

# THE ROLE OF YOGA IN REHABILITATION

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# OBJECTIVES

- Brief history and overview of present forms of yoga
- Review of certification process and opportunities for continuing education
- Review of current literature
- Presentation of therapeutic interventions and examples to incorporate into therapeutic sessions

GENERAL PREMISE: The combination of Yoga and Physical/Occupational Therapy assists patients/clients/students to **optimize function** through *mindfulness, breathing, and movement*.

## PERSPECTIVES — HOW HAVE YOU BEEN PERSONALLY IMPACTED BY YOGA?

“Yoga has helped me in so many ways: strength, flexibility, stamina. I have been more successful at times when I was doing yoga regularly. I think it has helped me stay focused and has probably relieved stress and overall just made me healthy in all ways: mentally, emotionally, physically, spiritually.”

“It has changed my outlook on life and made me feel more comfortable in my body and more resilient health-wise.”

“Yoga has helped me lower my anxiety and prevent headaches and back pain.”

“Yoga has provided physical, mental, and spiritual alignment.”

“Yoga has helped me maintain my weight and flexibility as I have aged, has given me better body awareness, and a greater understanding of my body’s strengths and weaknesses.”

# WHO PRACTICES YOGA?

300 million people practice yoga across the globe.

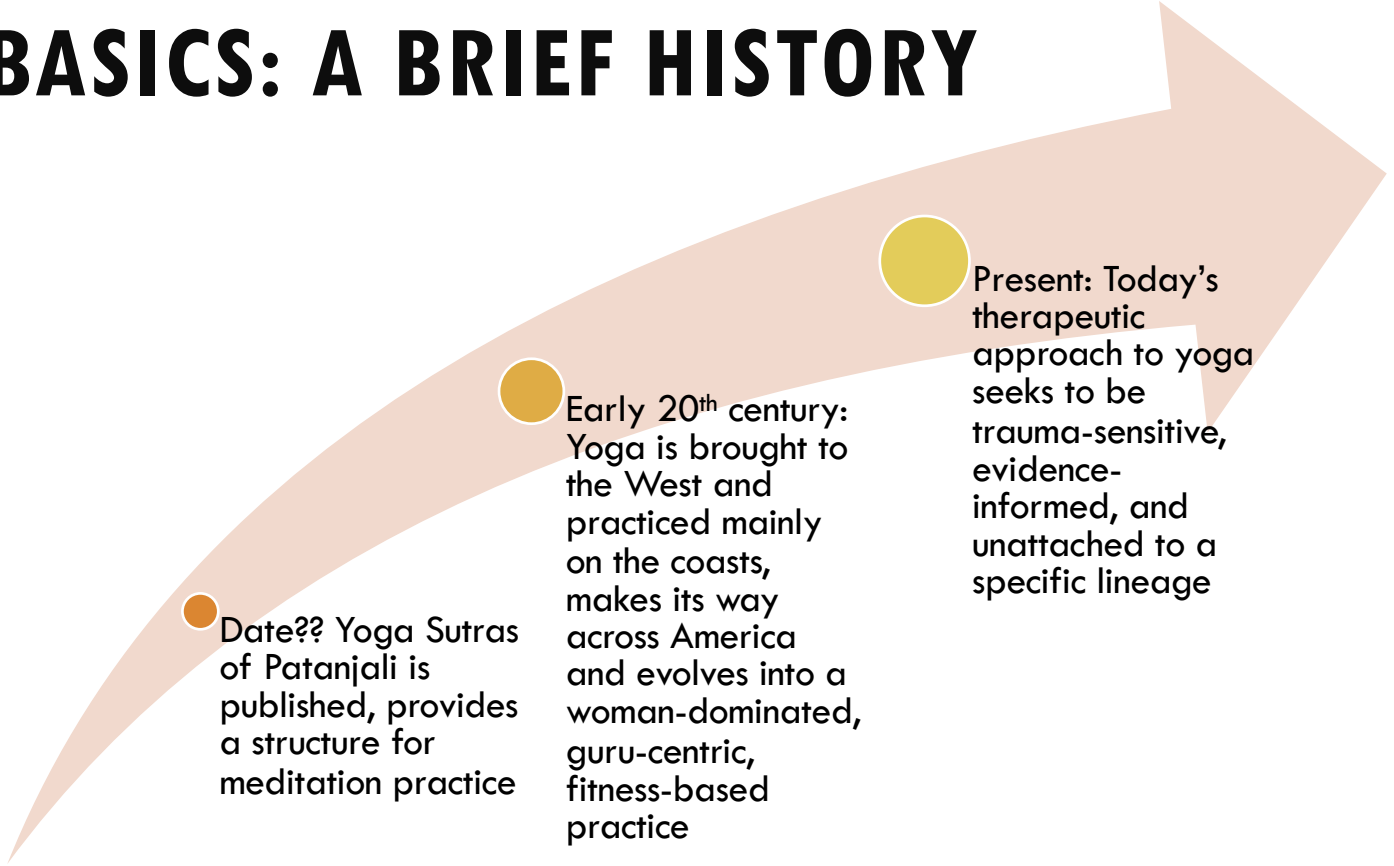
28% of Americans have tried practicing yoga in their lives.

