

Mindful Exercise in Health & Disease

Science and Practice

Part 2

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AGENDA & OBJECTIVES

1. Examine appropriate clinical applications of hatha yoga, qigong, and several contemporary forms of mindful exercise and mindful therapies.
2. Explore mindful exercise practice guidelines for a variety of levels of fitness, chronic conditions, and ages, including cardiometabolic disease and type 2 diabetes.
3. Incorporate mindful exercises into personal and professional health practices.

Mindfulness “vs” Meditation

Mindfulness: “the quality and power of mind that is deeply aware of what’s happening – without commentary and without interference.” *Joe Goldstein*

Meditation is a tool we can use to develop a regular practice of mindfulness. Mindfulness is a *quality*; meditation is a *practice*

Mindful Exercise



Low to moderate-intensity exercise coupled with breath and an internally-directed cognitive, meditative focus

Example Mindful Exercise Modalities

A Simple Taxonomy

Classical

- Hatha yoga
- Tai Chi
- Qigong exercise
- Baduanjin exercise
- Select ethnic & spiritual dance
- Breathwork therapies (pranayama)

“Contemporary”

- NIA
- Meditation walking
- Pilates
- GIO
- Physiosynthesis
- Breathwork
- Somatics
- E-motion
- Feldenkrais
- Alexander technique
- Laban movement
- Ideokinesis
- Composite forms

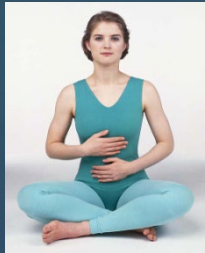
Yoga Practice

Yoga Asanas



Muscular contraction

+



Breathwork

+



Meditation
(internal nonjudgemental focus)

What is Hatha and Vinyasa Yoga?

Hatha yoga is practiced at a slower pace, with focus on the breath, controlled movements, and stretching.

Vinyasa on connecting the breath to your movements, which tend to be set at a faster pace. In a vinyasa practice, you can expect to stay in a constant flow of movements.

Basic styles of hatha yoga

Iyengar

emphasis on detail, precision and alignment

Ashtanga

vinyasa sequences, union of the eight limbs of yoga

Hot yoga (Bikram)

90 min @ ~105F

Restorative

gentle, use of props, longer poses

Savasana



Sukhasana



Two simple meditative
hatha yoga asanas





Savasana

Corpse pose

Iyengar Yoga is a form of hatha yoga with a focus on the structural alignment of the physical body through the practice of asanas.

- Precision is sought in body alignment in every asana.
- The sequences in which asanas are practiced is considered important in achieving the desired result.
- Use of props, designing suitable means to assist practitioners.

Iyengar:
Puts the accentuation on
accuracy and alignment





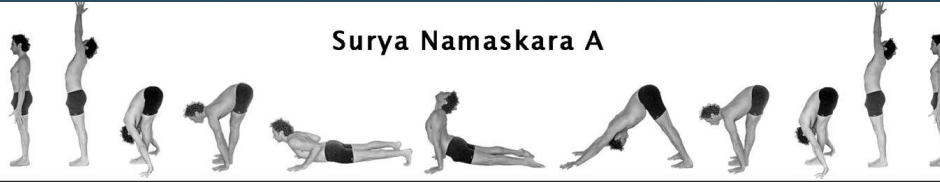
Ashtanga Vinyasa Yoga

A physically demanding style of yoga. Students follow a set sequence of postures each time, gradually progressing through the series.

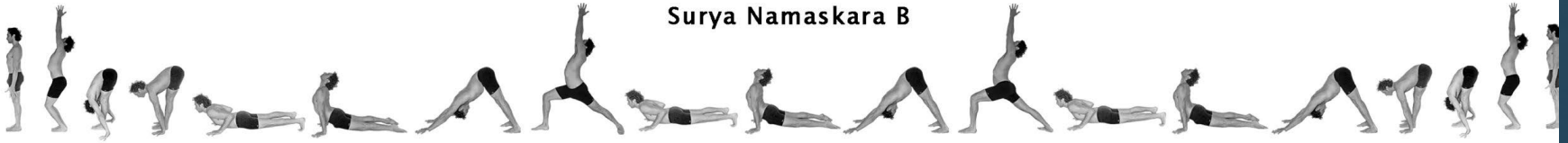
Ashtanga emphasises the linking of movement and breath, Ujjayi breathing and bandhas (energy locks).

Ashtanga yoga

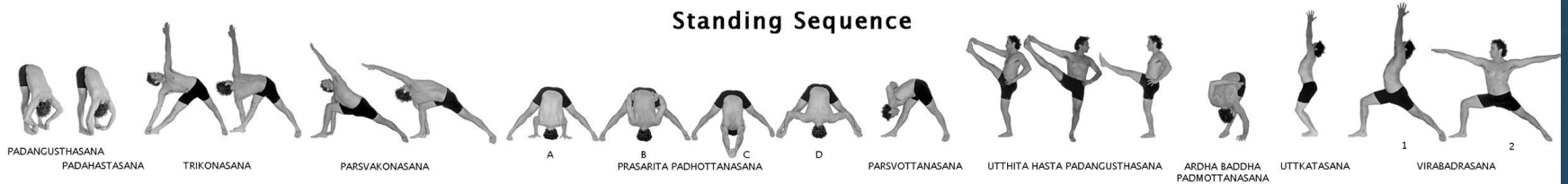
Surya Namaskara A



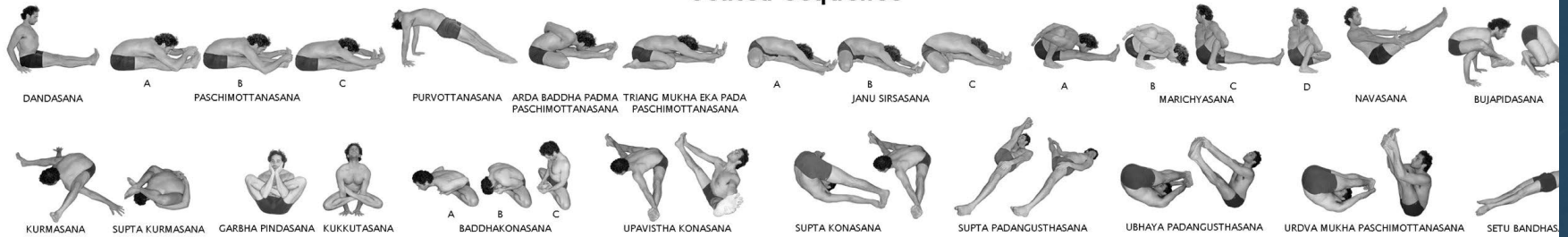
Surya Namaskara B



Standing Sequence



Seated Sequence



Finishing Sequence



THE SUN SALUTE



Sun Salutation

①
Begin in mountain

Exhale and release back
to mountain

⑪
Lengthen spine, reaching out
and up, press pelvis forward,
opening chest, **inhale**

