



BY JARROD SHAPIRO, DPM

Pathomechanics of Common Foot Disorders

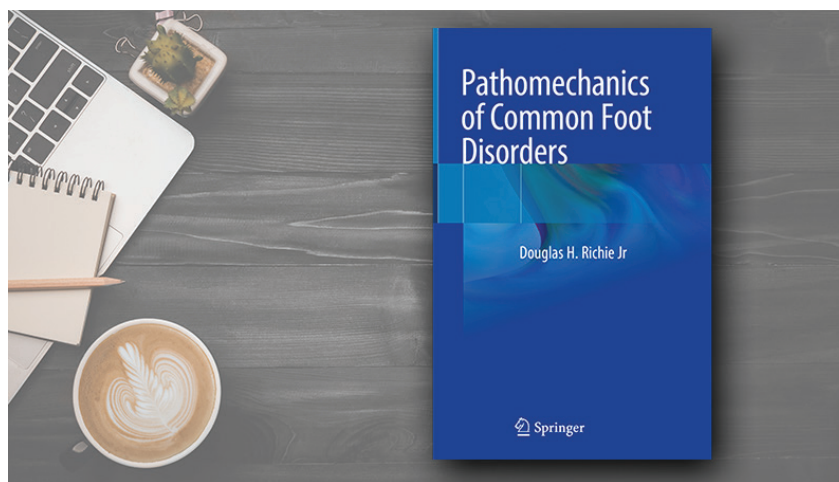
Here's a review of Dr. Richie's new text.

Practice Perfect is a continuing every-issue column in which Dr. Shapiro offers his unique personal perspective on the ins and outs of running a podiatric practice.

This Practice Perfect was going to be a retrospective on the past year. But 2020 was one year many of us would prefer to forget, or at least, move on from. Although some good things did come from the year—like the realization that we could have high quality CME physician education via the Internet—much of the year focused on the disastrous pandemic. So instead, we'll look forward into the future by spending this column on something positive: Dr. Douglas Richie Jr.'s new textbook *Pathomechanics of Common Foot Disorders*.¹

His approach to lower extremity pathology is consistently scholarly, and this book continues that scholarly approach. In a time where biomechanics seems to be falling away from the podiatric profession and into others' hands (note the current proposal by the Council on Podiatric Medical Education to decrease the minimum number of resident biomechanical examinations from 75 to 50, an already abysmal number made worse), Dr. Richie's book is a much-needed infusion of intelligence into our profession.

The title *Pathomechanics of Common Foot Disorders* clearly states what the book covers. The content is organized into four primary sections: fundamental mechanics, first ray disorders, adult acquired flatfoot, and plantar heel pain. This clear approach belies the complexity of the topic, and



Dr. Richie's book is a much-needed infusion of intelligence into our profession.

one might be concerned that such a large field of study might present as unwieldy or disorganized, but this is not the case here. Dr. Richie does a masterful job presenting the material in an organized yet surprisingly readable style. Despite the scholarly approach, which, in the published research literature, is often deliberately stilted and boring, *Pathomechanics* is well written with a more flowing, slightly conversational style.

The other difference with this book is its single authorship. All other texts of this type have been written as collaboratives with a group of "experts" presenting on different topics. This created a cohesive, unified approach to the material with one voice and clear underlying themes that, when repeated, reinforced the material. Like Kevin Kirby, DPM's

series, *Precision Intricast Newsletters*, the single expert perspective created a feel almost like a dissertation.

Each chapter starts with pertinent anatomy, fundamental kinematics, and kinetics with brief discussions about prior paradigms and methods of study. Some of our younger colleagues and students at the beginning of their biomechanical study may not fully appreciate the abbreviated review of prior paradigms (suggestion: read Dr. Stephen Albert's text *Lower Extremity Biomechanics Theory and Practice, Volume 1* for a detailed review of many biomechanics topics and principles), which may make *Pathomechanics* a second textbook for students.