Over 55 million people will start practicing yoga by 2020.

1 in 12 children had practiced yoga within the past 12 months according to a National Center for Complementary and Integrative Health survey.



# FROM MYSTICS TO LULULEMON AND BACK TO BASICS: A BRIEF HISTORY



● Date?? Yoga Sutras of Patanjali is published, provides a structure for meditation practice

● Early 20<sup>th</sup> century: Yoga is brought to the West and practiced mainly on the coasts, makes its way across America and evolves into a woman-dominated, guru-centric, fitness-based practice

● Present: Today's therapeutic approach to yoga seeks to be trauma-sensitive, evidence-informed, and unattached to a specific lineage

# WHAT IS YOGA?

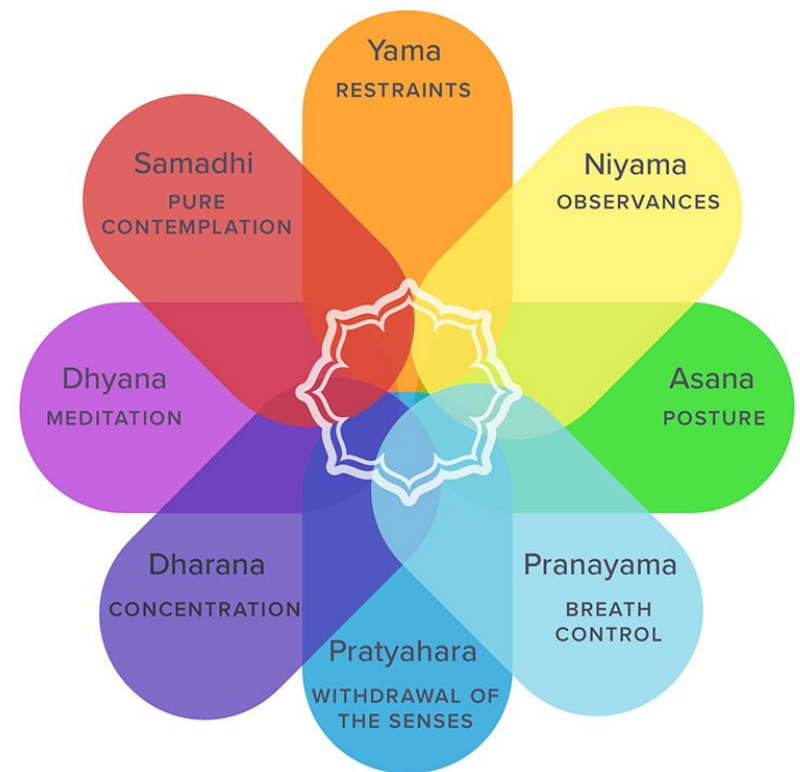
*Yogas chitta vritti nirodha*

According to the classic yoga text *Yoga Sutras of Patanjali*, yoga is described as:

- the cessation of fluctuations in the consciousness (Iyengar)
- the complete inhibition of the modifications of the mind (Taimini)
- the quieting of constant chatter in one's mind so that our True Selves can manifest, rest in our own true nature and be free of suffering (Stephens)