⑩
Left foot forward to
forward fold, **exhale**

②
Raise hands overhead, press
pubic bone forward, tighten
buttocks, open chest, **inhale**

③
Forward fold,
tail bone up, hands
next to feet, **exhale**

④
Right foot back to
lunge - press heel of
back foot, lengthen
spine, **inhale**

⑤
Bring left foot back to plank
position - long spine, **hold breath in**

⑥
Drag knees, chin and
chest to floor, **exhale**

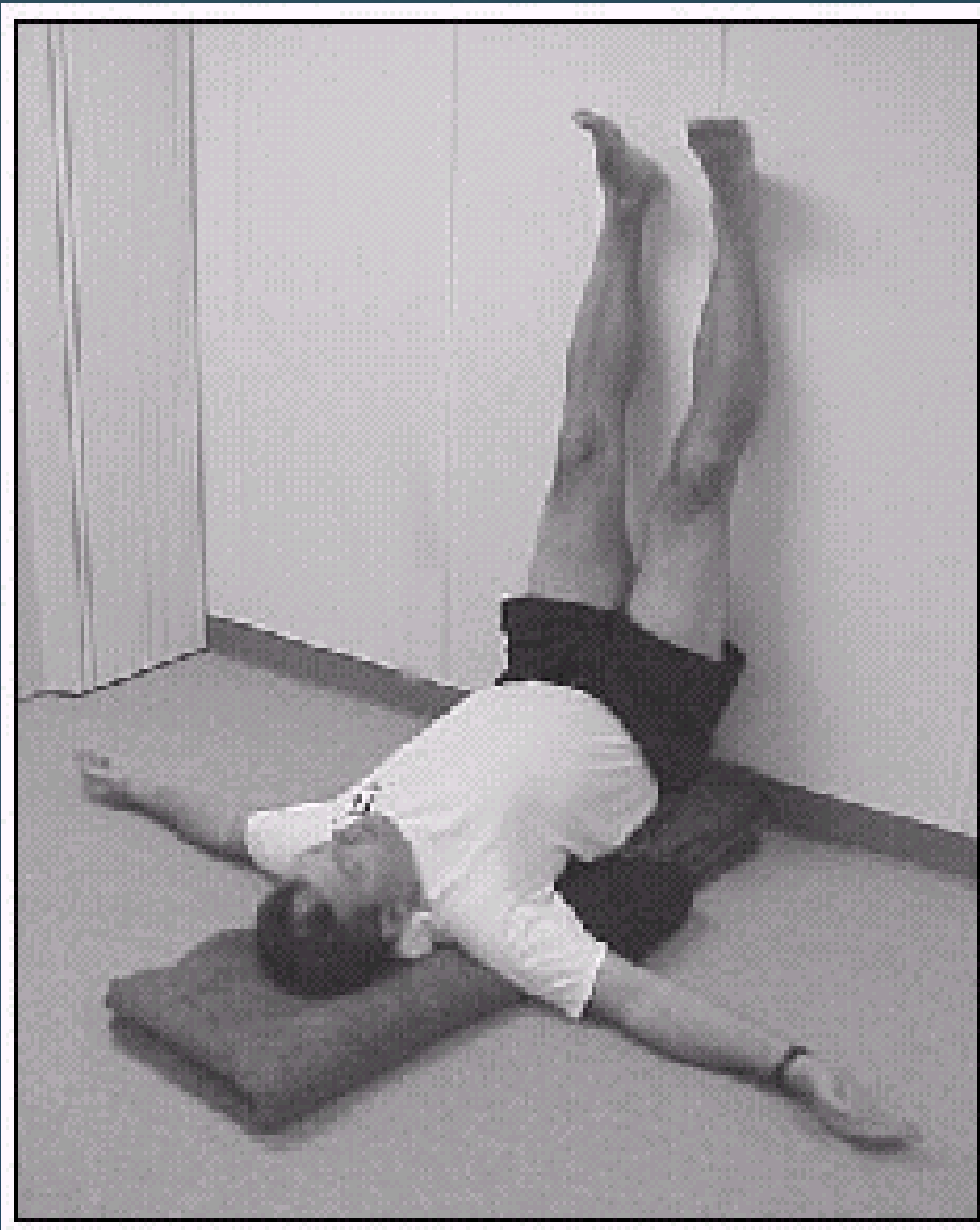
⑦
Sweep forward to cobra, **inhale**

⑧
Lift tailbone to
downward dog, **exhale**

⑨
Right foot forward
to lunge, **inhale**

Restorative Yoga

R E S T O R A T I V E



Prop
+
Low-level
passive
stretch
+
Breathwork
+
Meditative
component



Restorative poses





Shavasana restorative





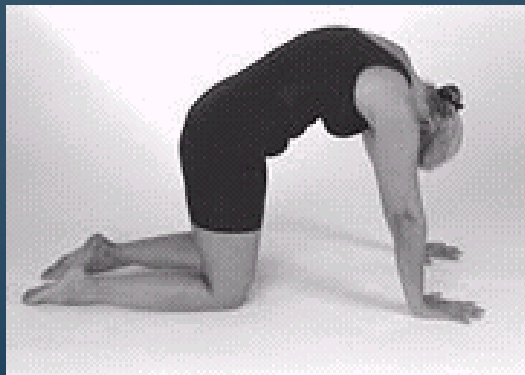
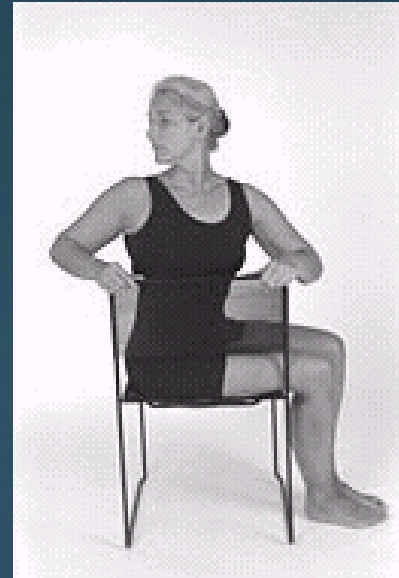
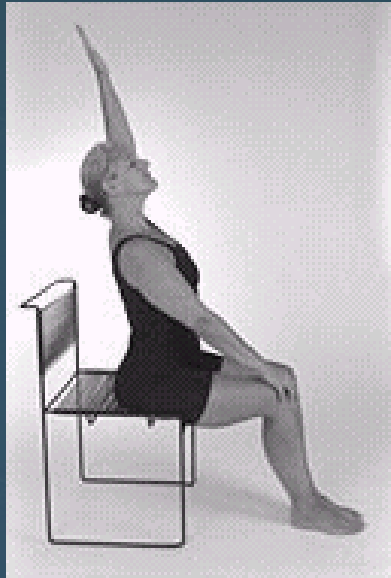






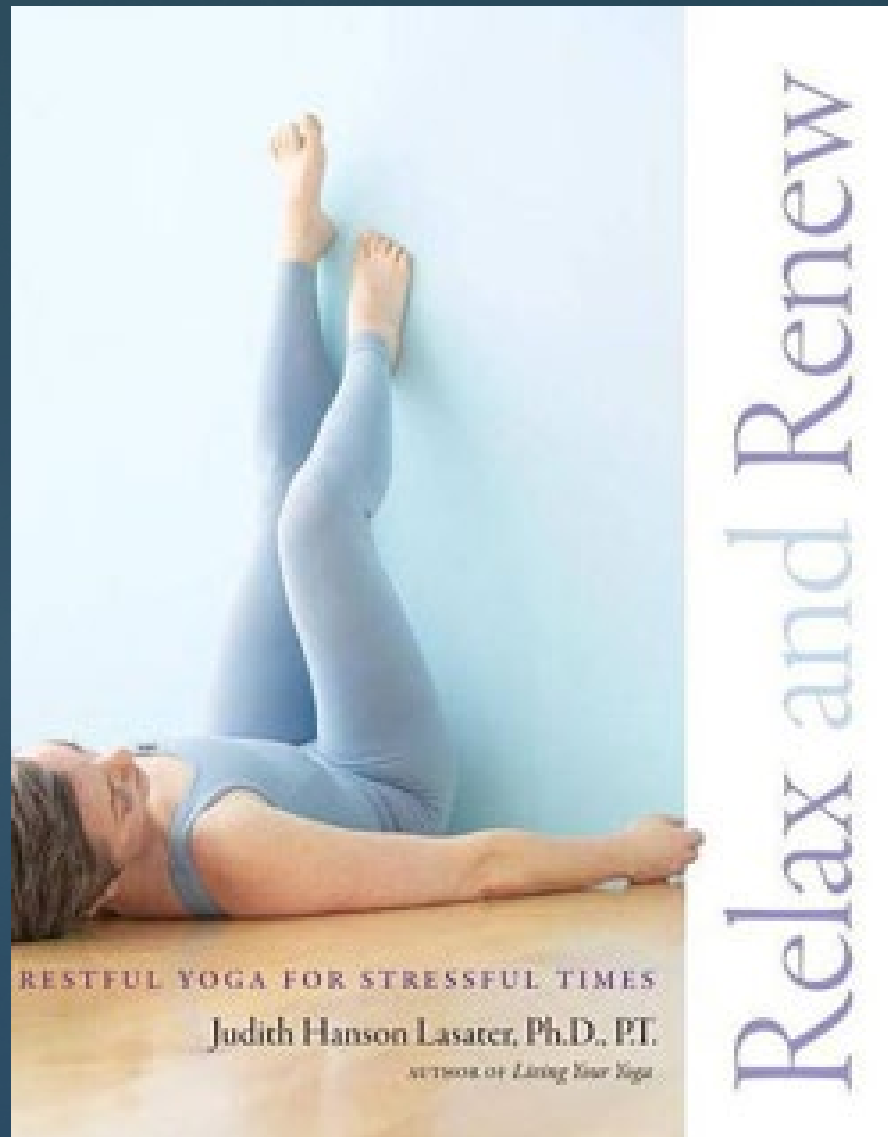


