

and Betaine HCL to help prime the pump so they can digest the meat the body hasn't seen in years. One incentive I use is vanity. That worked particularly well in Scottsdale, the land of silicone. A client losing hair will do almost anything to get it back.

I encourage Rolfers to use their eyes and hands to be the judge of clients' tissue quality and determine what possibly is missing. I initially resisted the idea that meat was the missing link for many of my clients. When I started to suggest it as a possible solution and saw results, I became convinced. Let your clients' reaction be the determiner.

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Endnotes

1. Private email communication with Harvey Ruderian, 2016.
2. We realize that there is a wealth of research to argue for or against meat. We encourage you to use your own experience of Roling SI to determine what works best. For more reading on this, here is an article on the importance of meat: <http://breakingmuscle.com/nutrition/why-all-humans-need-to-eat-meat-for-health>.

Reviews

Fascia in Sport and Movement, by Robert Schleip and Amanda Baker, Foreword by Thomas W. Findley (Handspring Publishing 2015)

MELT® Method DVD (Longevity Fitness Inc. 2015)

Review by Szaja Gottlieb, Certified Advanced Rolfer™

All theory is gray, my friend. But forever green is the tree of life.

Goethe

The publication of *Fascia in Sport and Movement* is a seminal moment as the newfound exploration of fascia shifts from research to application. Although they come from different publishers, *Fascia in Sport and Movement* can be considered a companion to *Fascia: The Tensional Network in the Human Body*, which was published in 2013 and presented the most important findings from the previous Fascia Research Congresses (FRCs) in 2007 and 2011. Both are edited by Certified Advanced Rolfer Robert Schleip, who is now a prominent scientist at the University of Ulm (Germany) and one of the world's leading researchers on fascia. Schleip's new offering gives the reader an up-close view of how recent fascia research is seeping into all manner of somatic practices. This transition to application was reinforced by Connect 2013: Connective Tissue in Sports Medicine, a congress held in 2013 in Ulm. The DVD set of this conference includes twenty-three presentations, many of which overlap the articles in *Fascia in Sport and Movement*, is available at <http://fasciadvds.com/fascia-and-sports-medicine-dvd>.

Fascia in Sport and Movement is comprised of twenty-five chapters, divided into two sections, the first appropriately entitled Theory (ten chapters) and the second Clinical Application (the remaining fifteen). Each chapter is an article by an expert in his field. The initial theoretical portion is a review of the relevant aspects of recent fascia research upon which the second half of the book is based. These articles cover a variety of subjects related to fascia such as fascia as a tensional network, fascia as a sensory organ, the physiology and biochemistry of fascia, and fascial myofascial force transmission. The second part examines various movement and exercise modalities in the light of

this research such as walking, running, dance, yoga, Pilates, Gyrotonic®, and weight training in the form of kettlebells and clubbells.

The bridging articles between clinical ideas and practical application are the last chapter in the theoretical section, "Facial tissue in motion: Elastic storage and recoil dynamics" by Robert Schleip, and the first chapter in the application portion of the book, "Fascial Fitness" by Robert Schleip and Divo Müller. It is this latter article, published in 2011, then subsequently republished in a number of journals, including this Journal (Schleip and Müller 2011), and subsequently voluminously referenced, that seemingly has become the touchstone upon which every discussion of how to train fascia is based. Presenting scientific evidence as to the unique elastic properties of fascia and its critical role as a modulator of kinetic energy, Schleip and Müller then propose specific movement practices to enhance fascial health, in the same manner as weight-resistance training is used to build muscle. This article launched a new field – now referred to as fascial fitness – and, I must add, a new certification.