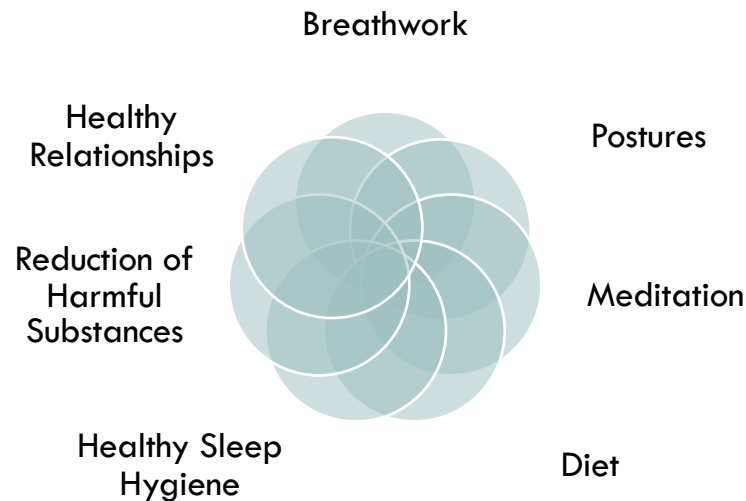
The word YOGA is derived from the Sanskrit word “yug” which literally translates as yoke/ bind/ union.

## 8 Limbs of Yoga



# YOGA THERAPY

*“The yogic definition of health (“svastha”) is when the functions of the body and mind are in harmony so that they can turn inward to reach the goal of Self-realization. In yogic terms, when you are really your SELF, you are truly at EASE. It is the loss of the Self that creates dis-ease. This is a bit different than the Western concept of health which is often defined as “the absence of disease.” –Ina Stephens*



# CERTIFICATION

There is no standard requirement for yoga teaching, though separate lineages have different standards



# FEASIBILITY AND EFFICACY

Thomas et al. (2021)'s recent survey of PTs that currently incorporate yoga into PT practice found that:

- PTs report improved physical and psychosocial functioning though yoga-specific assessments are lacking and these reports were anecdotal
- PTs indicated that incorporating yoga into practice warrants additional yoga training and the clinician must have a personal yoga practice
- PTs bill through Neuromuscular Re-education, Therapeutic Exercise, Therapeutic Activity, or cash
- Many PTs do not indicate to their patients that they are incorporating yoga, rather they use “mindfulness” or just “breathe and relax;” while others use yoga therapy and have built a niche with yoga
- PTs value safety and take additional precautions when teaching asana

# PERSPECTIVES — ARE YOU INTERESTED IN YOGA + PT?

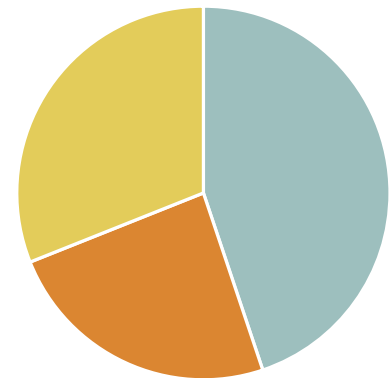
“Yoga for physical rehab is something I prefer over meds.”

“I think physical therapists have a lot of skills that enhance teaching yoga.”

“I wish that I had access to health care practitioners who used yoga i.e. PTs, chiropractors, doctors, kinesiologists.”

“Currently using it in hopes of helping my osteoporosis. I do not want to take medication”

Would you be interested in individual yoga + PT sessions to be offered at your local yoga studio or physical therapy clinic?



■ Yes, only if insurance covered it

■ Yes, I'd be willing to pay cash (\$75-150/session)

# IN PURSUIT OF SYSTEMIZED TRUTHS: CURRENT EVIDENCE SUPPORTING YOGA AS TREATMENT

Mental  
Health

Musculoskeletal  
Conditions

Neurological  
Conditions

Endocrine  
Disorders

Cardio Pulmonary  
Conditions

Special  
Populations -  
OB, geriatrics,  
cancer

# MENTAL HEALTH

## Anxiety

- Reduction in anxiety outcome measure HAM-A (Gupta 2013, Katzman 2012)
- Improvement in QoL (Khalsa 2015)

## Depression

- Fewer depressive symptoms (Broota 1990, Sharma 2005, woolery 2004, lavetsky 2013)