However, for professors at the podiatry colleges, this is an excellent

Continued on page 32


PRESENT Podiatry

PRESENT Podiatry (podiatry.com) is a podiatrist-owned-and-run company that proudly serves as the largest provider of online CME to the podiatry profession. One of the key lectures in their online CME collection is highlighted below.


Featured Lecture



The Utilization of an Autologous Blood Clot Tissue Matrix in the Treatment of Chronic Wounds in Patients with Diabetes



Robert Snyder, DPM, MSc, MBA, CWSP
Professor and Director of Clinical Research and Fellowship Director in Wound Care and Research
Barry University
School of Podiatric Medicine
Miami, FL




1.0 CECHS

In this Lecture...

Robert Snyder, DPM discusses the epidemiology of diabetic foot. Dr Snyder also lists the differences between acute and chronic wound biochemistry, discusses the use and mechanism of action of autologous blood clot tissue wound matrix to accelerate wound healing.

Scan to go to the lecture



Foot Disorders (from page 31)

resource for discussions about foot and ankle pathology. Each chapter then presents both past and up-to-date research evidence, which often contradicts prior knowledge. However, Dr. Richie's evidence-based and highly comprehensive use of the literature makes for strong and convincing arguments that are thought provoking and potentially practice changing, making it a must-read for all of us.

Well-cited, critical use of the current research literature is key to the success of this textbook and is different from the “in-my-hands” show-and-tell style we are so used to seeing at our largest conferences. It is for this reason (there are 864 citations!) one would call this text “scholarly”. Dr. Richie's approach has the effect of questioning much of our common knowledge, so if you are the type that does not like to hear alternative arguments that may question both what you know and how you practice, then this text might make you uncomfortable. Here are some illustrative topics Dr. Richie discusses that are supported by the evidence, to whet the appetite:

- The downplaying of classical Root biomechanics (in fact, it is barely discussed in comparison with other books due to lack of research evidence).
- An increased focus on the importance of the twisted plate model and lateral column to normal foot function.

Well-cited, critical use of the current research literature is key to the success of this textbook and is different from the “in-my-hands” show-and-tell style we are so used to seeing at our largest conferences.

- An argument against the “rigid lever” aspect of the foot during terminal stance and the “myth of midfoot locking”.
- A new appreciation for the contribution of the midfoot joints to sagittal plane motion, which are responsible for greater dorsiflexion than the ankle.
- An argument against the accuracy and validity of the Silfverskiold test.
- The appearance of 1st metatarsal eversion in hallux valgus resulting from hindfoot pronation, not abnormal 1st ray pronation.
- Transverse abduction of the hallux causing both increased medial adduction of the first metatarsal AND sagittal plane “hypermobility in HAV disorders” and not vice versa.
- Elongated lesser metatarsals not being associated with elevated plantar pressures or metatarsalgia.

Potential shortfalls of the text are that *Pathomechanics* does not recommend a specific biomechanical examination, treatment recommendations

for pathology, or orthosis prescriptions resulting from the concepts discussed. Similarly, the text does not cover in detail surgical treatment recommendations. We should remember, though, that this is a pathology textbook and not an exploration of treatment principles. It would be interesting to see what Dr. Richie would do with these subjects! Dr. Richie provides a deep and detailed thesis on foot function, presenting to us the evidence, but does not spoon-feed us with conclusions about what to do with this knowledge. He affords us the respect to meet him halfway. With that knowledge, we decide what to do with it. That is the practice of podiatric medicine, greatly improved with this excellent new textbook. **PM**

References

¹ Richie Jr DH. *Pathomechanics of Common Foot Disorders*. Springer Nature Switzerland, 2020.

Dr. Shapiro is editor of PRESENT Practice Perfect. He joined the faculty of Western University of Health Sciences, College of Podiatric Medicine, Pomona, CA in 2010.