



**Stanford**  
MEDICINE

# YOGA FOR DIABETES

Tracy Taylor RDN, CDCES, CYT, ACE-  
GFI

Registered Dietitian Nutritionist  
Stanford Medical Partners\*

\* The medical foundation of Stanford Health Care and Stanford Medicine

# Let's Explore Together

- **What is your experience with yoga practice?**

- A. I have never practiced yoga
- B. I have practiced yoga in the past but am not currently practicing
- C. I currently practice yoga 1-3 times a week
- D. I currently practice yoga 4-7 times a week



- **The yoga philosophy believes which of the following to be the most important facet of health.**

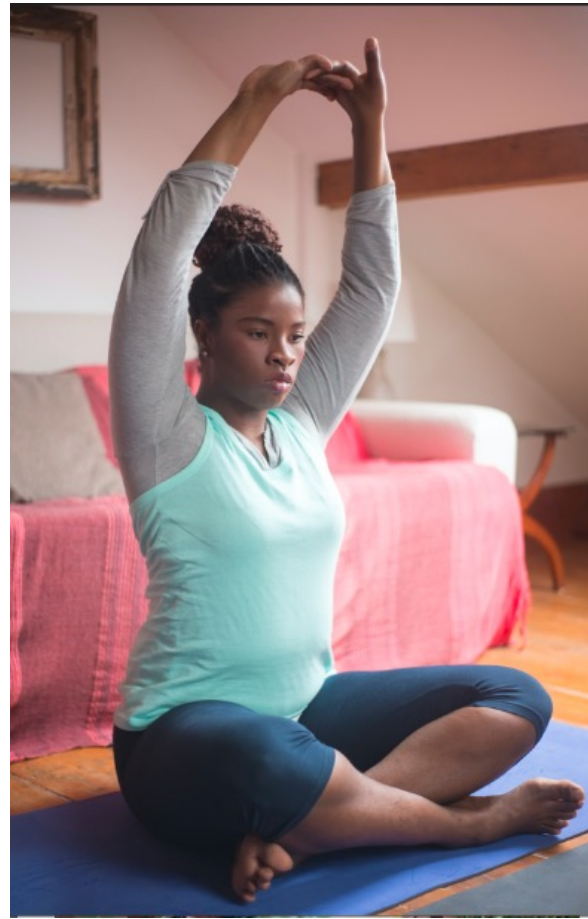
- A. Flexibility
- B. Vegetarian diet
- C. Breathing

- **A meta-analysis published in Feb 2023 based on 28 studies found that people with type 2 diabetes who began a yoga practice averaged a reduction in hemoglobin A1c of about 1 %**

- True
- False

# What is Yoga?

- 'to join' or 'to yoke' or 'to unite'
- awareness of synchronizing breath with movement
- body postures/movements (asanas), breathing techniques (pranayamas) and meditation



# Yoga can be done anywhere

- Requires little space, no equipment and can be practiced standing, on the floor, sitting in a chair or even on a paddle board!
- There are many different forms and levels of yoga — it's not one-size-fits-all. It doesn't have to be intensive — even restorative, gentle yoga can lower stress and help you manage blood sugar



# Yoga Tips

- You don't need to be flexible and bendy!
- Just breathe and move within your range of motion.
- If you feel any pain or discomfort, pull back.
- Yoga instructors often advise to not eat before a session. *If you're taking insulin or other medication, consider eating a light snack before your workout to avoid low blood sugar.*