Restorative forward bend
pose for low-back





Example chair yoga poses for seniors



Judith Lasater's Relax and Renew

Three spine and low-back yoga postures to go

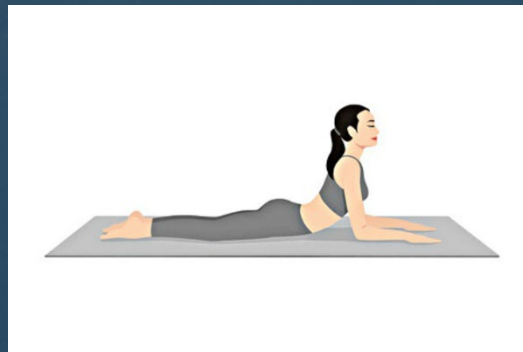
1



2



3



A photograph of two women performing Qigong exercises in a room with red brick walls and a large multi-paned window. The woman on the left is wearing a blue long-sleeved jumpsuit and black flat shoes, with her arms extended forward and palms facing each other. The woman on the right is wearing a red long-sleeved jumpsuit and black flat shoes, also with her arms extended forward and palms facing each other. The text "Qigong exercise" is overlaid in the center of the image.

Qigong exercise

Tai Chi & Qigong exercise



Because of their slow, intentional, internally-directed, nonjudgmental movements can reduce real-time HPA activation and state anxiety

T'AI CHI CHIHI!

