

# ***YOGA BIOMECHANICS – A REVIEW***

In the last ten years, more books have been written and published on yoga than in the last fifty years. Some of these books are excellent, some good, some ok. Recently I read *Yoga Biomechanics: stretching redefined* by Jules Mitchell.

Like many other books on yoga, this is not plot driven. But despite the fact you know what happens in the end and its expense (£40), I think that *Yoga Biomechanics* is definitely one of the excellent books. This is an important and essential read that continues the vital work of debunking yoga myths and rethinking yoga anatomy by teachers such as Paul Grilley, Judith Lasater and Bernie Clark. The ending says it all: “I am an advocate for open-ended questions and saying less because I believe sometimes yoga cues are too specific and interfere with student’s self-inquiry.”

Jules Mitchell grounds herself in research: “the effect of Tree pose on osteoarthritis cannot be determined. Without more research we will never know. Even with more research we may never know.” This is a practical and pragmatic book (I do not think she uses the word ‘spiritual’ once). For such a serious and at times highly technical book (for example: “the histologic processes by which a pathic tissue works to repair itself are mind bogglingly complex”), there are occasional amusing tongue-in-cheek lines.

Throughout is important information that we can all learn from: “injured ligaments were thought to be inert tissues with little or no capacity to recover their mechanical properties, but they are today recognised as highly active tissues that increase their recovery potential with early loading.” In recovering from injury, rest is less important than it used to be thought. Instead of the formula RICE (**rest/ice/compression/elevation**) being followed, POLICE (**protection, optimal loading, ice, compression, elevation**) is proposed to be more beneficial. Other important points include: “herniated discs are now known to have the ability to spontaneously regress without surgical interventions.” Mitchell clearly states — with evidence of course — that a person can have a particular diagnosis and yet not experience pain. She uses her own anecdotal story: “I have a grade 2 rotator cuff tear (tendinopathy)...I am absolutely asymptomatic with no loss of function.”

I was glad to read that Jules encourages using weights. Since about 2016, I too have been using weights — like cork bricks and sandbags — as a part of yoga practice. There is a great photograph of her holding a sandbag above her head while in a squat. Obviously, we already use our own body weight in practice in postures like Crow, handstand, standing poses and the innumerable press-ups that are done in an Ashtanga practice. Mitchell writes: “...overstretching is not the driver of my concern; underloading is.” She is looking at evidence and thoughtfully considering options: “The conclusion here may be that practising yoga in a hot room is beneficial to distal joints and will reduce injury.” For some people, such approaches could be heretical. I remember talking in early 2000s with an advanced Ashtanga practitioner about how skeletal structure significantly determines ability to perform postures. Her personal reaction to such heretical information was depression. For me, it was liberating.

A legitimate question at these times of upheaval is: do we need another book on yoga? These times of upheaval include the fact that June 2019 was the hottest June on record in the world; that July 2019 was the hottest month on record in the world; that as of today, more than 9,000 people have died this year in the US from ‘gun-related episodes’. This figure does not include suicides – in 2017, the most recent year for which there are statistics, 23,854 people killed

themselves with a gun in the US. In the 2019 summer heatwave in Alaska, thousands of salmon died from heart attacks caused by the strain of trying to survive in warmer waters. And also in summer 2019, Donald Trump had an idea for preventing hurricanes coming to the US: “I got it. Why don’t we nuke them?” Strange times indeed...and times that require creative and critical and constructive thinking.

In yoga, it is necessary to challenge established orthodoxies, whether yoga dogmatism, yoga corporatisation or yoga gurus. Thus back to why all sincere yoga practitioners can benefit from reading *Yoga Biomechanics*. Mitchell asks yoga teachers “to be more curious than authoritative”. She emphasises again and again this point: “the willingness to unlearn what you have learned is paramount to changing the course of modern western postural yoga.” She readily acknowledges mistakes that she has made (and lessons that she has learned). And there are spiritual moments (albeit expressed in scientific language): “We are not assembled together with different substances, rather our tissues evolved out of a single zygote which differentiated over time through programmed biological processes influenced by mechanical inputs ... the overwhelming sense of awe at the vastness of microscopic tissue activity.”

*Yoga Biomechanics* celebrates individuality and functionality. This is not a book that emphasises asana aesthetics or glorifies postural extremism, “where the shape is valued more than the experience.” This is an excellent book that I highly recommend.

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15 October 2019

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