Objectives

- What yoga is and the history of yoga
- Yoga for pain and stress management
- Evidence supporting yoga as an effective complement to allopathic medicine for pain management
- Key elements of effective yoga classes
- Various styles of yoga and what you can recommend patients with chronic pain
- Yoga at work demo!
What is Yoga?

Yoga is an ancient system that focuses on breathing techniques, physical postures and meditation as a “whole system” method to healing - integrating the mind, body and spirit to alleviate physical pain, emotional trauma, and stress to make room for healing, better health, and overall improved quality of life.

Derived from Sanskrit word “yuj” – to yolk/unite/integrate (breath + movement, body + mind).
Brief History of Yoga

- Described in many ancient Indian texts that can date back to at least 1900 BCE.
- Important texts in yoga: Bhagavad-Gita (~500 BCE) and the Yoga Sutras of Patanjali (~200 CE)
  - An 8-part path on how to lead a meaningful and purposeful life.
  - Minimal mention of physical poses until Hatha Yoga Pradipika in 14th century CE.
- Yoga became popular in the West within the past century, evolving into the multi-faceted discipline we are familiar with today.
  - T. Krishnamacharya, 20th century Indian yoga teacher in Mysore, India
    - i.e. Iyengar Yoga, Ashtanga Yoga, vinyasa/flow.
Patanjali’s 8 Limbs of Yoga

- **Yamas**
  - Ahimsa (non-violence)
  - Satya (truth)
  - Asteya (non-stealing)
  - Brahmacharya (control of sexual energy)
  - Aparigraha (non-hoarding)

- **Niyamas**
  - Soucha (cleanliness)
  - Santosha (contentment)
  - Tapas (discipline or self-discipline)
  - Svadhyaya (self-study)
  - Ishvara-pranidhana (surrender)

- **Asana**
  - Pose

- **Pranayama**
  - Breath

- **Pratyahara**
  - Withdrawal of the senses

- **Dharana**
  - Intense focus

- **Dhyana**
  - State of meditation

- **Samadhi**
  - State of oneness

Photo source: alisonhinksyoga.wordpress.com
More Than Just Stretching

- **Asana**
  - Physical movement and postures
  - Sanskrit: Asana = seat
  - Original ancient texts describe few if any postures besides a comfortable seat

- **Pranayama**
  - Controlled breathing
  - Many different techniques
  - Ujjayi breathing

- **Dharana**
  - Intent focus
  - Dristi = sight
    - Point of external focus to help bring awareness inward
    - Single-pointed focus = staying present
Physical Benefits

- Improved flexibility
  - Gradually loosens the muscles and connective tissue that surround joints and bones which may aid in reduced aches and pains as well as decrease the risk for injury.

- May help build muscle mass or maintain muscle strength.

- Effective in improving posture, balance and proprioception.

- Can reduce pain for people with carpal tunnel syndrome, back pain, arthritis and other chronic conditions.

- Effective adjunctive treatment for chronic lower back pain and functional disability.
Holtzman and Beggs (2013)

- Meta-analysis of randomized controlled trials to evaluate if yoga was an effective intervention for CLBP
  - 8 RCT with a total of 743 patients
    - Studies must have met specific criteria
    - 401 total patients randomized for yoga
  - Studies at-home self care and exercise education control group
    - 342 patients randomized to control groups
  - Participants attended 6 – 12 one hour sessions
  - Different styles were used

- Results:
  - Yoga for pain: $d=0.623$ improvement over control
    - medium to large effect size
  - Yoga for short-term functional disability: $d=0.645$
    - medium to large effect size
Psychosomatic Benefits

- Controlled breathing increases PNS activity and can account for a 40% variance in feelings of sadness, fear, anger and joy.
  - Evidence suggests yoga-based breathing interventions can increase heart rate variability and promotes stress resilience.

- Helps cultivate a deeper sense of awareness of the body.
  - Release of unconscious muscular gripping and improved proprioception.
  - Can lead to better posture, changing habits that could cause repetitive stress injuries and understanding the value in a healthy diet to feel better.

- People who practice yoga improve on a number of psychological health measures.
  - Self-esteem, mood, their sense of equanimity and they report lower levels of anger.
Yoga and Pain Management

- Yoga therapy is a comprehensive system designed to enhance the body’s ability to heal
  - Restorative and gentle poses, guided meditation and breathing techniques
  - Is an effective complement to alternative healing methods 6, 11, 12

- Yoga can be effective in reducing pain catastrophizing, increasing pain self-efficacy and aid in decreasing depression and anxiety 5
  - Regular meditators can decrease the signals between the thalamus possibly reducing the need for medications 4, 13

- Yoga offers statistically greater post-treatment improvements in functionality compared with traditional exercise control groups 6
Yoga and Stress Management

- Stress contributes to the etiology of chronic conditions and diseases and yoga is a promising stress management technique.
- Integrates physical, mental and spiritual components through breathing and meditation techniques, physical movement (asana), learning to control the mind and stay present.
- Produces a state of rest and recovery by increasing PSN activity by means of breathing techniques, physically moving the body and awareness and concentrating attention.
The Art of Breathing