The second half of the book is thus an encounter between old practices and new information and ideas, stimulating deep re-examinations of assumptions around well-known and accepted modalities. The mat exercises in Pilates, for example, need considerable revamping, by adding elastic recoil and multi-directionality, according to Elisabeth Larkin in her article "Fascia Oriented Pilates Training" (Chapter 13), in order to reframe Pilates exercise as fascia- rather than muscle-oriented. Yoga in the minds of many is synonymous with stretching but, according to Joanne Avison in "Fascial Form in Yoga" (Chapter 12), what is important in yoga is not stretching but balancing tensional relationships in the body using squeeze and release techniques to amplify elastic recoil. Of the three, Gyrotonic, sometimes referred to as 'yoga for dancers', is lauded as the best choice when it comes to training fascia. Gyrotonic's three-dimensional approach and focus on elasticity, flexibility, and coordination most completely fulfill the goals of fascial fitness, according to Stefan Dennenmoser in his article "Training fascia in Gyrotonic methodology" (Chapter 14).

If nothing else, the articles in the second half of *Fascia in Sport and Movement* serve

as a primer as to how to think about the effects of movement and exercise on fascia. The articles fascinate and educate. Some examples: “The Secret of Fascia in the Martial Arts” by Sol Petersen; “How to Train fascia in Dance” by Liane Simmel; “Plyometric Training, Basic principles for competitive athletes and modern Ninja warriors” by Robert Heiduk; and “How to train fascia in football coaching” by Klaus Elder and Helmut Hoffman.

Training and movement programs, especially those aimed at fascia, always involve loading of the tensional network, which begins a process whose goal is reorganizing and remodeling collagen fibers. This critical process involved is referred to scientifically as mechanotransduction, which Stephen Mutch in his article “On Myofascial Force Transmission” (Chapter 2) describes as “the process of conversion from the stimulus of mechanical loading to cellular response.” In other words, changes in structural tension stimulate complex biochemical responses within the fascia, including the cell, the fibroblast, and outside the cell, the extracellular matrix (ECM), which results in collagen remodeling.

The question that hangs unanswered, however, is just how much loading of fascia is beneficial and just how much is injurious. This question applies to overtraining as well as rehabilitation. Even more troublesome is the problem of scarring, which Stephen Mutch in his article “Athletic Coaching” (Chapter 21) describes as the evolutionary price for survival following a wounding. All in all, the healing process, whether the goal is repair (rehab) or improvement (training), turns out to be very slow and complex. First off, collagen repairs at different rates in different parts of the body. Collagen in the Achilles tendon, for example, is the slowest in the body to renew, two to three times slower than muscle fiber. The renewal speed of the body-wide fascial network is quite slow in and of itself, measured in months and years, rather than days or weeks. The recommendation concerning fascia-specific training is for no more than two to three times a week, according to Schleip; and thus, permanent change in the body-wide fascial network takes two to three years. Of particular importance to the manual therapist is that the benefits from a collagen remodeling process – let’s say a Roling® Structural Integration (SI) session – will not show up for thirty-six to forty-eight hours, and one can expect the client to possibly feel worse at the onset of the process.

The primacy of movement, however, is unmistakable. The similarities between training fascia for performance and engaging fascia to remove pain are hard to miss. Pain and performance seem to form one continuum, which leads to the striking conclusion that movement is ‘normative’ (my term), meaning that movement is integrative, maintains structural resilience, prevents myofascial problems, and potentially heals ailments without intervention.

The article that best exemplifies this concept is Certified Advanced Rolfer Adjo Zorn’s brilliant article “Elastic Walking” (Chapter 17). Zorn, who is also a faculty member at the University of Ulm, has been studying and writing about the role fascia plays in the mechanics of walking. Previously, in 2011, this Journal published an article by Zorn, co-written with fellow physicist and Certified Advanced Rolfer Kai Hodeck, entitled “Elastic Walking: the Fascial Engine” (Zorn and Hodeck 2011), which analyzed the mechanics of gait using an inverse pendulum model. This new contribution is the fruit of years of research and exploring the mechanics and importance of gait in relation to structure, a concept already familiar in the SI community. Zorn expounds on critical recommendations related to walking such as, walking with straight legs, take long steps, using the center of the heel, pressure with the ball of the foot, carry the pelvis, elastic breathing, the sacrum, etc. SI practitioners will quickly recognize that his recommendations are identical to the step-by-step (pun intended), week-by-week, results of the Roling ten-session series as expressed in the client’s gait. His article deeply reinforces both the structural change and, perhaps more importantly, the evolution of the client’s movement during the series towards integration. The simple and accessible language of the article belies its depth and provides a secure platform of cooperation between client and practitioner to work towards goals together while striking an easy balance between the structural and the movement objectives of the series. His article powerfully suggests that movement in the form of walking embodies structure, and that therefore fluid movement embodies a highly integrated structure. I strongly recommend it.

