

A Monthly Publication by EIM Faculty

# THE INSIGHT HUB



## MEET THE EXPERT

Paul Mintken PT, DPT, OCS, FAAOMPT

In our inaugural clinical newsletter, who better to interview than Dr. Paul Mintken, professor at Hawaii Pacific University and senior faculty at EIM. Dr. Mintken was recently honored with the

Freddy Kaltenborn "Teach I Must" Award from the American Academy of Orthopedic Manual Physical Therapists. A few questions for Dr. Mintken...

### What is the best advice you have ever received in your professional journey?

A combination of two pieces of wisdom have guided me. First, a mentor once told me to grant myself some grace. It means I can allow myself to be imperfect, to show compassion to myself, and to offer myself forgiveness or understanding when I make mistakes or fall short of expectations. Second, a quote by Maya Angelou really resonated with me: "people will forget what you said, people will forget what you did, but people will never forget how you made them feel." This has shaped how I approach patient care, teaching, and mentoring. It reminds me that relationships matter—whether it's the compassion I show a patient or the encouragement I give a student.

### What is one article all therapists should read and why?

**Beliefs about the body and pain: the critical role in musculoskeletal pain management.** This article is a must-read because it uses case studies to provide a comprehensive framework for understanding and addressing the role of beliefs in musculoskeletal pain management. It equips physical therapists with the knowledge and tools to challenge unhelpful beliefs, both in themselves and their patients, fostering a shift toward more effective, evidence-based, and patient-centered care.

### What is one book all therapists should read and why?

Every physical therapist should read "The Brain That Changes Itself" by Norman Doidge because it provides profound insights into neuroplasticity—the brain's ability to rewire itself in response to learning, experience, and injury. It underscores that recovery and improvement are always possible, even in seemingly irreversible situations. It empowers physical therapists with evidence, inspiration, and actionable ideas to help patients reclaim function and improve quality of life through the brain-body connection.

### What are you working on right now?

I am at the stage of my career where I am more interested in 30,000-foot views of our profession than in comparing one intervention to another in clinical trials. Physical therapy is not a treatment, it is a profession, and the package that we have to offer as healthcare providers is underappreciated. I am currently involved in projects looking at updating the neck pain clinical practice guidelines, provider burnout, patient expectations, and the best strategies for teaching and practicing orthopaedic manual physical therapy.

### Do you have any advice for early-career therapists?

"Your interaction may outweigh your intervention." While clinical skills and technical expertise are important, the way you engage with your patients—the empathy, communication, and trust you build—often has a more significant impact on patient outcomes than any treatment you deliver. I also encourage new therapists to develop a mindfulness practice. This does not mean sitting on a cushion and meditating, it simply means to learn to pay attention to the present moment, both professionally and personally. The present moment is all we ever really have in this life because it is the only point in time where life actually happens.

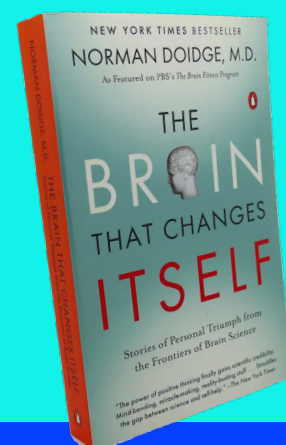
## BOOK CLUB

Our clinical expert this month, Dr. Paul Mintken mentioned Dr. Norman Doidge's book – The Brain That Changes Itself. As we planned the newsletter, this book was already scheduled as this month's focus. I have read this book numerous times, tell therapists at every weekend pain class about it, and have handed out dozens of copies. Neuroplasticity in rehabilitation means HOPE – the most powerful thing we can turn on in people struggling with pain and disability. – Adriaan Louw, PT, PhD

### About the book:

An astonishing new science called "neuroplasticity" is overthrowing the centuries-old notion that the human brain is immutable. In this revolutionary look at the brain, psychiatrist and psychoanalyst Norman Doidge, M.D., introduces both the brilliant scientists championing neuroplasticity and the people whose lives they've transformed. From stroke patients learning to speak again to the remarkable case of a woman born with half a brain

that rewired itself to work, *The Brain That Changes Itself* will permanently alter the way we look at our brains, human nature, and human potential.



# HEALTH CORNER: SLEEP Brett Neilson, DPT, OCS, FAAOMPT, TPS

There is a lot of concern over the rehabilitation workforce, especially following the COVID-19 pandemic. A new line of studies is emerging related to workforce issues such as burnout, professional development, etc. In our monthly newsletter we'd like to focus on strategies to help clinicians stay healthy, both physically and emotionally.

