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PHYSIOZine™

Advancing Physiotherapy with Knowledge & Innovation



**ECONOMIC
ROLE OF
PSYCHO-
PHYSIOTHERAPY**
in Criminal Psychology

**ETHICAL
DILEMMAS**
in Return to Play

**YOGA AND
PHYSIOTHERAPY**
For Optimal Recovery

**AI IN GAIT
ANALYSIS**



**MASSAGE
VS MFR**

October 2025

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PhysioZine is a dynamic platform dedicated to advancing the field of physiotherapy. It serves as a comprehensive resource for both seasoned professionals and aspiring therapists. Through its e-magazine, online courses, and engaging community, PhysioZine offers a wealth of knowledge, including expert articles, interviews, research insights, and practical techniques. Whether you're seeking to stay updated on the latest trends or enhance your clinical skills, PhysioZine is your go-to destination for all things physiotherapy.

FOUNDER PHYSIOZINE

Dear Readers,

It gives me immense pleasure to present to you the October 2025 issue of PhysioZine. With every edition, our vision remains clear – to create a platform that bridges clinical practice, research, and innovation in physiotherapy while inspiring professionals across the globe.

This month's cover theme, "AI in Gait Analysis," reflects how technology is rapidly transforming the way we assess and treat movement disorders. Artificial Intelligence is no longer a futuristic concept – it is becoming an essential tool for enhancing precision, personalization, and outcomes in physiotherapy practice.

We also bring to you thought-provoking articles on diverse yet equally vital areas of our profession – from the economic role of psycho-physiotherapy in criminal psychology to the ethical dilemmas in return-to-play decisions, and from the integration of yoga with physiotherapy for optimal recovery to an evidence-based comparison of Massage vs. Myofascial Release (MFR). Each piece is carefully curated to spark new insights and stimulate meaningful discussions.

Let us continue working together to advance physiotherapy through knowledge and innovation. I hope this edition inspires you to embrace new ideas, question existing boundaries, and apply them in your clinical journey.

With warm regards,
Dr. Darshan Parmar
Founder, PhysioZine



CHIEFEDITOR

Dear Readers,

Welcome to the October 2025 issue of PhysioZine. This edition highlights the growing impact of AI in gait analysis while also addressing important themes like ethical dilemmas in return-to-play, psycho-physiotherapy in criminal psychology, yoga in recovery, and Massage vs. MFR.

Our goal remains simple – to bring you relevant, innovative, and thought-provoking insights that strengthen physiotherapy practice and research.

Happy reading!

Warm regards,
Dr. Jaspreet Kaur Kang
Chief Editor, PhysioZine



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Artificial Intelligence (AI) in Gait Analysis and Correction in Neurophysiotherapy



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Gait, or the manner in which a person walks, is a fundamental aspect of mobility and independence. In neurophysiotherapy, addressing gait abnormalities is often a primary focus, particularly for individuals recovering from neurological conditions like stroke, Parkinson's disease, cerebral palsy, or traumatic brain injury. Traditionally, gait analysis and correction have relied heavily on the expertise of therapists and clinicians who observe patients and make subjective judgments about their movement patterns. However, the integration of Artificial Intelligence (AI) into neurophysiotherapy is revolutionizing this field, enabling more precise, data-driven gait analysis and more effective interventions for gait correction.

AI-powered gait analysis uses advanced algorithms, sensors, and machine learning models to collect, process, and interpret movement data, offering unparalleled insights into a patient's walking patterns. The result is a more personalized, objective, and efficient approach to gait rehabilitation, ultimately leading to better patient outcomes.

Gait Abnormalities in Neurological Conditions

Many neurological conditions result in gait abnormalities that affect patients' ability to move efficiently and safely. These abnormalities can manifest in various ways, including:

- **Hemiplegic Gait:** Often seen in stroke patients, where one side of the body is weaker, causing the affected leg to move in a circumducting pattern (swinging in a circular motion).
- **Shuffling Gait:** Common in Parkinson's disease, where patients take small, quick steps with reduced arm swing, often accompanied by a stooped posture.
- **Ataxic Gait:** Seen in individuals with cerebellar disorders, characterized by an unsteady, wide-based walking pattern, with a lack of coordination.
- **Scissoring Gait:** Typically found in patients with cerebral palsy, where the legs cross over each other as they walk due to tight muscles in the hips and thigh

The correction of these gait abnormalities is crucial for improving mobility, reducing the risk of falls, and enhancing the overall quality of life for patients with neurological conditions. AI is providing innovative ways to tackle these challenges.