Joy Thru Movement

*Non-martial movements dedicated to the
circulation & balancing of Cosmic Energy*

By Justin F. Stone, the Originator

Foreword by Tai Chi Chik Teacher Carmen L. Brackkhart

Third Edition

<https://youtu.be/NswUbbuXOVE>

Tai Chi and Qigong for Balance in Seniors





Breathwork - Pranayama



The fundamental purpose of breathwork (pranayama) is to develop the ability to:

a) to sustain relaxed attention of the flow of the breath, b) refine and control respiratory movements, and c) to integrate awareness and breathing in order to reduce stress

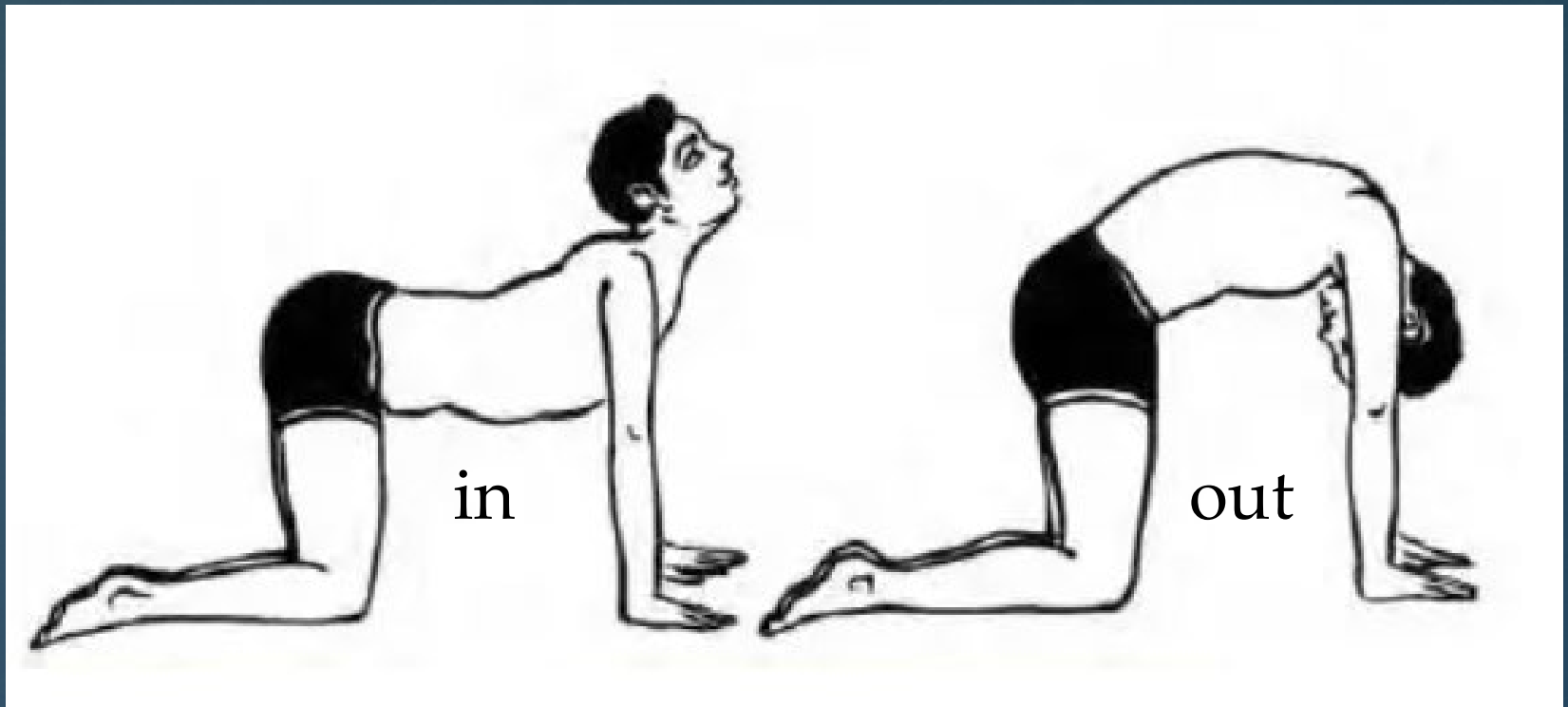
Simple Mind-Body Pranayamic Practice

As a general rule, the same breathing pattern is used in classical mindful exercise practices, eg. qigong and yoga therapy.

Whenever a yoga movement or pose expands the chest or abdomen, the participant **inhales**. Conversely, when a movement contracts or compresses your chest or abdomen, the participant **exhales**.

Expansion - **inhale**

Contraction - **exhale**

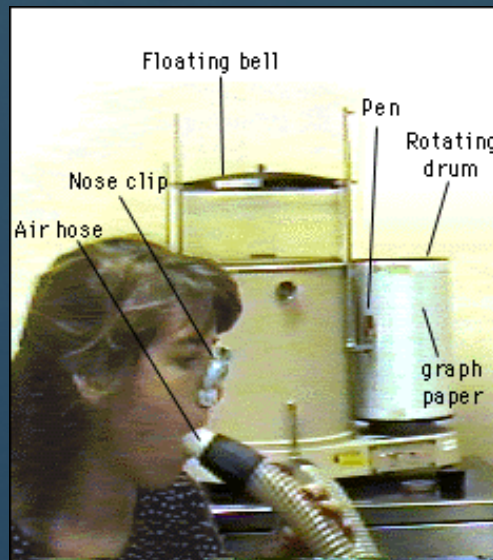


CHATAS PADA ASANA
(mad cat)

FEV1

Forced expiratory volume 1_{sec}

The volume of air that is forcefully exhaled in one second and a good method of evaluating a yoga breathwork outcome