I would also like to mention a rather technical but important article entitled “Assessment technologies: From ultrasound

and myometry to bio-impedance and motion sensors” by Christopher Gordon, Piroska Frenzel, and Robert Schleip (Chapter 24). Since there is now common agreement on the importance of fascia tissue, the development of scientific tools to measure tissue density heralds not only scientific advances and discoveries but ways of evaluating fascia by manual therapists and trainers. At the FRC’s Joint Conference on Fascia, Acupuncture and Oncology at Harvard last November there was, it seemed to me, general acceptance of a relationship between fibrosity of tissue, particularly mammary, and cancer. In some future time it is not difficult to envision a health specialist using a Star Trek-like scanner to measure tissue fibrosity in various anatomical locations of a client or patient.

The movement from theory to application in the fascial field has, as I have previously mentioned, spawned a new field of fascial fitness, and the result is a constellation of fascial-fitness modalities. One of the stars of this constellation is the MELT Method, a program created by trainer Sue Hitzmann that utilizes foam rollers and soft spongy rubber balls for self-care. MELT is, by the way, an acronym for Myofascial Energetic Lengthening Technique. The author of a *New York Times* best seller, *The MELT Method*, Hitzmann developed her program in contact with people whose names are familiar in both the fascia research and Roling communities, people such as Robert Schleip, Tom Myers, Tom Findley, and Gil Hedley. When I reviewed her book for this Journal in 2013, I lauded the program but not the sometimes repetitive and unnecessarily personal style of the book. I thought the DVDs would amend those problems. Thankfully, the personal style of the book is gone, and though the repetitive style still persists, I would still highly recommend the MELT DVDs for SI clients, especially if they lack a support system of exercise and movement for the work they are receiving from their SI practitioner.

Research has revealed that fascia is a watery world – at least it should be. The first order of business for repair and maintenance is hydration. The importance of hydration is discussed in Robert Schleip’s important article, “Fascial Fitness,” and he recommends using a foam roller in a sponge-like manner to push water out and allow water back into the fascia tissue. Hitzmann’s system is based on this insight,

her language (gliding, shearing, rinsing, melting) exemplifying such. Besides this physical process of MELTing with foam roller and soft sponge balls, the other half of her program attempts to rebalance stuck stress in three key areas – shoulder girdle, diaphragm, and pelvic girdle – and thus becomes a program of somatic awareness. While I may have some quibbles with her program – there is an absence of discussion of movement and kinetic chains, and I question that a soft foam roller is superior to a harder one – MELT is a complete and potentially very helpful program for SI clients. If you care about your clients' resilience and need to give them a program to sustain your work, MELT is a good choice in terms of self-care, particularly for older clients who need very simple and not overly challenging movement and exercise.

Müller, D. and R. Schleip, 2011. "Fascial Fitness." *Terra Rosa E-Magazine* (Issue 7). Also, "Fascial Fitness: Fascia-Oriented Training for Bodywork and Movement Therapies." *Structural Integration: The Journal of the Rolf Institute*® 39(2):7-13 (Dec 2011).

Zorn, A. and K. Hodeck, Jun 2011. "Elastic Walking: The Fascial Engine." *Structural Integration: The Journal of the Rolf Institute*® 39(1):5-8.

Functional Atlas of the Human Fascial System by Carla Stecco MD (Churchill Livingstone Elsevier 2015)

Reviewed by Allan Kaplan, Certified Advanced Rolfer

Wow, wow, wow. . . I confess I am not the anatomy geek I once was, but this volume really grabbed my attention with the most engaging photographs of fascia yet to be seen. I'd tend to describe it as a cross between a technical anatomy text and a coffee table photo book, but any way you slice it, it's 'fascia porn' at its best.

