



BOOK

DISCUSSION TOPICS

CHAPTERS 1 - 6

Thought-provoking discussion topics from
my book Yoga Biomechanics - Stretching Redefined.



BY JULES MITCHELL

CHAPTER 1

DISCUSSION TOPICS

- Define biomechanics and explain how it informs how you teach/practice yoga.
- Discuss the load parameters in the context of different yoga poses.
- Explain compression and tension from a biomechanical perspective. How does this differ from the way it is often explained in yoga?
- What is adaptation? What are the components of optimal loading? Do you think yoga can satisfy either of these?
- Research Summary page 36: What is your opinion of the effectiveness of yoga for osteoporosis?
- Research Summary page 37: How do you think yoga impacts sports performance?



CHAPTER 2

DISCUSSION TOPICS

- Define conventional stretching and identify the six types of stretching listed. How are these represented in the way you teach/practice yoga?
- What are the benefits of stretching (i.e. why do you stretch)?
- How does stretching make you more flexible? What are the mechanisms at play.
- Identify some yoga postures and transitions where eccentric contractions occur.
- Research Summary page 70: Compare the abstract of the published paper to my summary and comment on how flexibility is presented in the original paper.
- Research Summary page 72: Examine the methods and results in this paper and determine how this paper informs your beliefs about stretching in a yoga setting.



CHAPTER 3

DISCUSSION TOPICS

- What are the three factors of mechanical properties and which is the focus of this chapter?
- Explain stiffness in terms of stress and strain. Would you be able to determine the stiffness of someone's tendons by the way they practice yoga? Explain elasticity. Would you be able to determine the elasticity of someone's tendons by the way they practice yoga?
- Describe viscoelasticity. Discuss the role of viscoelasticity in posture, yoga, and stretching.
- What is maximum voluntary contraction (MVC) and how might your understanding of its use in tendon research influence the way you teach certain poses. What would be your desired outcome?
- Research Summary page 106: How do the results challenge any previous notions you may have had about stretching?



CHAPTER 4

DISCUSSION TOPICS

- List the four types of tissue and the characteristics that are specific to connective tissue.
- Describe the fiber arrangement of tendons, ligaments, and fascia in terms of density and regularity.
- What is mechanotransduction and how is the cell involved?
- How does the current understanding of limited cartilage regeneration influence how you teach yoga to students with osteoarthritis (OA)?
- Research Summary page 131: How do the results influence your opinion of passive stretching and overall tension on tendons?



CHAPTER 5

DISCUSSION TOPICS

- What are the three considerations in determining capacity? Explain how they are dependent and/or independent of each other.
- How do you define an injury if something can hurt and not be damaged or be damaged and not hurt?
- Briefly summarize the timeline of tissue repair.
- Explain the donut analogy and how this influences your thoughts on avoiding injury in yoga?
- How might frequent exposure to end range result in unexpected adaptations?
- Research Summaries page 158, 159, & 161: What are your thoughts on safety in yoga? Are we hurting ourselves, healing ourselves, or something else?