## Substance-use disorders

- Improvement on Quality of Recovery Index (Khalsa 2008)
- Smoking cessation (Dai 2014)

## Schizophrenia

- Improvement in Positive and Negative Syndrome Scale (Duraiswamy 2007, Visceglia 2011, Varambally 2012, Manjunath 2013)

# MUSCULOSKELETAL CONDITIONS

## Back Pain

- Improvement in RMDQ (Sherman 2005), sf-36 (Saper 2013, ODI, VAS, BDI-II (Williams 2009))

## Neck Pain

- Improvement in pain, function, ROM, grip strength, pinch strength (Sharan 2014)

## Arthritis

- Improvements in pain and stiffness (Bedekar 2012, De G.R Hansen 2010)

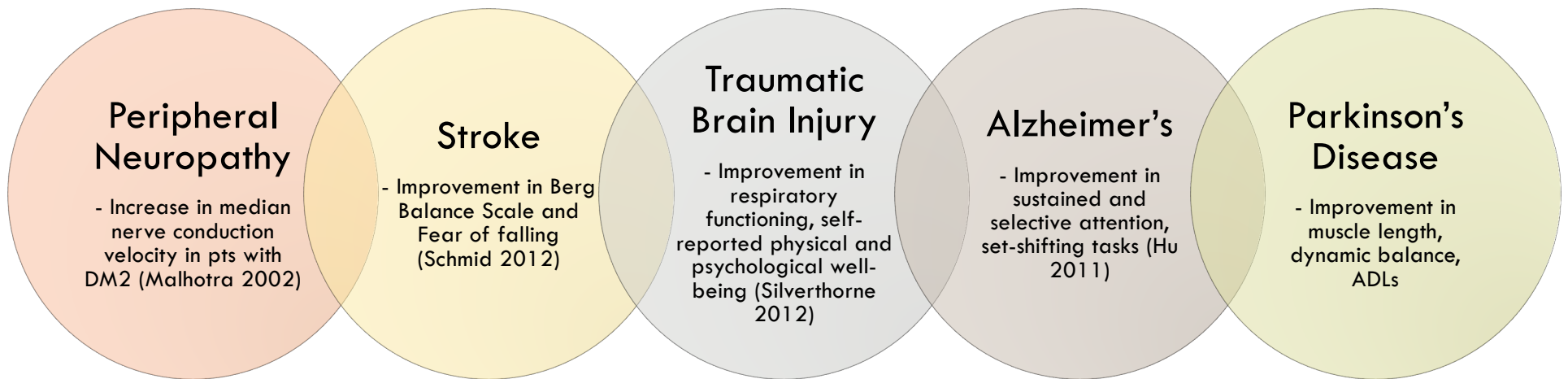
## Chronic Pain

- Restoration of healthy pain response and evidence of brain changes (Carson 2006)