Breathing Triangle

simple quick-breath technique

Suspend
(2-4 sec)



in

8 count

out

8 count



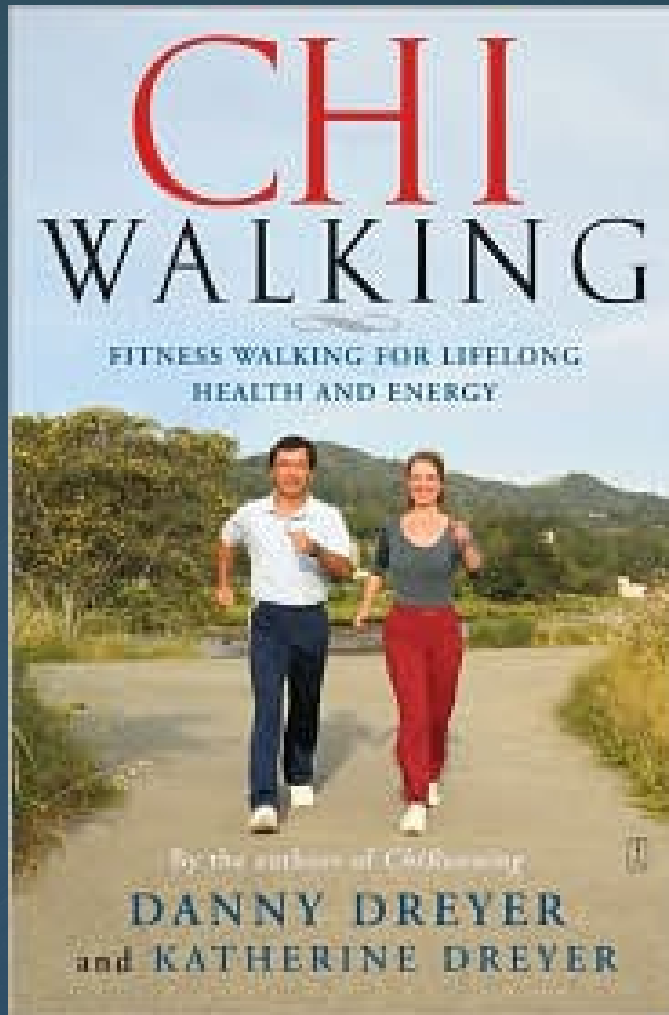
Breathwalk

Breathing Your Way to a Revitalized Body,
Mind, and Spirit



Foreword
by Herbert Benson, M.D.

Gurucharan Singh Khalsa, Ph.D., and Yogi Bhaian, Ph.D.



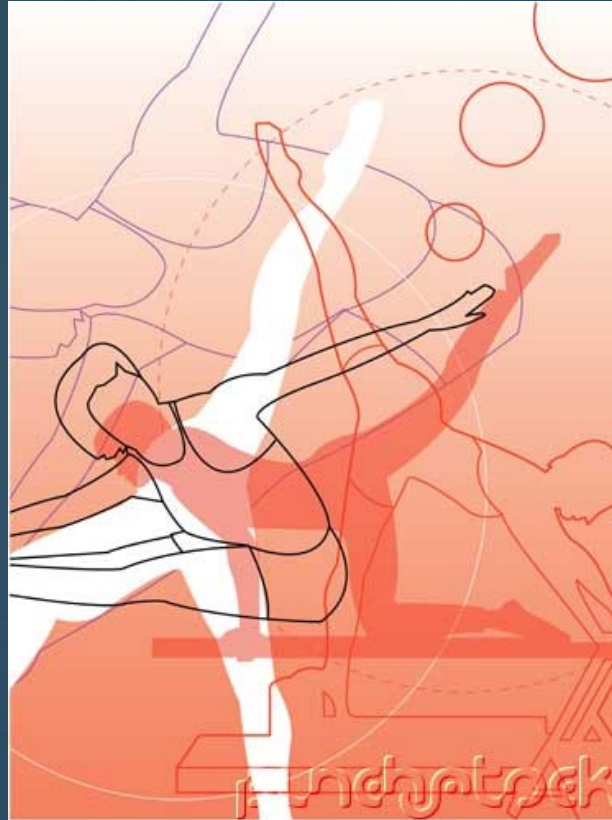
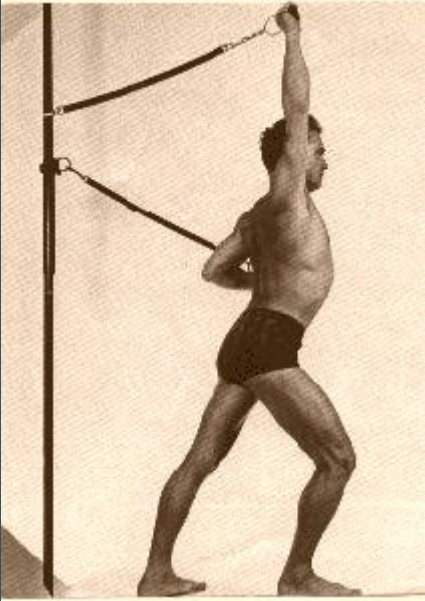
Mentation

Posture awareness

Relaxed breathing

Chi sense

Pilates



Cognitive + breath + core strength

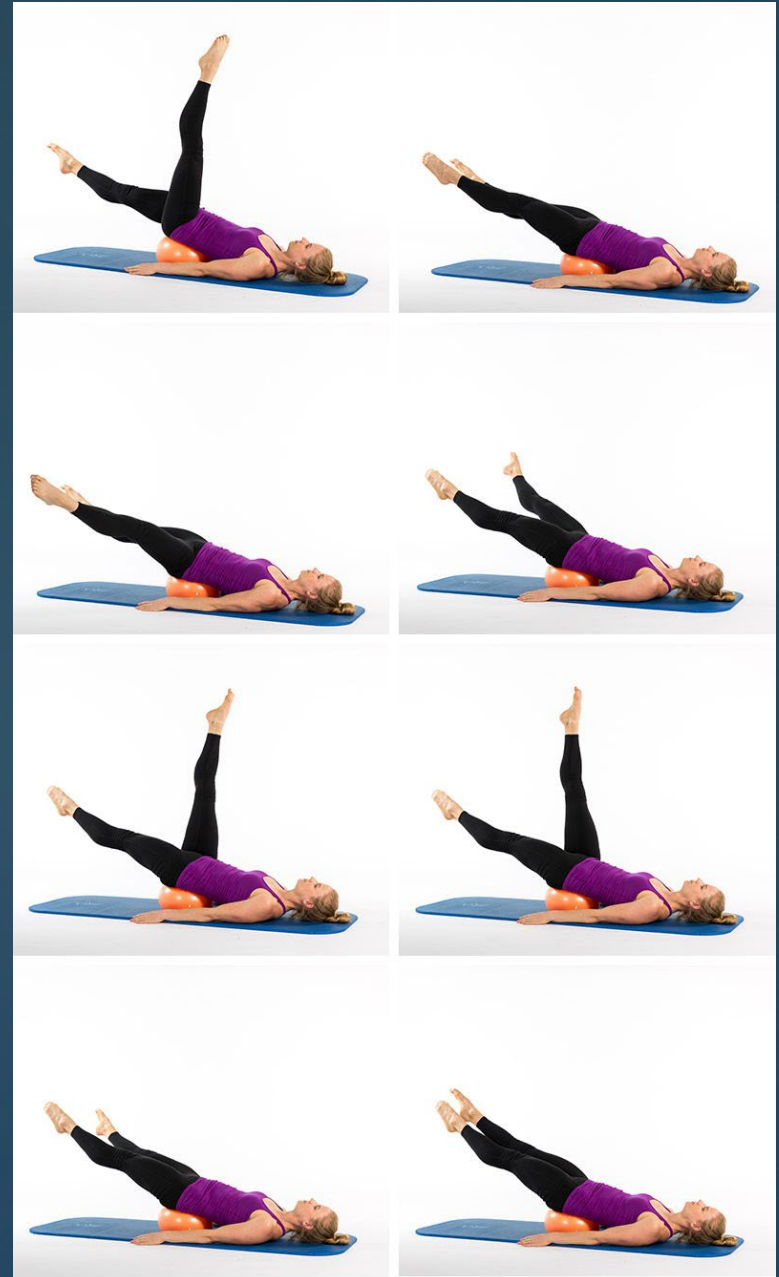
What is the main difference between Yoga and Pilates?