**Diaphragmatic Breathing**
- Contracting the diaphragm to breath
- Breath is more controlled, slower and steady than day-to-day automatic breathing

“For breath is life, and if you breath well you will live long on earth.”
- Sanskrit Proverb

**Ujjayi Breathing**
- Sanskrit = “Victorious Breath”
- Resistance breathing that constricts the larynx and partially closes the glottis to impede air flow
- Use your nose
  - Creates resistance to air flow for slower and more controlled breathing
The Art of Intention

Patanjali’s Yoga Sutra 1.2:
“Yoga is the cessation of fluctuations of the mind”

- Intangible goal setting to create a path to follow based on what matters to you
- Meant to help set your focus during class
  - Dharana
- Can be a simple word you dedicate your practice to that represents a value you would like to bring into your life
  - Be present
  - Gratitude
How Poses Can Affect the Body

- **Forward folds**
  - Calming
  - Aids in improved blood circulation

- **Hip opening poses**
  - Releases and lengthens muscles attached to the pelvis, lumbar spine, sacrum and other parts of the femur, relieving pain, stiffness and discomfort

- **Chest Opening poses**
  - Chest expansion during spinal extension appears to increase blood flow and oxygenation to the heart and lungs
  - Energizing

- **Twists**
  - Said to “squeeze internal organs, encouraging flow of oxygenated blood to organs”
  - Reduces abdominal discomfort
  - Increases flexibility of back and core muscles, helps prepare for deeper backbends

- **Standing Balance Poses**
  - Improves focus
  - Improves balance

- **Inversions**
  - Assists in returning blood from the feet to help with swelling and can act as an aid in the circulatory system

* More research is needed to support some of these claims
The Importance of Ambience and Sensory Environment

- **Light**
  - Natural light is important
  - Natural sunlight is important to healing
    - Beauchemin and Hays found that depressed patients in a psychiatric unit recovered faster in rooms with brighter and natural light

- **Viewing Nature**
  - Ulrich’s “Theory of Supportive Healthcare Design” includes guideline to “Provide Access to Nature and other Positive Distractions”

- **Noise**
  - High noise levels are associated with increased stress

- **Smell**
  - Some evidence that fragrance perceived as pleasant can lower patient-related anxiety during MRI
  - Additional empirical evidence is needed to support claims that pleasing aromas can slow respiration, lower blood pressure and reduce stress

- **No clutter is ideal**
  - Turning attention inward is difficult when there is too much external stimuli in the room
Yoga Nidra

- Nidra = sleep
  - It refers to the state in which the body profoundly relaxes, the thinking mind subsides, but awareness remains.

- Sequence of meditation practices that help you feel connected to yourself, with others and the world around you
  - teach practitioner how to respond, rather than react, to emotions, thoughts and actions
  - Reacting vs. responding

- Includes guided relaxation, guided imagery, guided breathing meditations, healing guided imagery

- iRest: “Integrative Restoration”
  - Program designed specifically for military personnel suffering from PTSD and anxiety disorders
Different Styles for Different People
“Different yoga interventions can yield statistically similar effect sizes” but note that not all classes are beneficial to individuals in chronic pain!

Suggested classes:

- Therapeutic Yoga
- Gentle Yoga
- Beginner’s Yoga
- Integrative Yoga Therapy
- Iyengar Yoga
- Viniyoga
- Restorative Yoga
- Chair Yoga
- Thai Yoga
- Beginning Iyengar Yoga
- DDP Yoga
- Some Yin Yoga classes

How to find or recommend the best yoga class/studio to your patients:

- Emphasize not all yoga classes are designed to be easy for everyone
- If there are no therapeutic yoga classes offered in your area, find beginners or gentle yoga for first class
- Suggest they email or call the studio before they come to class to learn yoga studio etiquette and what classes may be best for them
- Good online resources and books (although live teachers are ideal). I recommend www.yogaglo.com
  - In-depth explanations of different yoga styles: http://www.yogajournal.com/article/beginners/not-all-yoga-is-created-equal/
Yoga at Work!

Seated cat and cow

Seated half moon

Seated twist

Seated pigeon
Yoga is strong medicine but it is slow medicine. Don’t expect overnight cures with yoga (though for many people it does start to yield benefits right away). One major difference between yoga and many other approaches to healing is that yoga builds on itself, becoming more effective over time. In this sense yoga is something like learning to play a musical instrument: the longer you stick with it and the more you practice, the better you get and the more you get out of it. A corollary to this is that yoga, by and large, is not the proper treatment for acute problems like broken bones, overwhelming infections, or surgical emergencies. These are best cared for in a conventional medicinal setting, and indeed the treatment of such acute problems is allopathic medicine’s strength.

- Dr. Timothy McCall, Yoga as Medicine

Arthur Boorman  https://www.youtube.com/watch?v=qX9FSZJu448
Sanskrit:
Nama = bow
As = I
Te = you

The light in me recognizes and honors the light in you

“Namaste.
I honor the place in you where the entire Universe resides. A place of light, of love, of truth, of peace, of wisdom.
I honor the place in you where when you are in that place and I am in that place there is only One of us.”
~ Mahatma Gandhi
Resources

10. Miller, R. The iRest program for healing PTSD; 2015.