Traditional Gait Analysis and Its Limitations

Historically, gait analysis in clinical settings has been conducted through visual observation and video recordings, often supplemented by motion capture systems or pressure-sensitive mats. Clinicians use these tools to assess a patient's gait cycle and identify abnormalities. While effective to some extent, traditional gait analysis has several limitations:

1. **Subjectivity:** Much of the analysis depends on the clinician's expertise and subjective observation, which can vary between individuals.
2. **Limited Precision:** Although motion capture systems and force plates provide valuable data, they are expensive, require specialized equipment, and can only capture limited aspects of gait mechanics.
3. **Intermittent Assessment:** Gait analysis is often performed in clinical settings on a periodic basis, providing only snapshots of a patient's gait rather than continuous monitoring over time.
4. **Time-Intensive:** The process of setting up and conducting gait analysis, particularly with advanced equipment, can be time-consuming and may not be feasible for frequent monitoring.

These limitations create challenges in developing precise, personalized rehabilitation plans for patients, as the data available is often incomplete or prone to human error. AI presents a solution to many of these issues.

How AI is Revolutionizing Gait Analysis in Neurophysiotherapy

AI-powered gait analysis systems combine data from various sources such as wearable sensors, cameras, and pressure-sensitive platforms, allowing for the continuous, real-time monitoring of a patient's gait. This technology offers several transformative benefits:

1. Objective and Accurate Data Collection

AI systems are designed to eliminate the subjectivity inherent in traditional gait analysis. Using a combination of sensors, cameras, and advanced algorithms, these systems collect precise, objective data on various aspects of the gait cycle, including:

- **Step Length and Width:** AI can measure the distance between steps and the width of the gait, both of which are important indicators of walking stability and coordination.
- **Gait Speed:** An essential metric in evaluating a patient's overall mobility, AI systems can accurately track changes in walking speed over time.
- **Joint Angles:** AI-powered systems can assess the angles of joints (ankles, knees, and hips) throughout the gait cycle, offering insights into compensatory movements and abnormalities.
- **Foot Pressure Distribution:** Sensors placed in shoes or on the ground can analyze how pressure is distributed across the foot during each step, which is crucial for identifying imbalances or asymmetries.

These objective metrics provide clinicians with detailed, actionable data that can be used to make informed decisions about gait correction strategies.

2. Machine Learning for Pattern Recognition

AI excels at recognizing patterns in large datasets, which is particularly useful in gait analysis. Machine learning algorithms can analyze thousands of gait cycles from multiple patients to identify common patterns associated with specific neurological conditions. Over time, these algorithms become increasingly accurate at diagnosing gait abnormalities and predicting patient outcomes.

- **Predictive Models:** By analyzing past gait data, AI can develop predictive models that forecast how a patient's gait will evolve over time. For example, in stroke rehabilitation, AI can predict whether a patient is likely to regain full mobility or require long-term gait assistance, enabling clinicians to adjust treatment plans accordingly.
- **Early Detection:** AI systems can detect subtle changes in gait that may not be visible to the naked eye, allowing for the early identification of emerging issues. For instance, in Parkinson's disease, AI may identify small reductions in step length or gait speed, signaling the need for early intervention before the condition worsens.

3. Personalized Gait Correction Plans

One of the most significant advantages of AI in gait analysis is its ability to provide personalized rehabilitation plans based on real-time data. Rather than relying on generalized protocols, AI systems can customize gait correction strategies for each patient, adapting the therapy as the patient progresses.

- **Adaptive Interventions:** AI-powered systems continuously monitor the patient's gait and make real-time adjustments to the rehabilitation program. For example, if the system detects that a patient is compensating with their unaffected leg, it can suggest exercises that specifically target the affected limb.
- **Feedback Mechanisms:** Many AI systems provide instant feedback to both clinicians and patients. For instance, wearable devices with haptic feedback (vibrations or auditory cues) can notify patients when they are not walking correctly, allowing them to adjust their gait in real-time. This immediate correction helps reinforce proper movement patterns and enhances the effectiveness of the therapy.

This personalized approach ensures that each patient receives the most effective treatment for their specific condition, leading to faster recovery and better long-term outcomes.

4. Remote Gait Monitoring and Telerehabilitation

One of the most promising applications of AI in gait analysis is its potential for remote monitoring and telerehabilitation. Wearable sensors equipped with AI can continuously monitor a patient's gait outside of clinical settings, providing clinicians with valuable data on how the patient moves in their daily environment.