The main difference is that Yoga focuses more on flexibility and broad muscle groups while Pilates focuses on muscle toning, body control, and core strength.

- **Core:** trunk, pelvis, low-back:
balance & stability

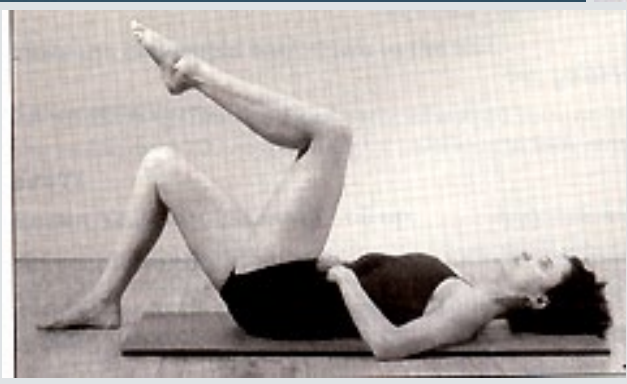
Pilates exercises that strengthen the core

- Breathing.
- Shoulder bridge preparation.
- Leg lifts.
- Toe taps.
- Side bend preparation.
- Sidekick.
- Side leg lifts.
- Roll down.



Lower Energy Cost Pilates Mat Exercises

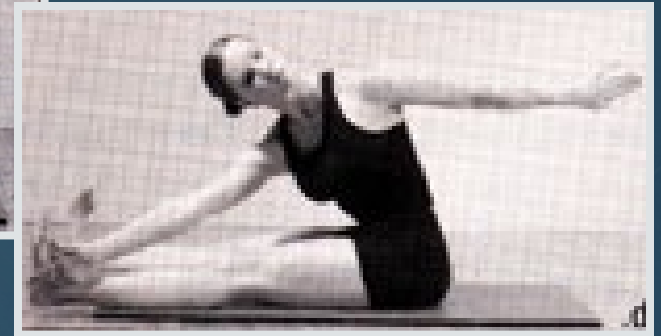
Leg Circles



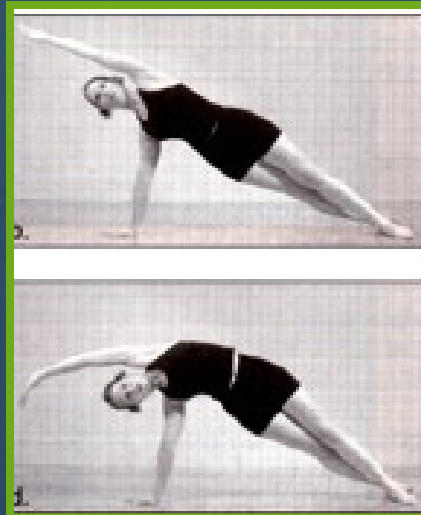
Hundred



Saw



Side Bend



Roll Over

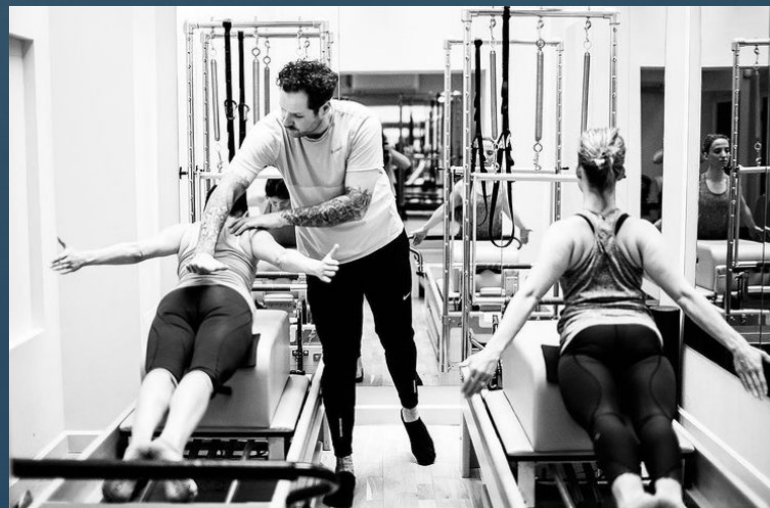
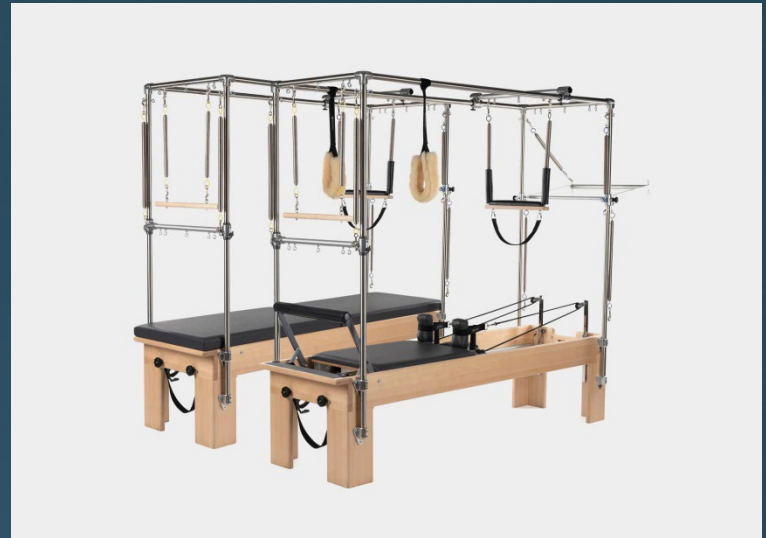