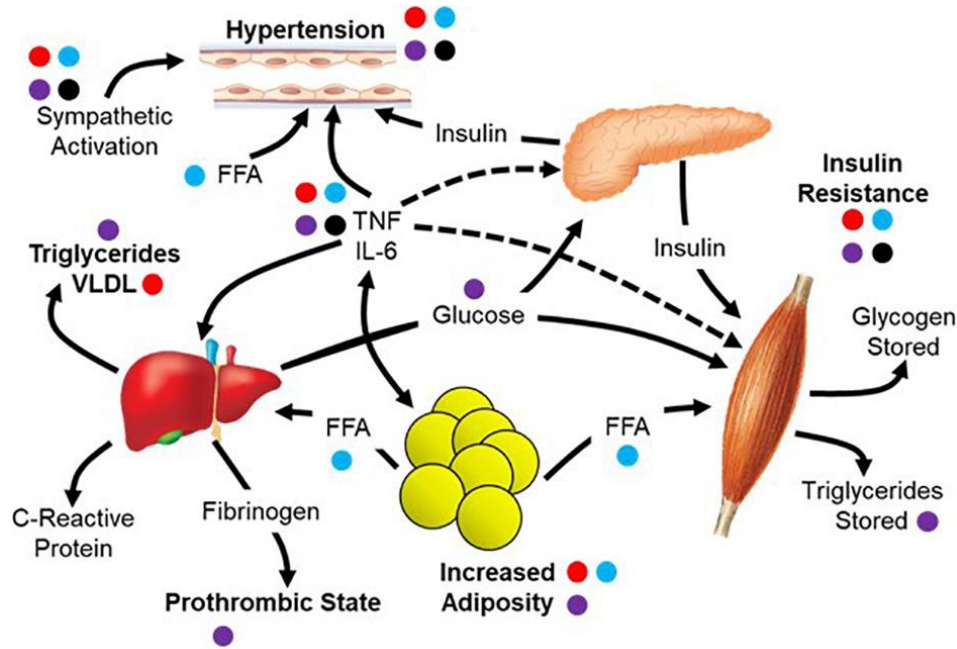


# Yoga and Diabetes Research

- Three meta-analyses (Jayawardena et al (1\*), Thind, et al (2\*) and Sanogo et al (3\*)) describe benefits of yoga for people with type 2 DM. Both found improvements in FBG, postprandial BG, A1c and BMI.
- Studies also show yoga to:
  - lower blood pressure, improve cholesterol profiles, enhance lung function, mood, sleep, and quality of life.

\* references in notes

# Yoga enhances function/efficiency



- Somatostatin
- Cholecystinin
- Glucagon-like Peptide 1
- Vasoactive Intestinal Peptide

- respiratory, digestive, neurological, cardiovascular and endocrine systems
- improves metabolic activity

# Need Type 1, 1.5 studies\*

## *POTENTIAL YOGA BENEFITS\*\**

- Discipline Equals Freedom
  - With diabetes management there are times of frustration, distraction, or fear. As we encounter yoga poses or moments that are uncomfortable, we “focus, breathe through it and persevere” and over time notice growth and strength.
- Release What We Can't Control
  - Many PWD understandably have a need for control. Yoga helps us to learn to let go of perfection and expectations and continue to move forward.
- Support Growth Mindset & Mindful Food Choices
  - Unlike many other exercises, yoga forces you to be present and go inward. Helps with growth mindset to seek nourishment your body deserves and needs.

\*\*Adapted from Rachel Zinman RYT/Type1 LADA

\*There is one study with 88 PWType1D underway (see notes for reference)



# Benefits of Yoga for Diabetes

- Deep focused breath, stretching, strengthening muscles, and non-judgmental awareness
- Switching between asanas (poses) contracts and relaxes specific areas, increases oxygenated supply to cells and organ, uses glucose
- Stretching triggers endorphins and makes you feel good
- Stress =  $\uparrow$ BG. Consistent practice, especially Pranayama (Yogic breathing) can help  $\downarrow$  stress (relaxes sympathetic nervous system =  $\downarrow$  glucagon release and improves insulin action thus blood sugar)