The text is really the majority of the book, and is comprised of a technically in-depth journey through the body's entire fascial net. The photos are well-lit and generally crisply focused, and many are truly works of art. Occasionally, an inset box with a "Clinical Pearl" will expound on the text with interesting facts and anecdotes. There are also a few well-conceived diagrams scattered about to further illustrate concepts.

While the book's text is extremely comprehensive, certainly the most so I've

seen in terms of fascia, I hesitate to call this book an 'atlas', as it is not a comprehensive guide in the extent of its illustrations and labels. I'd say it is more the most-detailed fascial anatomy text there is, with gorgeous photos to marvel at, some of which are more scrupulously labeled than others. If you're really looking for an anatomy photo atlas, Rohen and Yokochi's *Color Atlas of Anatomy* remains the standard. But if you want to drool over enthralling dissections of fascial planes, Stecco's *Functional Atlas of the Human Fascial System* is the way to go.

Yoga: Fascia Anatomy and Movement by Joanne Avison (Handspring Publishing 2015)

Review by Kate Bradfield, Certified Rolfer™, RYT-200

Let's start by acknowledging that *Yoga: Fascia Anatomy and Movement* is huge – in scope, content, and intention. Joanne Avison has set out on a major task, linking together the history of anatomical study with current fascia research and its practical application to present-day yoga practice. It is no small task. And the reader must have deep curiosity on all of these fronts to get through her book.

I was initially drawn to this book by its cover, wise old sayings be damned. We see an image of a person, in a pose similar to Warrior 2, wrapped in some kind of gauze or nylon tube, almost like a sheer windsock. She slinks her physical form to find the shape of a deep lunge and presses against the fabric that keeps her contained. It's a powerful image. The person looks free in her body, but simultaneously bound. It's like the 'endless web', but seen in an external representation. It made me want to climb into that windsock and start pressing my way out through its resistance. It's a beautiful and weird image.

Avison is a Kinesis Myofascial Integration (KMI) practitioner and teacher as well as the director of the Art of Contemporary Yoga Teacher Training in London. As such, the Anatomy Trains myofascial meridians are woven throughout the book, as are anecdotes of her training and study with Tom Myers.

So much of what she writes about deeply connects to what I have been studying and searching for over the past thirteen years. I first landed at the The Rolf Institute® after having taught yoga for several years. I was always drawn to an alignment-based

practice, and I had come up against a road block as far as how deeply I could dive into anatomy in the context of yoga teacher training. Furthermore, I was developing a curiosity about what I saw in the yoga studios where I taught. I would be flummoxed by one person's ability to move with ease and adaptability from one pose to another, while another student comparable in age, strength, and fluidity would look completely different in all of his shapes and movements. I had rough ideas about why and how this might be, but I wanted to know more. This book would have unlocked that mystery. As it turned out, I went to the Rolf Institute and learned about fascia and the rest is history. But this book should be in the library of anyone who is curious about the human form and how it is able to do what it does, especially in the context of *asana*.

Avison divides *Yoga: Fascia Anatomy and Movement* into three parts: history of classical anatomy and the way that emerging fascia research changed or enhanced all of this; application of this science in *asana*; and finally specific movements and sequences to explore the fascial net. Each section is loaded with information, whether it be scientific, historical, or explorative in the context of *asana*. Almost every page has lengthy margin notes, and the end of each chapter cites many references – from Robert Schleip to Stephen Levin to Japp van der Wal to Tom Flemmons. Many of these names will be familiar to the structural integration (SI) community, but those who come to this book from a different background will have their eyes opened wide to the ever-expanding field of fascia research. Curiously, there is no mention of Ida Rolf anywhere in the book. Perhaps I am biased, but I found this to be odd. Considering Avison's SI roots and the long list of scientists / researchers / artists / doctors included in the historical timeline, one would think that Rolf would have been mentioned. After all, it could be argued that without her, fascia might never have been considered as having any importance!

Those who have been taught that the body is mechanical by nature, linear in form, will have their world turned upside down by reading this book. Avison devotes large sections of her book to biotensegrity, tension/compression, embryology . . . all of the components that can greatly expand a limited view of the body as a series of levers and fulcrums. For this alone, I love this