

Top **10** Performance & Sports Medicine Papers of 2025

Selected From 200+ Papers, Interpreted and
Applied by Dr. Ara Suppiah

**“These are the papers that actually made me stop, rethink,
and adjust how I work with athletes.”**

- Dr. Ara,

*Emergency and Sports Medicine physician,
Founder and CEO of Functional Sports Medicine,
Chief Medical Analyst for Golf Digest*

This PDF accompanies [Dr. Ara Suppiah's 2025 research review video](#).

This is not a literature review. This is a clinical decision support summary.

1. The Value of Oral Health Screening for Athletes

Journal: *Research in Sports Medicine*

Authors: Julie Gallagher, Peter Fine

Publication Year: 2025

DOI: 10.1080/15438627.2025.2532535

Why This Paper Matters

Oral health is one of the **least screened but most inflammatory systems** in athletes. This review highlights that elite athletes experience **similar rates of gum disease, dental disease, and TMJ issues** as the general population, despite superior access to care.

Key Findings

- Poor oral health contributes to **systemic inflammation**
- Elevated inflammatory markers (including CRP) are associated with dental pathology
- Risk factors in athletes include:
 - Dehydration
 - High carbohydrate exposure
 - Training-induced immune suppression
 - Low prioritization of oral hygiene

Clinical Takeaway

When athletes present with:

- Unexplained fatigue
- Performance drop
- Low HRV
- Persistent inflammatory symptoms

👉 **Look in the mouth before escalating labs or interventions**

“The mouth is an inflammatory surface we consistently ignore. This paper reinforces why oral screening belongs in high-performance medicine.” - Dr. Ara

2. Wearable-Derived Sleep and Physiological Metrics Are Associated With Performance in Professional Golfers

Journal: *International Journal of Sports Physiology and Performance*

Authors: Gregory J. Grosicki et al. (WHOOP Research Team)

Publication Year: 2025

Why This Paper Matters

This study links wearable-derived sleep and recovery metrics to **real competitive performance**, not just training proxies.

Key Findings

- **Sleep consistency** was a stronger predictor of performance than sleep duration
- Metrics analyzed included:
 - HRV
 - Resting heart rate
 - Sleep timing
- Performance outcomes included:
 - Scoring
 - Greens in regulation
 - Putting accuracy
 - Distance metrics

Clinical Takeaway

Stop focusing only on *how long* athletes sleep.
Start focusing on **how consistent their sleep timing is**.

“This changed how I talk about sleep immediately. Consistency beats duration when it comes to performance.” - Dr. Ara

3. Inflammation in Elite Athletes: A Review of Novel Factors, the Role of Microbiome, and Treatments for Performance Longevity

Journal: *Cureus (Springer Nature)*

Authors: Elliot Dinetz, Nataliya Bocharova

Publication Year: 2024–2025

Why This Paper Matters

This review reframes inflammation as a **systemic, multi-organ issue**, with visible external markers clinicians often miss.

Key Findings

- Endurance athletes commonly experience:
 - Gut ischemia
 - Increased intestinal permeability
 - Endotoxin (LPS) leakage
- Chronic inflammation may manifest externally as:
 - Acne
 - Eczema
 - Vitiligo

Clinical Takeaway

You don't always need advanced gut testing.

👉 **Skin + mouth findings can act as early inflammatory indicators**

Important Limitation

- Genetic data remains biased toward Caucasian populations
- Limited predictive value across diverse athlete populations

“If the gut is inflamed, the skin often tells you first, if you’re paying attention.” - Dr. Ara

4. Mechanisms of Blood Flow Restriction Training for Knee Pain: A Mini Review

Journal: *Frontiers in Sports and Active Living*

Authors: Shi-Yu Xie et al.

Publication Year: 2025

Why This Paper Matters

Knee pain affects **~650 million people globally**. This paper explains *why* BFR works — not just that it does.

Key Findings

- BFR induces hypertrophy via **metabolic stress**, not mechanical load
- Pain modulation may involve endogenous opioid pathways
- No clear anti-inflammatory effect observed

Clinical Takeaway

BFR benefits may be replicated using:

- Long-duration isometric holds
- Low-load metabolic stress strategies

BFR is a **tool**, not a requirement.

“Metabolic stress can stimulate hypertrophy.....where else can you create this environment?” - Dr. Ara

5. Emerging Use of BPC-157 in Orthopaedic Sports Medicine: A Systematic Review

Journal: *HSS Journal (SAGE)*

Authors: Nikhil Vasireddi et al.

Publication Year: 2025

Why This Paper Matters

BPC-157 is widely discussed but poorly understood. This review synthesizes **544 articles** across preclinical and limited clinical data.

Key Findings

- Supports healing in:
 - Tendon
 - Ligament
 - Muscle
 - Bone
- Promotes angiogenesis and cellular repair
- Metabolized by liver, cleared by kidneys
- No major adverse effects reported in preclinical models

Critical Context

- Not FDA-approved
- Banned by WADA
- Injection appears more effective than oral
- Clearance ~4–5 days → **minimum 7-day buffer if used outside competition**

**“Mat be used to help fractures heal.....and is cleared by the body in 5 days.” -
Dr. Ara**

6. Effects of Low Energy Availability on Performance in Male Athletes: A Scoping Review

Journal: *Journal of Science and Medicine in Sport*

Authors: Tim Hänisch et al.