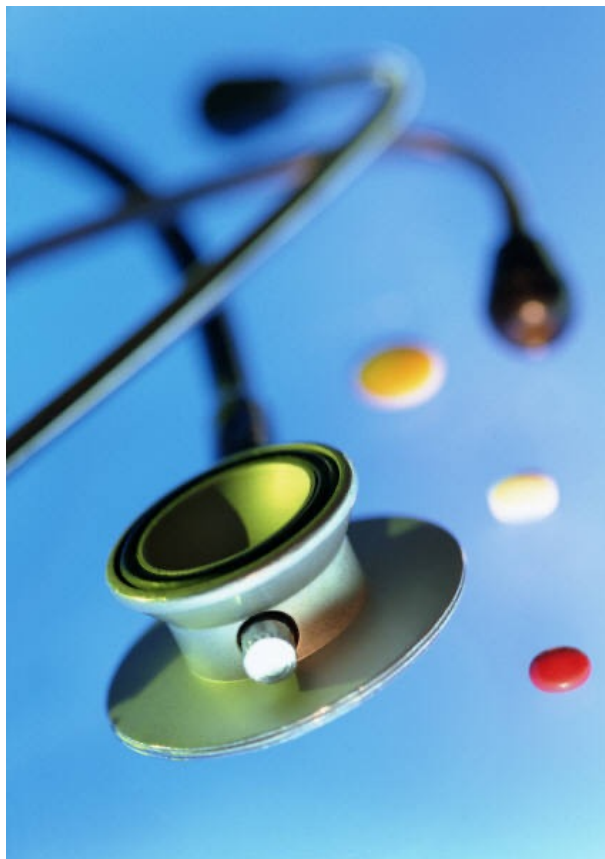
# Benefits of Yoga: Diabetes and Diet



- In addition to yoga postures, the breathing exercises and meditation segment helps with “emotional eating”
- People often report a decreased craving for sweets and an ease with mindful eating.

# YET

- with Diabetes Complications  
THERE ARE SOME PRECAUTIONS TO BE AWARE OF
- Green=modifications
- Red=avoid



# Heart disease or High blood pressure (defined as 140/90)

Begin with a gentle practice and work up to a moderate level

Vigorous practice

# Autonomic dysfunction or low BP

Gentle to moderate practice

Chair yoga and/or use slow and careful transitions between postures, esp moving between seated or on your back (supine) to standing

Moving quickly between postures

# Peripheral neuropathy

Practice with soft shoes or sneakers and socks to protect your feet

Chair yoga or supine poses on a mat

Practice while barefoot

Prolonged standing postures if you have impaired sensation or if you experience pain

# Peripheral vascular disease

Chair yoga

Gentle to moderate  
practices that focus on  
seated and supine poses

Move carefully between  
postures

Vigorous practice

Prolonged standing postures

# Retinopathy

Standing, seated or supine postures that keep your head above or even with your heart

Gentle to moderate practice

Vigorous practice

Postures where your head is below your heart



# Low blood sugar

Begin yoga practice if your blood glucose is  $>100$  mg/dL

Have a readily available fast acting sugar source (4 oz fruit juice or glucose tabs for example)

Exercising when blood sugar is  $<100$  mg/dL if you take medications that affect insulin levels

# Resources

## *free videos*

- <https://diabetesstrong.com/yoga-insulin-sensitivity/> yoga for diabetes w Rachel Zinman
- <https://www.youtube.com/watch?v=TSnxM9DbppY> simple yoga for diabetes by Indea Yoga
- <https://www.youtube.com/watch?v=hRwzELaCHDA> 5 Simple to reduce BG, The Yoga Institute
- <https://www.youtube.com/watch?v=fmh58tykgpo&t=6s> yoga and diabetes w Adriene

*free blog* <https://yogafordiabetesblog.com/>

*free app available for iOS and Android* Yoga For Beginners

## *books*

- Yoga for Diabetes – Rachel Zinman RYT and Person with Type 1 LADA diabetes
- Yoga and Diabetes: Your Guide to Safe and Effective Practice- Annie B Kay MS, RDN, RYT and Lisa Nelson MD



# NAMASTE

Any questions or comments?



Stanford  
MEDICINE