Boomerang



Higher Energy Cost Mat Exercises

Pilates Reformers





The reformer is able to target your arms and legs while still focusing on the core

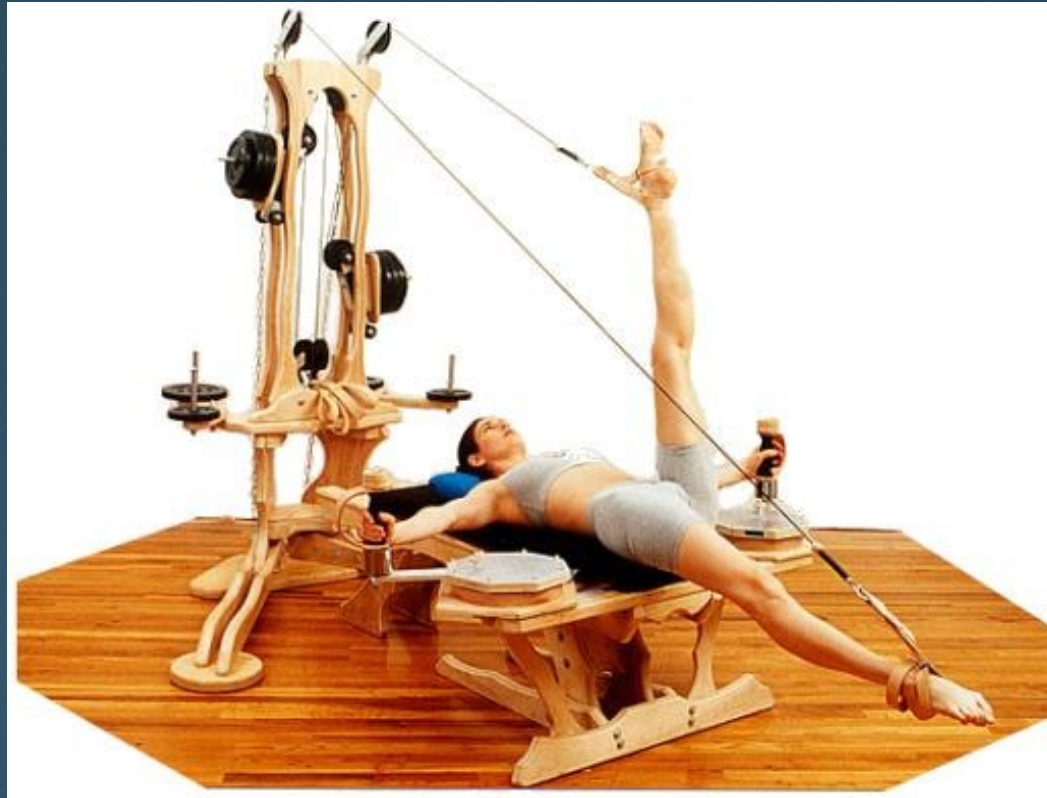
Gyrokinesis®

developed by Juliu Horvath

Embraces some of the key principles of yoga, dance, gymnastics and tai-chi and gently works the joints and muscles through rhythmic and undulating exercises.

Gyrotonics





Gyrokinetics as the basis to exercise the musculature while mobilizing and articulating the joints, simultaneously stretching and strengthening the body with minimal effort, while increasing range of motion and developing coordination.

www.gyrotonics.org



Yogalates

Mind-Body Circuit

45-50 min @6-8 min/station

Meditation



Tai Chi Chih

Restorative
yoga



Iyengar yoga

Camai



NIA

Pilates mat
work



Qigong

Anger Management Mindful Therapy

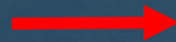


Pranayama

e.g. breathing triangle

+

Meditative or
contemplative
mindset



Decreased HPA & amygdala
activation

+

Increased parasympathetic tone

=

Relaxation response

Application of mindful strategies in cardiology

Anger expressivity

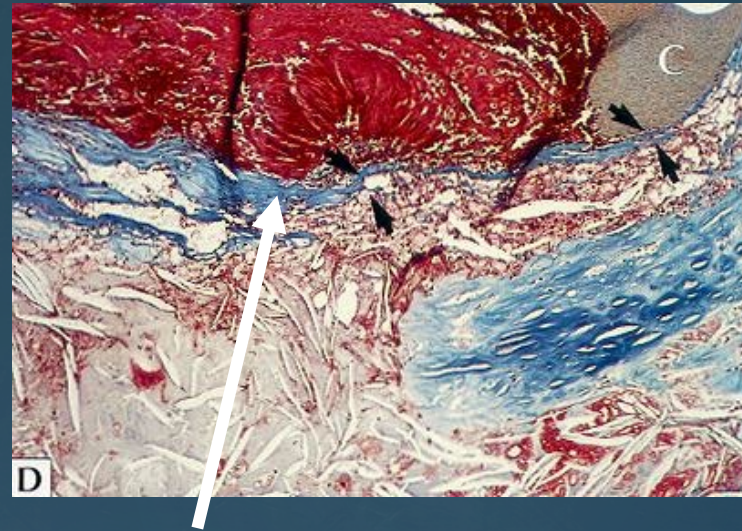
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Metabolic syndrome

(↑ TG, ↑ BP, ↑ ab fat)

=

Acute coronary syndromes
and SCD



Current therapy

Aggressive blood lipid management
Beta blockade
ACE inhibition
Glycoprotein inhibition
Anticoagulation
Thrombolysis
PTCA
PCI
CABG

Modifiable Triggers:

Stress/anger - [$\uparrow\uparrow$ catecholamines]

Tobacco

Sudden onset exercise

Acute dietary factors (e.g., $\uparrow\uparrow$ PPTG)

Sympathomimetic agents (e.g., cocaine)