## This month's focus? Sleep

Want to know how important sleep is? It is now well documented that the loss or addition of one hour of sleep per night can have a huge impact on your health. For example, Sanhu and colleagues have shown that the Monday after daylight savings in the Spring (when we lose an hour of sleep), a person's risk for a heart-attack increases 25%, whereas the risk is down 21% the Monday after gaining an extra hour of sleep in the fall.<sup>1</sup>

Closer to home, and more recently – Shepherd and colleagues looked at sleep, anxiety and physical therapy students. With results showing DPT students who rated sleep as restless exhibited signs of poor subjective

sleep quality associated with an increased risk of experiencing moderate to severe anxiety compared to students who had restful sleep. Students reported behaviors surrounding sleep that may contribute to anxiety.<sup>2</sup>

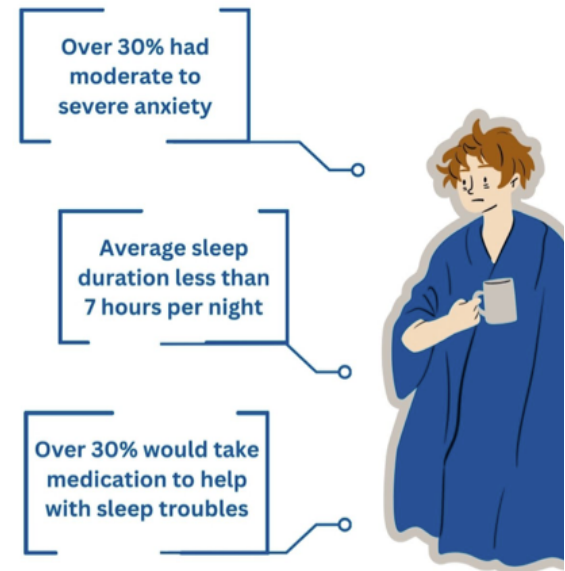
## What to do?

The answer can be very complicated and may end up including seeing a specialist for testing, but the best place to start would be the basics. Sleep health and sleep hygiene specifically are habits, and people often fall into bad habits. As with patients, we often start with education about sleep and then a task to put in place what we learn. Below is an example of a sleep hygiene program we use with patients.

## Finally – two quick reminders:

It is well documented that we “wake” at least twice a night (sometimes more) during the various sleep cycles. This is normal and happens to all of us – usually a time to go to the restroom or move onto the other side. Don't fret about it and try to get back to sleep.

Many times, when we talk to patients, we hear – “I get by with 5 to 6 hours per night.” We have yet to see a study to prove that – especially long-term. Numerous studies and current guidelines report the ideal duration of sleep to be 7+ hours per night! Remember, Albert Einstein slept at least 10 hours a day!



## Calming Nerves: Sleep Hygiene<sup>3</sup>

Below is a list of strategies to help you develop a healthy sleeping pattern. Choose one every day, and over time you will see the benefit. Use this as your sleep checklist:

- |   |   |
|---|---|
| <input type="checkbox"/> Set a time to go to bed—before 11 pm                     | <input type="checkbox"/> Relax, meditate, or read a book before bed   |
| <input type="checkbox"/> Quiet the house by turning off the computer and TV       | <input type="checkbox"/> Avoid checking e-mails or messages before bed  |
| <input type="checkbox"/> Reduce fluid intake in the evening                       | <input type="checkbox"/> Stay in bed—if you cannot sleep, close your eyes and relax                           |
| <input type="checkbox"/> Reduce alcoholic beverages in the late evening           | <input type="checkbox"/> Set a wake time and stay in bed until then   |
| <input type="checkbox"/> Darken and cool the bedroom                              | <input type="checkbox"/> Eliminate naps—if naps are needed, limit them to power naps of fewer than 20 minutes |
| <input type="checkbox"/> Remove kids and pets from your bed (no bed buddies)      | <input type="checkbox"/> Avoid caffeine in the late afternoons or evenings                                    |
| <input type="checkbox"/> Park your ideas—place a notepad and pen next to your bed | <input type="checkbox"/> Exercise during the day  |


1. Review the program and then reflect on your sleep habits. Are you well aligned with most of these? Which items do you need to work on?
2. Check the ones you do on a regular basis – well done!
3. Decide which of the remaining ones you think you can readily implement, and then try and add one every night or every other night.
4. For the more challenging ones – think of ways you can move closer to the ideal situation over time – possibly discussing this with your partner.