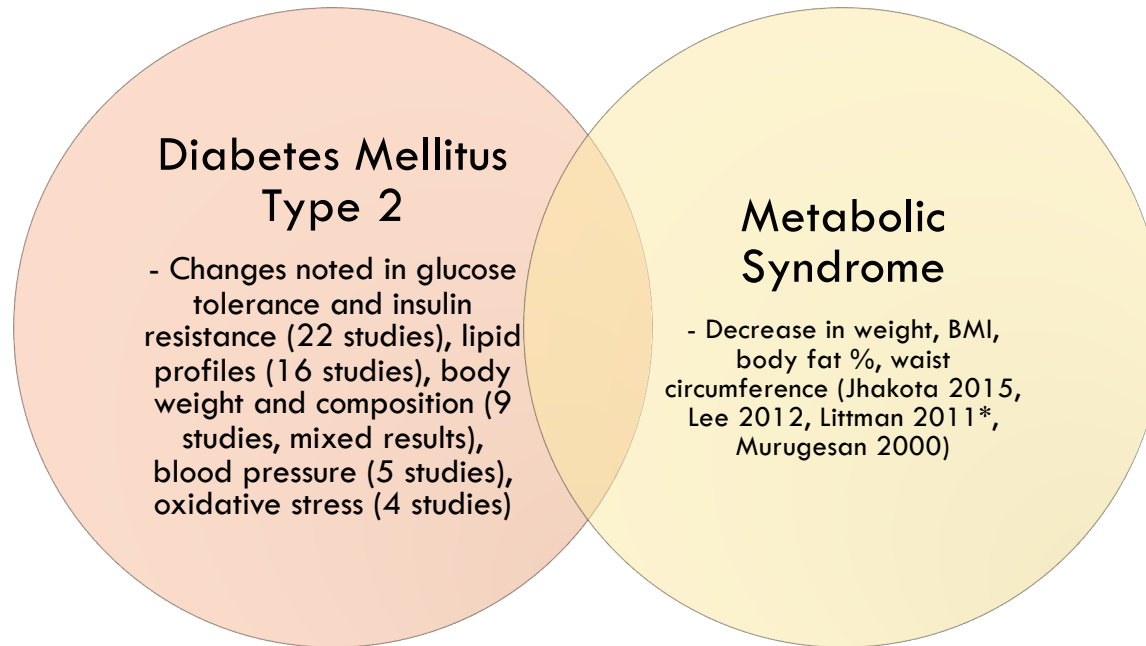
## Fibromyalgia

- Improvement in pain, stiffness, sleep problems, memory, balance, strength, vigor (Carson 2010)

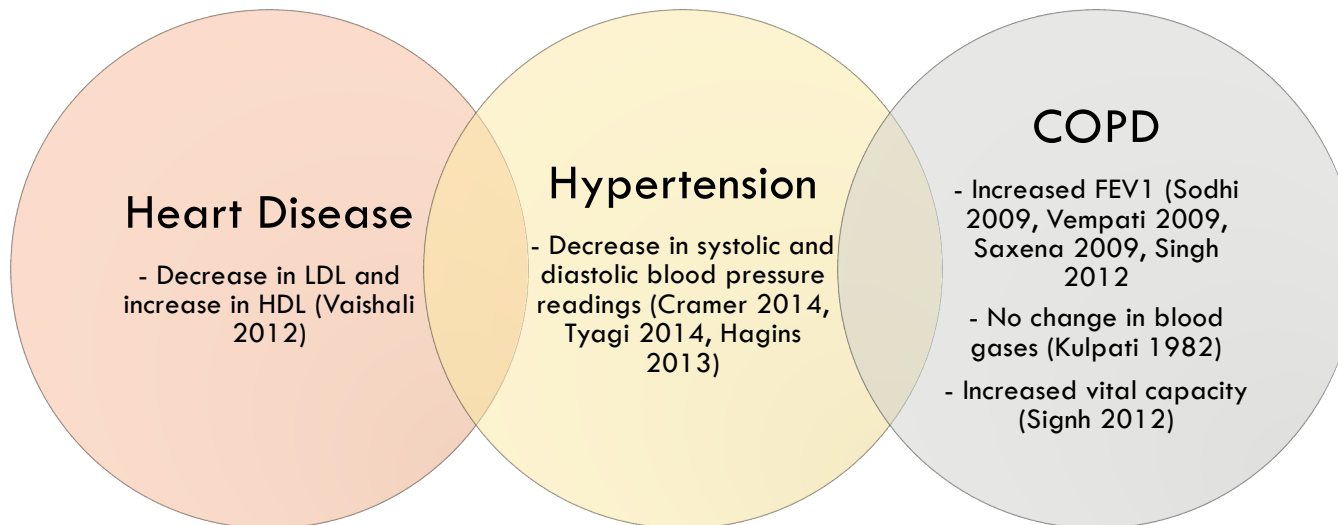
# NEUROLOGICAL CONDITIONS



# ENDOCRINE DISORDERS



# CARDIOPULMONARY CONDITIONS



# YOGA'S ROLE IN REHABILITATION



# INCORPORATING YOGA INTO TREATMENT

## ○ Mindfulness

- Body-scanning, zen meditation, savasana techniques can all be utilized to bring the attention to the present moment and decrease perceived stress

## ○ Movement

- Yoga asana/posture practice can be found in MedBridge, HEP2go, or you can create your own HEP with modified poses for the patient
- Practicing postures has been correlated with increased GABA levels, which is associated with feelings of calm and well-being (Streeter et al, 2010)

## ○ Breathwork

- Abdomino-diaphragmatic breathing techniques can be found in MedBridge or through continuing education courses