- **Remote Monitoring:** AI-powered wearables collect data on gait patterns as the patient goes about their normal activities, providing a more comprehensive view of their mobility. Clinicians can remotely assess the data and make adjustments to the rehabilitation plan without requiring frequent in-person visits.
- **Telemedicine Integration:** AI systems can be integrated with telemedicine platforms, allowing patients to engage in virtual gait rehabilitation sessions. The AI system provides real-time feedback during the exercises, ensuring that the patient performs them correctly. This is particularly beneficial for patients in rural or underserved areas where access to neurophysiotherapy services may be limited.

Remote gait monitoring and telerehabilitation offer increased flexibility and accessibility for patients, reducing the burden of frequent clinical visits and ensuring continuous care.

AI in Gait Correction: Tools and Technologies

Several cutting-edge tools and technologies are using AI to improve gait analysis and correction in neurophysiotherapy:

1. Wearable Sensors and Smart Shoes

Wearable sensors, such as inertial measurement units (IMUs), are becoming increasingly popular for AI-based gait analysis. These small, lightweight devices can be attached to different parts of the body (hips, knees, ankles) or embedded in shoes to track the patient's movements in real-time.

- **Smart Insoles:** Pressure-sensitive insoles can measure foot pressure distribution and gait parameters. AI analyzes the data to provide insights into gait abnormalities, such as uneven weight distribution or compensatory movements.

2. AI-Powered Motion Capture Systems

AI-driven motion capture systems use cameras and sensors to track a patient's movements during walking. Unlike traditional motion capture systems that require extensive setup, AI-powered systems are more accessible and can be used in both clinical and home settings. These systems capture high-precision data on joint angles, body posture, and movement patterns, which are then analyzed to identify gait abnormalities.

3. Robotic Gait Training Systems

Robotic gait training systems, such as robotic exoskeletons, are revolutionizing gait rehabilitation for patients with severe mobility impairments. These systems use AI to assist patients in walking, providing the right level of support based on their current abilities. As the patient improves, the AI system reduces assistance, encouraging more active participation in the walking process. This promotes neuroplasticity, helping to restore walking function in patients who may otherwise struggle to regain mobility.

Benefits of AI-Powered Gait Analysis and Correction

The integration of AI in gait analysis and correction offers several distinct benefits:

1. **Increased Precision:** AI provides highly accurate, objective data on gait patterns, reducing the reliance on subjective assessments.
2. **Personalization:** AI enables the creation of individualized gait correction plans tailored to each patient's specific needs, improving the effectiveness of rehabilitation.
3. **Real-Time Feedback:** AI systems provide immediate feedback during gait exercises, helping patients correct their movements and reinforcing proper gait mechanics.
4. **Remote Accessibility:** AI-powered wearables and remote monitoring tools allow for continuous gait assessment outside of clinical settings, improving access to care for patients in remote areas.
5. **Faster Recovery:** With personalized, data-driven rehabilitation plans and real-time feedback, patients are likely to experience faster improvements in their gait and overall mobility.

Challenges and Ethical Considerations

While AI offers significant advancements in gait analysis and correction, there are also challenges and ethical considerations to address:

- **Data Privacy and Security:** The use of AI-powered systems requires the collection and storage of large amounts of personal health data, raising concerns about privacy and data security.
 - **Accessibility:** Although AI tools can improve accessibility to care, they may be costly and not widely available in all regions, potentially exacerbating healthcare inequalities.
 - **Reliability:** AI systems must be rigorously tested to ensure their reliability and accuracy in clinical settings. There is also a need for ongoing human oversight to ensure that AI complements, rather than replaces, the expertise of therapists.
- The advantages of artificial intelligence-based gait assessment in detecting, predicting, and managing Parkinson's disease

According to the article titled "The Advantages of Artificial Intelligence-Based Gait Assessment in Detecting, Predicting, and Managing Parkinson's Disease" by Miao Wu, Peng Wu, et al. (July 2023), the authors found that AI-based gait assessments provide significant advancements in several aspects of Parkinson's Disease (PD) management. These include:

1. **Improved Detection:** AI technologies were shown to significantly enhance early detection of Parkinson's disease by analyzing subtle changes in gait patterns that are not easily observable by the human eye. Machine learning algorithms can identify early markers of PD, such as changes in stride length, walking speed, or foot pressure distribution.
2. **Accurate Prediction of Freezing of Gait (FOG):** AI was found to be effective in predicting imminent FOG episodes, a debilitating symptom of PD. By continuously monitoring gait through wearable sensors or camera systems, AI algorithms can predict FOG and alert patients and caregivers, allowing for timely intervention to prevent falls.
3. **Personalized Management:** The study highlighted that AI-powered systems can provide personalized gait rehabilitation programs tailored to the specific needs of each patient. These systems adapt in real-time to changes in a patient's gait, making the rehabilitation process more dynamic and effective.
4. **Remote Monitoring and Intervention:** AI allows for remote gait assessment, enabling patients to be monitored in real-world environments outside of clinical settings. This continuous data collection ensures that patients' conditions are closely followed, and any significant changes in gait can be addressed promptly.

The study concluded that AI-based gait assessment tools not only enhance the precision of PD diagnosis and symptom monitoring but also offer practical solutions for improving patient autonomy and reducing the risks associated with motor dysfunction.



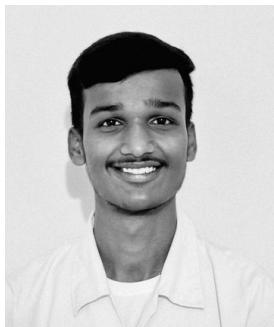
Conclusion

AI-powered gait analysis and correction represent a transformative approach in neurophysiotherapy, offering more precise, objective, and personalized rehabilitation solutions for patients with neurological conditions. By harnessing the power of AI, clinicians can deliver more effective gait correction strategies, track progress in real time, and improve long-term outcomes for patients. As AI technology continues to advance, its role in neurophysiotherapy will only grow, providing new possibilities for enhancing mobility and quality of life for individuals affected by neurological impairments.

"Yoga isn't about doing more – it's
about being more"



PROPS AS PATHWAYS: BRIDGING YOGA AND PHYSIOTHERAPY FOR OPTIMAL RECOVERY



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Imagine a healing journey where ancient wisdom meets modern science. By blending Yoga with Physiotherapy, a powerful pathway to recovery unfolds, nurturing both body and soul. While Physiotherapy precisely repairs and strengthens, Yoga cultivates flexibility, balance, and inner peace.

In this holistic synergy, props are indispensable tools. In Yoga, they are trusted companions offering support, stability, and space. From blocks to bolsters, these items gently whisper, "it's okay to meet yourself where you are," making practice wiser, not weaker, and reminding us that flexibility is of the mind, not just muscles. For Physiotherapy, props are precision tools in the science of movement. Resistance bands, foam rollers, and balance balls are carefully chosen aids that guide recovery, retrain muscles, and rebuild confidence. Each serves a purposeful role—to activate, strengthen, or realign—helping patients regain function and return to life's rhythm. Here, props truly act as bridges, connecting injury to independence, step by careful step.

Yoga: Motion into Meaning

Yoga transforms motion into meaning. It's not about how deep you go in a pose, but how deeply you feel—movement with intention, breath with awareness, and healing in every moment. In a fast-paced world, yoga offers a sacred pause, revealing where we hold tension and where real healing begins.

This ancient wisdom is a beautifully layered system, like a lotus with eight unfolding petals: Patanjali's Ashtanga Yoga, a soulful roadmap for a conscious life.

1. Yama (The Roots of character) : Moral guidelines, your inner compass.
2. Niyama (The Rituals of Self- discipline): Personal vows for self-growth.
3. Asanas (Dance of the body) : Physical postures, the body as your temple.
4. Pranayama (The Power of Breath) : Breath, the bridge between body and mind.
5. Pratyahara (The Art of Turning inverse) : Turning inward, the art of deep listening.
6. Dharana (One pointed of Focus) One-pointed focus, calm in the chaos.
7. Dhyana (The Flow State of Meditation) : Effortless awareness, where thoughts pass like clouds.
8. Samadhi (The Bliss of Union) : The bliss of union, pure presence.

These Limbs are not mere steps, but interwoven threads, creating a sacred tapestry. You may enter through movement or breath, silence or service—but the deeper you go, the more you realize: Yoga isn't about doing more – it's about being more.



Understanding Yoga Props

In Yoga, props are more than just tools—they are trusted companions on your journey inward. They gently whisper, "it's okay to meet yourself where you are," allowing every body to find comfort, alignment, and depth in practice. Props in yoga are keys, inviting you to explore your practice with grace and profound support.

The most commonly used yoga props include blankets, yoga blocks, yoga bolsters, and yoga straps.