1. Sandhu A, Seth M, Gurm HS. Daylight savings time and myocardial infarction. *Open Heart* 2014;1:e000019. doi:10.1136/openhrt-2013000019  
 2. Shepherd MH, Neilson B, Siengsakon C, Young JL. Restless sleep is associated with increased anxiety in physical therapy students: a cross sectional survey study. *BMC Med Educ.* Oct 18 2024;24(1):1170. doi:10.1186/s12909-024-06140-4  
 3. From: Louw A, Puentedura E, Schmidt S, Zimney K. *Pain Neuroscience Education*. Vol 2. Minneapolis, MN: OPTP; 2018.

## RESEARCH CORNER

Evidence In Motion, by nature of its name, is focused on research. Our 300+ post-professional faculty publishes close to 100 papers per year, speak at national and international conferences and push boundaries when it comes to forward-thinking in rehabilitation. Each month we will feature some of these new papers, and reflect on a key paper/study all clinicians should have in their library.


### Graded Motor Imagery and Fall Risk in Older Adults: An Exploratory Case Series

 Louw A, Moyer H, Bernier C, Blaske H, Hazer K, Knobloch KF, Nolting M, McEachern L, McEachern J, Gardner C, Bruzzone H, Louw C and Farrell K

**Results:** Immediately following treatment, mean self-reported pain improved by 1.24 points ( $p < 0.001$ ), with a large sub-group meeting the minimal clinically important difference (MCID) for self-reported pain (1.7). Gait speed improved significantly ( $p < 0.001$ ) meeting MCID (0.1 m/s). Left-right judgement task speed ( $p < 0.001$ ) and accuracy ( $p = 0.04$ ) improved. None of the PPT measurements improved. While mean composite Briefest test scores did not reach MCID values (9 points), statistically significant improvements were noted in the biomechanical constraints ( $p = 0.007$ ) and sensory orientation ( $p = 0.009$ ) subcomponent scores.

**Conclusion:** A brief, one-time GMI session in older adults can decrease pain and improve scores on tests associated with fall risk but fail to decrease sensitivity of the nervous system. More research is needed to validate the results of this exploratory study.

### Clinical Utility of Qualitative Change of Direction Movement Assessment in ACL Injury Risk Evaluation

 Evan Andreyo, Casey Unverzagt, Thomas Dos'Santos, J Jay Dawes

Anterior cruciate ligament (ACL) injuries are complex and influenced by numerous internal and external risk factors that should be considered to effectively mitigate injury and facilitate informed return to sport decision-making. Among these risk factors, movement quality exhibited during sport-specific tasks has been identified as a significant predictor of injury occurrence. Particularly, change of direction (COD) movements, when performed with sub-optimal movement quality, such as knee valgus and lateral trunk flexion, are prominent mechanisms of ACL injury in multidirectional sports. Unfortunately, the formal and objective assessment of COD movement quality is underutilized in clinical and sports practice, with existing methods often confined to expensive, sophisticated laboratory settings impractical for everyday clinicians. The purpose of this clinical com-

mentary is to demonstrate the necessity of integrating COD movement assessments to screen for potential ACL injury risk, particularly among higher-risk populations. The authors will review cost-effective and clinic-friendly objective tests used to qualitatively screen COD movements, such as the Cutting Movement Assessment Score and The Expanded Cutting Alignment Tool. Additionally, this commentary will discuss key considerations when assessing COD movement.

### Neck pain in demolition derby drivers

Alexander C. Simotas, MD; Timothy Shen, MD

This classic paper from 2005 shows how psychosocial issues impact neck pain following collisions. Anecdotally we suspected this, but Simotas and the team showed that number of collisions, speed of collisions, etc., do not necessarily predict pain and disability in whiplash-associated disorders. Currently whiplash-associated disorder research in rehabilitation is heavily focused on stress-inoculation therapy or psychologically informed therapy, which makes sense given...the demolition derby driver study!

**Results:** Forty drivers participated in a mean of 30 career events and had an average of 52 car collisions per event, 55% being rear-end. Mean and maximum collision speeds were 26 and 45 miles/h (41.6 km/h, 72 km/h), respectively. Only 2 drivers reported their worst postparticipation neck pain lasted more than 3 months, and for 1 it lasted more than a year; for the majority, the worst neck pain event lasted less than 21 days. Three participants reported having mild chronic persistent derby-related neck pain (never went away). The remaining 37 drivers reported no chronic neck pain. The average pain episode was moderate or severe for 8, but for all respondents, the average pain episodes lasted less than 21 days. Ten reported chronic neck pain they believed was unrelated to derby competition (7 mild, 2 moderate, 1 severe).

**Conclusions:** These data suggest that derby drivers sustain less chronic neck pain after multiple car collision events than might otherwise be expected. Further study of this unique population of car drivers may contribute to understanding whiplash disorder.

