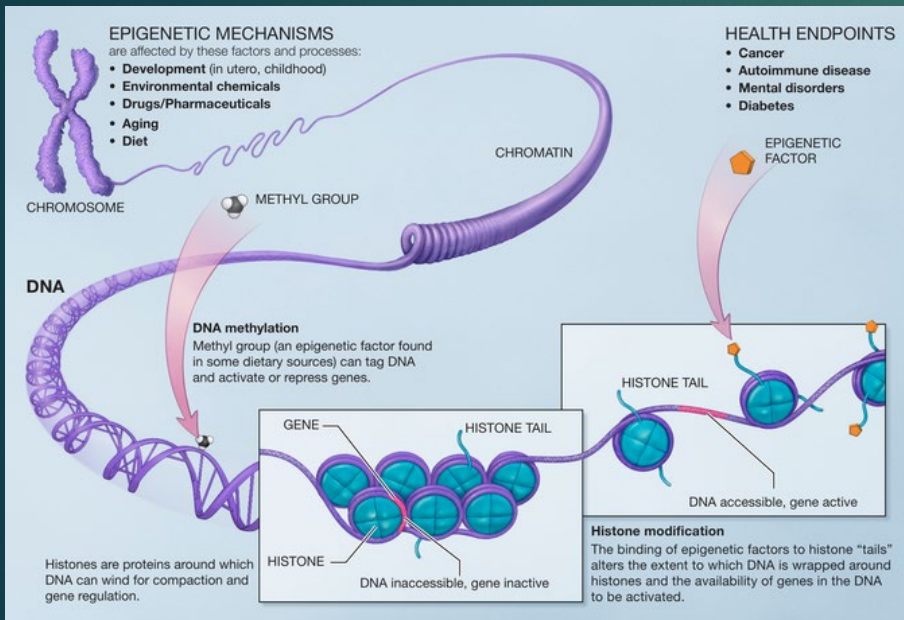
Plant Medicine for Emotional Support

- ▶ Nervines
- ▶ Adaptogens
 - ▶ Help the body adapt to stress
 - ▶ Including neuroendocrine, immune systems
 - ▶ Regulates HPA and sympathoadrenal system
 - ▶ Adaptogens adapt to grow in harsh environments
 - ▶ High altitude, cold weather, low oxygen
 - ▶ Take many years to mature
 - ▶ Roots that store nutrients, energy
 - ▶ High value
- ▶ Devil's club
- ▶ Panax ginseng, Maca, Aralia (spikenard), Licorice root, Rhodiola, Sarsaparilla

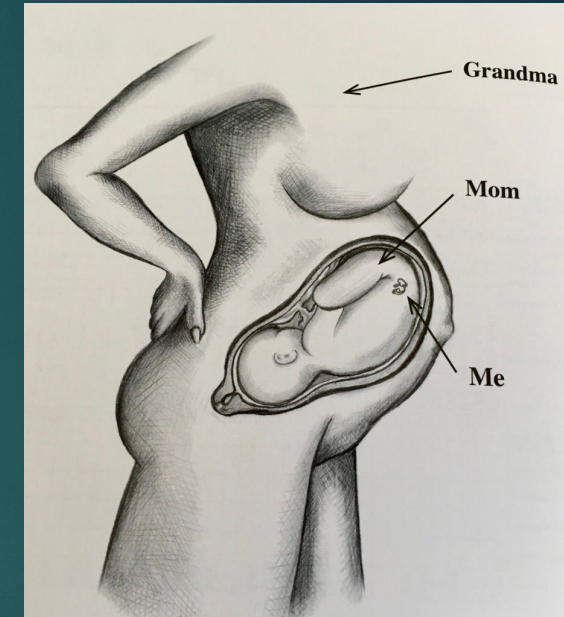




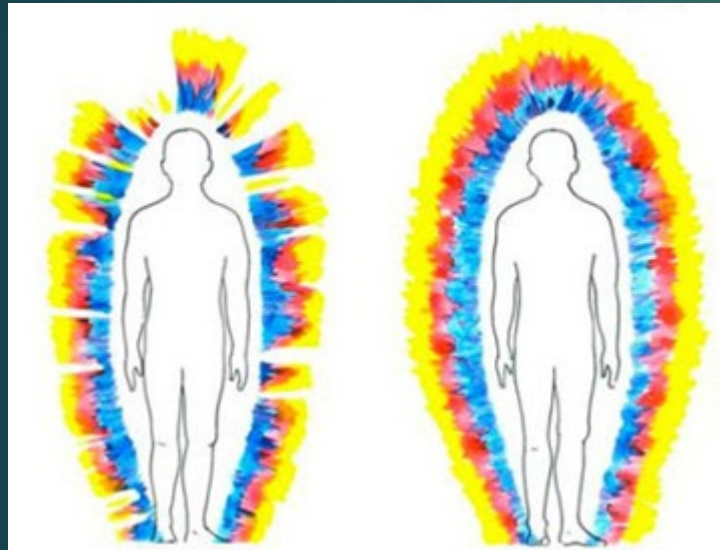
Epigenetics and Intergenerational Transmission



- ❖ Epigenetics influence transmission of traits, including skills, across generations without changes to DNA itself, but how it is expressed
- methylation, histones, RNAs that regulate expression
 - Including behaviors and stress responses



Ceremony & the spiritual body



Smudging
Sweat lodge
Talking circle
Limpieza
Spiritual counseling
Ceremony



"Spiritual Energy System" by Alex Grey

Plant Medicine for Spiritual Support

- ▶ Sage
 - ▶ Sagebrush, prairie sage, white sage
- ▶ Sweetgrass
- ▶ Cedar
- ▶ Pine
- ▶ Tobacco
- ▶ Bear root



Incorporating Indigenous Approaches in Clinic

Getting Services Covered

- ▶ Referral relationships with local providers
- ▶ Hire contractor for billable services
 - ▶ Acupuncture
 - ▶ Chiropractor
 - ▶ Osteopathic Manipulation
- ▶ Connect to a medical visit to cover the service in-house
 - ▶ Pain management visit with doctor/APP then massage therapist or other practitioner
 - ▶ Herbal Medicine Clinic
- ▶ Outside funding to pay for direct services
 - ▶ Grants
 - ▶ Foundations



- ▶ What is the local indigenous diet?
- ▶ What are local Indigenous Practices and Plant Medicines for Body Support?
- ▶ What are local indigenous Activities and Plant Medicines for Mental Wellness?
- ▶ What are local Indigenous Practices and Plant Medicines for Emotional/Grief Processing?
- ▶ What are local indigenous practices for spiritual/ceremonial cleansing/healing?

THANK YOU
Pij̄nagigi



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