# ACUTE CARE

Yoga's use in the hospital is limited due to illness severity and time constraints

- HEP for gentle yoga in patients with cancer
- Respiratory kinematics for patients with COVID19, COPD, anxiety
- Mindfulness practice in trauma unit

Sample **treatment note** that incorporated both therapeutic yoga and physical therapy intervention:  
*PT BID. AM session focused on neuromuscular re-education for improved postural control and respiratory mechanics as pt demonstrates high accessory muscle usage with normal breathing. Began on 2L/min supplemental oxygen via nasal cannula, able to titrate down to 1 L/min with verbal cuing for improved respiratory kinematics when oxygen saturation dipping to mid-70s. Proned for 5 minutes with cues for abdomino-diaphragmatic breathing, incentive spirometer x 10 reps with increased time for recuperation. Mod ind with sit<>stand transfers and ambulation x 25 feet. Rec 2 more days in hospital with BID PT treatment to maximize independence with functional mobility and improve respiratory kinematics to decrease anxiety, oxygen desaturation, and risk of re-hospitalization. Family training tomorrow would be beneficial if able. PM session: Pt was agitated, confused, required increased oxygen to 4L/min. Able to walk 50' x 2 with seated rest break. Rec continued BID treatment, dc Friday.*

# ACUTE REHABILITATION

Yoga programs have been incorporated into acute rehabilitation, but no clinical trials have been published yet. Feasibility and efficacy has been subjectively assessed with good results. Further research is warranted.



# OUTPATIENT

Does the patient practice yoga already? If so, they would benefit from a PT's perspective on modifications for poses that they may already be practicing in addition to their HEP that may be hindering their progress.

- Ex., Warrior poses encourage external rotation of the hips concurrently with knee stabilization, which may alter pelvic alignment and result in pain or hypermobility. Assessing a patient's degree of hip ante/retroversion can help to suggest a pose that "fits" the patient – maybe they need to have feet wide rather than narrow in Warrior II due to their natural hip and pelvic arrangement.

Postural awareness and training: building kinesthetic awareness using costoclavicular and diaphragmatic breathing.

Balance training: with cues for incorporating proprioceptive and sensory inputs, trying balance exercises with and without shoes.

Diaphragmatic breathing and mindfulness exercises to manage acute anxiety and stress, dizziness, and kinesophobia.

Glenohumeral positioning and scapulothoracic engagement: addressed in postures with or without resistance

Cervical tension, cervicogenic dizziness, headaches, suboccipital awareness and positioning can all be addressed in isometric positions for improved ROM and decreased pain



Pelvic stability: many standing poses require large ranges of external rotation. Consider testing hip anteversion

Midfoot concavity can be addressed through observation, intention, and additional therapeutic exercise

# BALANCE TRAINING

Single leg stance with support  
(Medbridge)



Chair Supported Tree Pose  
(Medbridge)



# SINGLE LEG BALANCE: TWO WAYS

## Single leg balance (Medbridge)

**Setup** Begin in a standing upright position holding on to a stable object for support.

**Movement** Lift one foot off the floor and hold this position.

**Tip** Make sure to maintain your balance during the exercise.



## Tree Pose (Vrkshasana)

**Setup** Stand behind chair with left hand on back of chair and left foot parallel to back of chair.

**Movement** Balancing on left foot, place right foot in one of three placements: kickstand the foot toes touching the floor and heel rest near left ankle, lift right foot and place sole of the foot against inside of left leg below the knee, lift right foot and place sole of the foot against inside of left leg above the knee. Hold the pose for 3-5 breaths, then slowly release and switch sides.

**Tip** Push firmly through standing leg and pull in core to lengthen through the body/spine. If you'd like to practice balance, begin to lift left hand from the back of chair and bring palms to touch at the heart. Another option is to bring arms up above your head, but keep shoulders releasing away from the ears as you do so.