## CLINICAL PEARL

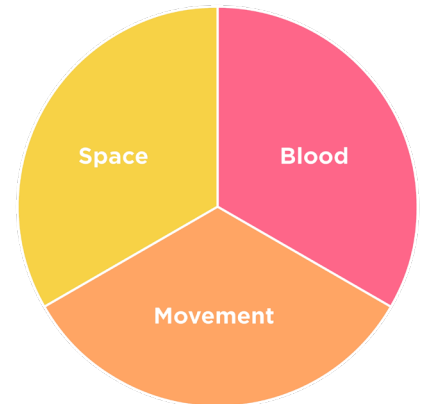
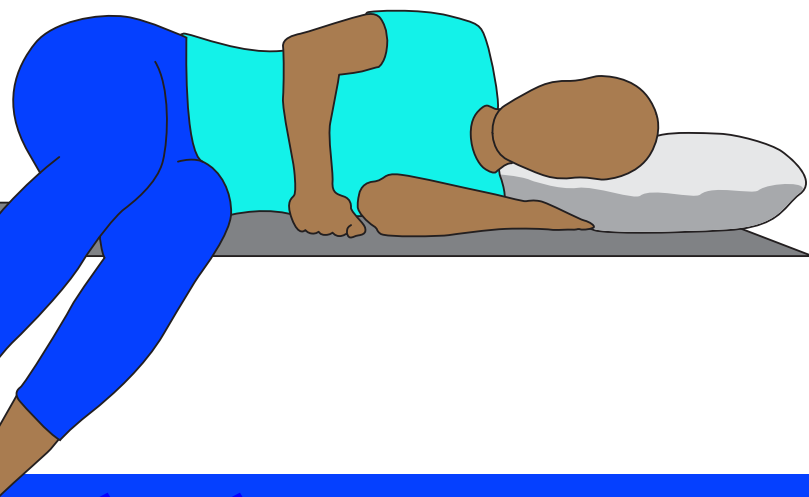
### Treatment of Sciatica and Lumbar Radiculopathy with an Intervertebral Foramen Opening Protocol: Pilot Study in a Hospital Emergency and In-patient Setting

Michael Shacklock, Marinko Rade, Siniša Poznic, Anita Marčinko, Michael Fredericson, Heikki Kröger, Markku Kankaanpää, Olavi Airaksinen

Physiotherapy Theory and Practice 2023 Jun;39(6):1178-1188

This month's clinical pearl is a stunning, easy-to-perform technique for acute radiculopathy by Michael Shacklock and colleagues. In EIM pain courses we discuss how acute peripheral neuropathic pain can be very challenging to treat, both pharmacologically and/or non-pharmacologically. We teach that nerves require SPACE, MOVEMENT and BLOOD SUPPLY to be "happy." The space element often refers to the containers nerves travel through (tunnels, tissues, canals, etc.), and this technique shows how creating space for the neuromeningeal tissues can ease pain, even decrease narcotic use, as a treatment technique in the clinic and/or home exercise strategy.

**AIMS:** Perform a pilot study of a static nerve root foramen opening protocol for lumbar radiculopathy from disc hernia in an emergency hospital setting to establish if patients could execute the protocol, consistency would occur across outcomes, superior outcomes would occur in the experimental group, and if the protocol would be safe.



**METHODS:** Patients with sciatica arrived of their own volition at the local emergency hospital department, were admitted for care and were randomized into two groups: 1) control (n = 10): forward bending, walking, and medication; and 2) experimental (n = 10) as control subjects, plus a static lumbar foramen opening protocol using flexion and contralateral lateral flexion (side-lying). Outcomes were back and leg pain (i.e. visual analog scale), disability (i.e. EuroQol5D5L and Oswestry) and straight leg raise.

**RESULTS:** At admission, the baseline outcome variables between groups were not significantly different. All patients had moderate or large disc hernias on MRI and 75% had neurological deficits in electrophysiology. At discharge, patients in the experimental group were significantly better ( $p \leq .05$ ) than controls in all outcomes. Statistical analysis of the outcomes produced greater significance, effect sizes and minimal clinically important differences in the experimental group. Patients in the experimental group consumed less medication than control patients (21% versus 79%), including less than half the opioids (tramadol). No adverse responses occurred.

**CONCLUSIONS:** Patients could perform the protocol and superior outcomes occurred, with no adverse effects. The data support more detailed study of therapeutic efficacy, days in hospital, costs, conversion to surgery, and medication consumption, including opioids.

“Let’s hope our profession can take on the role of case manager of a multimodal approach, not limited to exercise and education, but also including dietary interventions, sleep management, stress management, and last but not least: supporting patients in tapering off medication.” **-Jo Njis PT, PhD**