Rx: Cognitive-behavioral therapy, stress trigger management, yogic breathing strategies, qigong, restorative yoga, meditation

Incorporating Mex into other physical activities

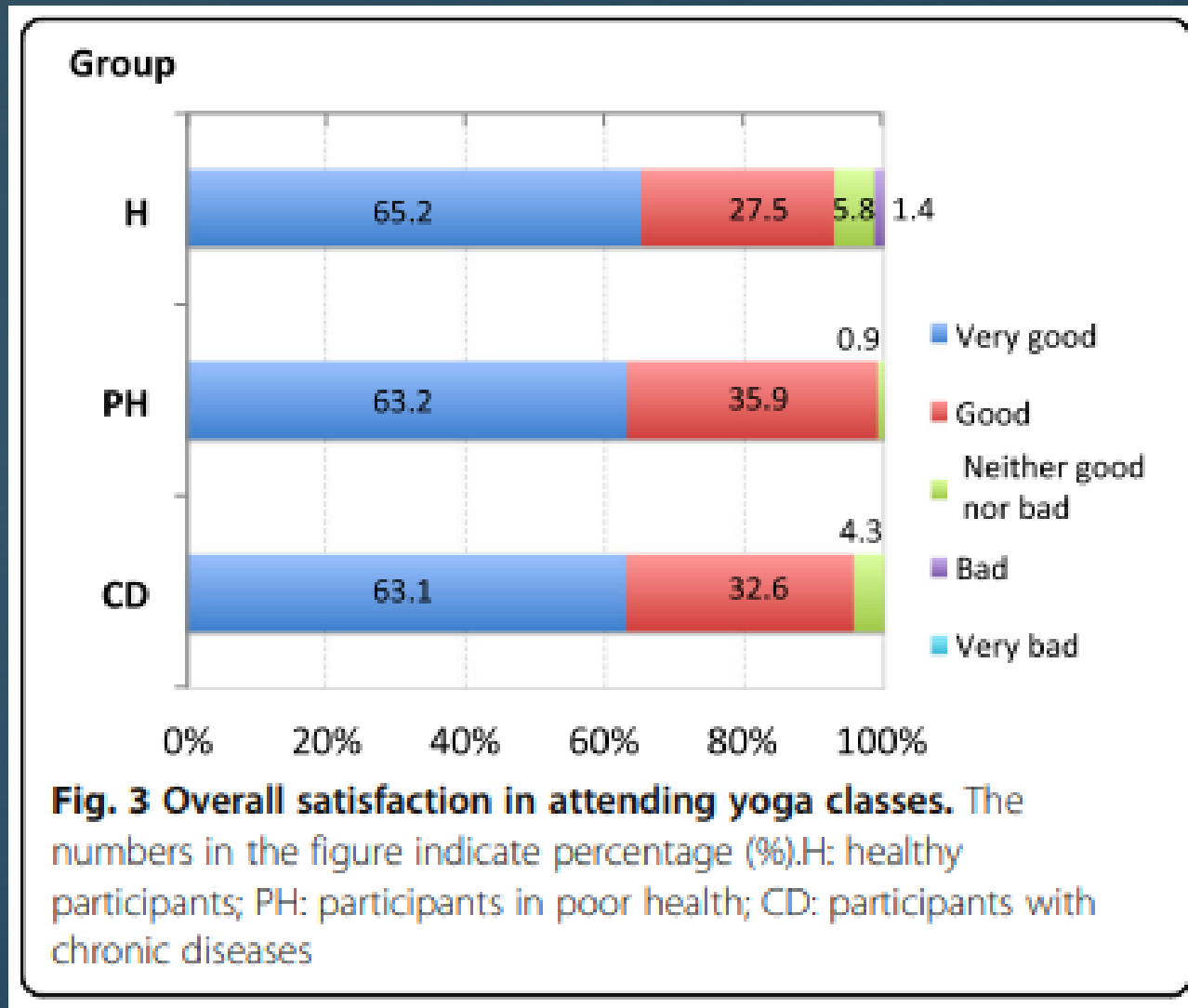
Meditation and yogic-breathing exercises can be integrated with existing warm-up and cool-down exercise programs

Adding a mindful component to a flexibility exercise, low-level cycling, slow intentional muscular contractions during strength training, or walking

Senior fitness classes – include the “three to go” yoga poses to insure flexible spine and low-back health

Balance exercise, e.g., qigong & tai chi chih, taught daily for those over 60 years of age

Health-related benefits and adverse events associated with yoga classes among participants that are healthy, in poor health, or with chronic diseases



SF-8 Health Related QOL Survey

1. Overall, how would you rate your health during the **past 4 weeks**?

Excellent Very Good Good Fair Poor Very Poor

2. During the **past 4 weeks**, how much did physical health problems limit your usual physical activities (such as walking or climbing stairs)?

Not at all Very little Somewhat Quite a lot Could not do PA

3. During the **past 4 weeks**, how much difficulty did you have doing your daily work, both at home and away from home because of your physical health?

None at all A little bit Some Quite a lot Could not do daily work

4. How much bodily pain have you had during the **past 4 weeks**?

None Very mild Mild Moderate Severe Very severe

5. During the **past 4 weeks**, how much energy did you have?

Very much Quite a lot Some A little None

6. During the **past 4 weeks**, how much did your physical health or emotional problems limit your usual social activities with family or friends?

Not at all Very little Somewhat Quite a lot Could not do social activities

7. During the **past 4 weeks**, how much have you been bothered by emotional problems (such as feeling anxious, depressed or irritable)?

Not at all Slightly Moderately Quite a lot Extremely

8. During the **past 4 weeks**, how much did personal or emotional problems keep you from doing your usual work, school or other daily activities?

Not at all Very little Somewhat Quite a lot Could not do daily activities

Resources/Further Reading

Tai Chi Chih (3rd Ed.), Justine Stone

Chi Walking, Danny Dreyer

Relax and Renew: Restful Yoga for Stressful times, Judith Lasater

Light on Yoga, B.K.S. Iyengar

Yoga Alliance

www.yogaalliance.org/Credentialing/For_Teachers

Molecules of Emotion, Candace Pert





HEALING INDIGENOUS COMMUNITIES ONE BREATH AT A TIME



<https://nativestrengthrevolution.org>