# GET CREATIVE!

Crescent moon pose



Supine crescent moon pose



# RESOURCES

[Resources for Online Training \(iayt.org\)](http://iayt.org)

[Learn - Living Well Institute \(integrativelifestylemed.com\)](http://integrativelifestylemed.com)

[Training for Teachers - Mind Body Solutions](#)

## **Manage My Pain with Yoga Program Information:**

Visit <https://hprfstudies.org/redcap/surveys/?s=RKXN8YE3E3> to register. Email MyYoga@HealthPartners.com for more questions

PDFs on Handi Website:

[Incorporating Yoga into Treatment](#)

[Sample Restorative Treatment](#)

## Restorative Sequence

Here is a simple restorative sequence that can be practiced with pillows or beach towels if you do not have access to a bolster at home. In each of these poses, allow a bit of time to settle in to the pose physically and then practice a slow and steady belly breath. Allow tension to melt from your jaw, shoulders, and belly. Give yourself space and enough time to truly let the pose do the work for you.

### Supta baddha konasana:

Rest your entire back on support, enough to feel like you can relax your back. You may need to experiment with height here – it should not overstretch your hips or feel like your low back is uncomfortable. Tuck your chin gently to elongate the neck and free the base of the skull. Fold your legs in and either cross them at the ankles or place the soles of feet together. Support your outer thighs with blocks or blankets. Close your eyes and tune in to the sensations of your physical body. Stay for 6 – 8 slow breath cycles or as long you can while remaining comfortable.



### Easy twist:

Make your way slowly up from the last pose, turn towards your bolster or pillows and rest your chest. Soften your shoulders and allow the breath to expand your upper back. If your neck allows it, turn your head opposite your knees. If your neck is uncomfortable, keep your head towards the knees. Stay for 6-8 breaths and then switch to the opposite side.



### Wide legged forward fold or child's pose:

Gently press yourself up from the twist and turn to face your bolster or pillows. If your hips and knees allow it, bend your knees and sit on your heels. Rest your torso on the support in front of you and your arms comfortably by your sides. Turn your head if it's more comfortable, or rest your forehead on the support. If your knees do not allow this, rest instead with the legs out wide (a slight bend is ok). You may need more support to rest comfortably into wide-legged forward fold. Stay for 6-8 breaths.



# REFERENCES

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# QUESTIONS?



## Incorporating Yoga into your treatment session:

When considering yoga to be included in your treatment session, keep it simple! Add one piece at a time and have your patient practice this throughout their everyday life, checking back with you with updates. Yoga is a mindset, a way of looking at health by returning to the core or true self. It takes practice!

### **Mindfulness:**

Incorporate a body scan into your work-day or a 5-minute pause in your usual morning routine. You can do this while sitting, taking a bath, walking, etc., as long as you can be present and observe your body. Close your eyes if you are still and notice where your tension exists already, don't do anything about it initially, just notice it. Soften your eyebrows, temples, and jaw. Let your belly relax. Breathe slowly now, noticing the passageway of air your breath takes as it travels through your nose, down your throat and into your lungs. Allow those tense areas you noticed before to soften. Observe the sounds in your environment, observe the thoughts floating in your mind. Recognize that these are just distractions and do not need your attention. Label them as thoughts and let them float away like clouds floating by on a summer's day. Breathe now, slowly and steadily. Settle in and rest here for 6-8 breaths or as long as you can.

### **Movement:**

Consider adding yoga *asana*, physical posture, to your HEP for patients with musculoskeletal conditions. If your patient already has a yoga practice and you think the poses may be affecting their condition, ask to see them in the poses and make changes to protect the joints that you are rehabbing. Refrain from saying, "you should just avoid yoga," as the patient may get more out of it than just the stretching or strengthening component. If you are unsure, ask a colleague with yoga experience! *Asana* can be found in MedBridge and HEP2go.

### **Breath:**

Abdomino-thoracic diaphragmatic breathing is an accessible and comfortable way to teach deep breathing and can be done in a variety of positions: seated forward fold (this is a powerful practice during or after COVID19), semi-recumbent over support, sitting upright on the floor or in a chair. Begin with a few seconds of quieting the mind (see mindfulness practice above). Bring the attention to the breath and keep it there. Allow the neck, shoulders, and chest to soften. Inhale and allow the belly button to rise, exhale and gently pull the belly back in towards the spine. Practice a few rounds of this until the breathing pattern is smooth and feels easy. Then, add a slight pause in between the inhale and the exhale. It may be helpful to count – inhale for 6 seconds, pause for 2, exhale for 6 seconds and pause for 2. Return to your normal breath anytime you need a break. Continue for 6-8 breath cycles or as long as you desire.

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