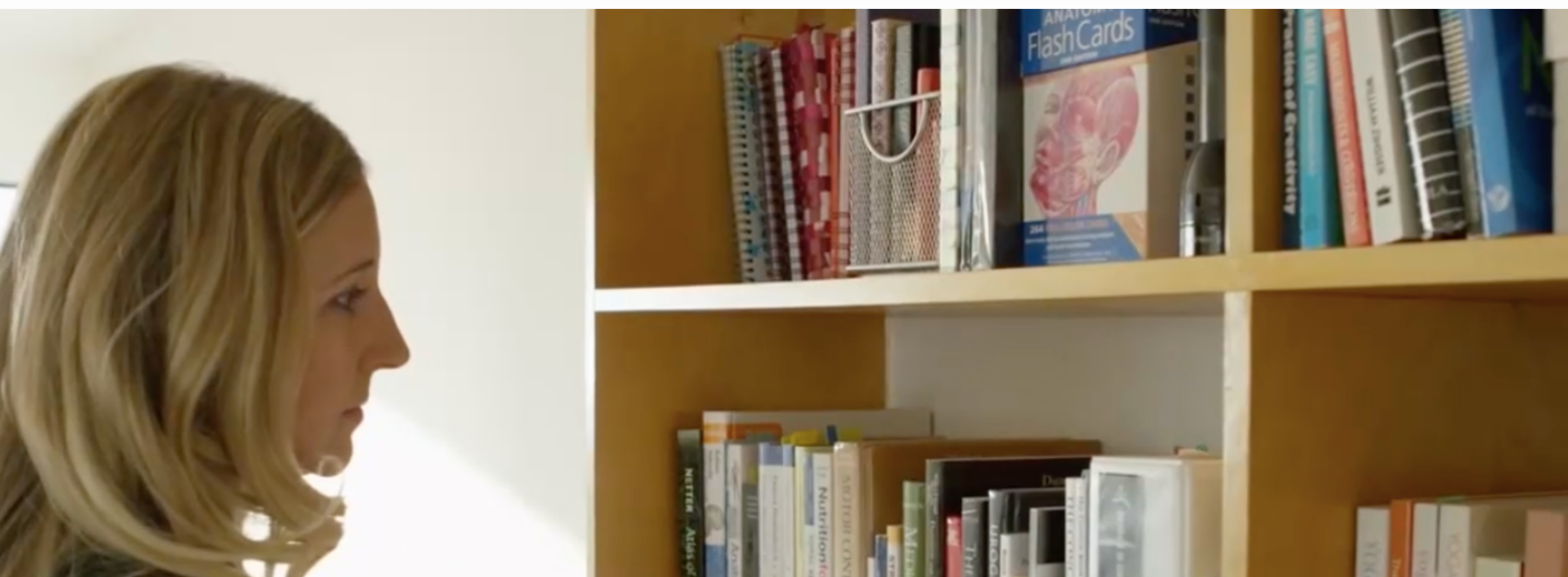
CHAPTER 6

DISCUSSION TOPICS

- Explain the biotensegrity model and discuss how it further informs your understanding of tension and compression.
- What is the flexion-relaxation phenomenon and how does this influence your beliefs on spinal flexion?
- Define stability. Define mobility. Is the spine stable, mobile, or both? What are your thoughts on “core stability” and “navel to spine” in the context of yoga? Bring breathing into the discussion if you wish.
- How does your knowledge of viscoelasticity influence your thoughts on posture, alignment, stability, and safety?
- What is co-contraction? Discuss in relation to reciprocal inhibition and autogenic inhibition.
- Identify one common cue you will no longer say after reading this book. Did you replace with something else or eliminate it entirely?
- Research Summaries page 189 & 191: Do you teach/practice headstand? Why or why not?



ABOUT JULES MITCHELL



Jules Mitchell MS, CMT, ERYT500 is a Las Vegas based yoga teacher, educator, and massage therapist. Her unique approach blends the tradition of yoga with her extensive study in biomechanics to help teachers develop their craft and empower them with education.

Jules's methods intend to achieve ease in movement through deliberate effort, thus her teachings integrate numerous modalities, balancing the somatic aspects of yoga with the most current exercise science. Bringing the most useful and applicable pieces of that science into the yoga community is her passion.

She regularly contributes to teacher training programs and leads workshops and courses worldwide. Her book, Yoga Biomechanics: Stretching Redefined, is now available through Handspring Publishing. As adjunct faculty at ASU, she serves as a yoga consultant on various research studies measuring the effects of yoga therapy on special populations.

Her most influential teachers include Leeann Carey (Yapana Yoga), Gil Hedley (Integral Anatomy), John Casey (yoga philosophy and Sanskrit), and the many dedicated scientists who collect, analyze and publish data so we may continue to ask more questions, even when it invokes a discerning analysis of popular opinions.