Publication Year: 2025

Why This Paper Matters

Challenges rigid application of the **30 kcal/kg FFM/day** rule in male athletes.

Key Findings

- Low energy availability does not always immediately reduce performance
- Temporary performance improvements may occur due to:
 - Cortisol elevation
 - Improved power-to-weight ratio
- Long-term consequences remain significant

Clinical Takeaway

Short-term performance ≠ sustainable health.

“Performance can improve in low energy states — which is exactly why tired opponents can still be dangerous.” - Dr. Ara

7. Factors Affecting NBA Game Performance Over the Course of a Season

Journal: *Journal of Science and Medicine in Sport*

Authors: Jennifer L. Russell, Blake D. McLean, Sean Stolp, Donnie Strack, Aaron J. Coutts

Affiliations: Oklahoma City Thunder (Human & Player Performance); University of Technology Sydney

Why This Paper Matters

This paper looks at **real-world performance in a dense, high-travel, high-fatigue environment** — an NBA season — rather than isolated lab or training conditions.

It's valuable because it reflects the **messy reality** clinicians actually deal with:

- Travel
- Back-to-backs
- Sleep disruption
- Cumulative load

Key Findings

NBA performance is influenced by:

- **Game congestion**
- **Travel demands**
- **Sleep disruption**
- **Accumulated training and game load**

Performance fluctuations over a season are **not random** — they reflect interacting stressors that build over time.

Clinical Takeaway

This reinforces the importance of:

- Monitoring cumulative load (not just acute spikes)
- Accounting for travel and schedule density
- Adjusting expectations and interventions **across the season**, not week to week

“This is what real performance looks like — not controlled labs, but humans navigating stress, travel, and recovery over months.” - Dr. Ara

8. Does Massage Gun or Foam Roller Use During a Warm-Up Improve Performance in Trained Athletes?

Journal: *Sports (MDPI)*

Authors: Lachlan Ormeno, Matthew Driller

Publication Year: 2024–2025

Why This Paper Matters

Foam rolling and massage guns are **routinely misused** in warm-ups.

Key Findings

- Improves ankle mobility
- **Reduces:**
 - Countermovement jump height
 - Reactive strength index (RSI)
 - Sprint performance

Clinical Takeaway

Avoid soft-tissue relaxation **before:**

- Plyometrics
- Speed work
- Reactive tasks

“Stiffness is a performance asset depending on the type of training and sports. Don’t remove it right before you need it.” - Dr. Ara

9. Central and Peripheral Fatigue in Physical Exercise Explained: A Narrative Review

Journal: *International Journal of Environmental Research and Public Health*

Authors: José Francisco Tornero-Aguilera et al.

Publication Year: 2025

Why This Paper Matters

Moves beyond the outdated **central governor theory**.

Key Insight

Introduces an **integrative governor model**, combining:

- Psychological
- Physiological
- Homeostatic factors

Clinical Takeaway

Fatigue is **negotiated**, not simply imposed.

“Intergrated governor!! Understanding fatigue changes how you prescribe training — and how you explain it to athletes.” - Dr. Ara

10. Blood Test Findings in a Large Cohort of Olympic Athletes: A Cross-Sectional Study

Journal: *Journal of Science and Medicine in Sport*

Authors: Armando Ferrera et al.

Publication Year: 2025

Why This Paper Matters

Large Olympic cohort (2012–2024) shows elite athletes are **not metabolically immune**.

Key Findings

- Elevated LDL and triglycerides common
- Blood glucose control often suboptimal
- Standard reference ranges may be too broad for elite sport

Clinical Takeaway

Interpret labs in **context**:

- Training load
- Timing of blood draw
- Nutrition (e.g. fructose-heavy sports drinks)

“Numbers without context lead to bad decisions, and do assume elite athletes are always healthy.” - Dr. Ara

Do you want to go deeper, ask questions, and develop the precision decision-making that defines the top 1% of performance professionals?

This PDF is a **free example** of how Dr. Ara approaches performance science.

Inside the [Performance Science Membership](#), professionals working with elite athletes get:

- **Monthly Research Deep Dive**
A concise, under-60-minute breakdown of key studies, translated through the same interpretive lens used with professional athletes. Focused, digestible, and immediately useful.
- **Clinical Application Summary**
Every month, complex research is broken down into clear, practical guidance you can use immediately. No jargon. No fluff. Just the essential 1 percent that actually matters in practice.
- **Technology & Supplement Reviews**
Unbiased reviews of wearables, devices, and supplements that are trending in performance and health. You'll learn what works, what doesn't, and what is mostly marketing.
- **Monthly Live Office Hour**
Bring your real cases, real questions, and real uncertainty. See how complex information is interpreted and applied in practice, with direct guidance from Dr. Ara.
- **Replay Library & Case Insights**
Access past sessions and case discussions to reinforce concepts and learn from real-world scenarios.
- **Direct Access to Dr. Ara**
Ask questions inside the community and get guidance directly from a physician trusted by world number one athletes and Olympic gold medalists.

"It's like you get a chance to sit over my shoulder while I interpret the research I actually use in my daily practice. I wish I had something like that available for me 5-10 years ago". - Dr. Ara