Blankets are used to provide extra padding. They also function as a height booster. Blankets are used in asanas such as shoulder stand pose and headstand.

Yoga blocks assist particularly in alignment and are used in poses such as supported bridge pose and half pigeon pose. Yoga bolsters help lift the body off the floor and provide a cushion to promote relaxation. They are useful in poses such as elevated legs-up-the-wall pose, reclined hero pose, and supported child's pose.

Yoga straps prevent unwanted movement and provide support for those with tightness in areas such as the shoulders and hamstrings. Yoga straps may be used in poses such as seated forward fold and cow face pose.

These props, popularized by B.K.S. Iyengar, make yoga inclusive. Whether someone is dealing with pain, disability, stiffness, or inexperience, props offer a safe and adaptable entry into yoga practice.

Use of Props in Physiotherapy

In Physiotherapy, props are precision tools in the science of movement. They are like bridges—connecting injury to independence, guiding the body's precise journey back to strength and confidence.

An Extension of Your Being: They expand your body's reach, bringing deeper poses within grasp. Props bridge the gap between effort and ease.

The Wisdom of Alignment: Guides for optimal form, they help you understand your body's true positioning. Props refine postures through intelligent support.

Journeying Deeper into Stillness: They let you linger longer in poses, releasing tension and discovering inner depths. A brief hold transforms into a profound experience. **The Sanctuary of Relaxation:** Architects of inner peace, props create a nurturing environment. They invite surrender, melting stress for deep rejuvenation.

Yoga for Every Heartbeat: Embodying yoga's universal embrace, props make practice accessible for all. They offer modifications, personalizing the journey for every unique body.

Synergy Between the Two Fields

We've explored the profound wisdom of Yoga and the precise science of Physiotherapy. Now, imagine their harmonious dance. Both disciplines, rigorously studied and scientifically validated, offer undeniable pathways to well-being.

While Yoga embodies a mindful flow and Physiotherapy focuses on precise rehabilitation, their methods for nurturing the body often find surprising parallels. A simple stretch might ease post-workout tension, yet for deeper postural issues, combining their strengths provides a holistic solution that ignites profound growth beyond the treatment room.

This integration unleashes a cascade of benefits. Physiologically, Yoga enhances cardiovascular and lung function, alongside strength and flexibility. From a Physiotherapy lens, these mindful postures actively improve respiratory function, uplifting countless bodily systems. Mentally, Yoga's ancient wisdom for inner peace is now embraced by Physiotherapists through "relaxation techniques," guiding patients to cultivate self-efficacy and positive mind states. Together, body and mind heal as one.



Real-World Application

1. Post-Surgical Rehabilitation

Use of **yoga bolsters** and **blocks** helps maintain posture and reduce compensations during recovery.

Physiotherapists may use similar props for early mobilization or postural re-education.

2. Chronic Pain Management

Restorative yoga with props allows deep muscular release and nervous system calming.

Physios may combine this with graded mobility exercises and breathwork, using the same props.

3. Balance and Fall Prevention

Wall support and chair yoga can assist those with poor balance.

Physiotherapists use similar approaches to teach gait training and balance drills.

4. Muscle Tightness and Weakness

Yoga straps provide gentle, sustained stretches without overloading joints.

Bands and straps in physio promote progressive strengthening or flexibility training

Conclusion & Reflections

Props are not shortcuts — they are pathways. They allow us to reach safely toward recovery, especially when our body is not fully ready to move freely.

By combining the scientific structure of physiotherapy and the mindful depth of yoga, and supporting this blend with props, practitioners can offer patients a more complete recovery experience. This synergy is gentle but powerful, making healing more accessible for people across all ages, conditions, and abilities. Whether in the studio, clinic, or at home — the thoughtful use of props ensures healing is not rushed, but respected.

The Comeback Conundrum

"He says he feels fine. The coach needs him in 72 hours. The rehab protocol is almost complete—but your gut says, not yet."

Welcome to the grey zone of sports physiotherapy—where clinical decision-making, ethical dilemmas, and performance pressure intersect. Among the most challenging responsibilities of a sports physiotherapist is deciding when an athlete is truly ready to return to play. This decision carries weight beyond physical readiness—it may define the trajectory of an athlete's career, health, and confidence.

In elite sports, there is always urgency to return. But as physiotherapists, we are often caught between the data we measure and the doubts we feel. This blog dives deep into that grey zone—and how we, as physios, can ethically and effectively navigate it.

What Exactly Is Return-to-Play (RTP)?

Return-to-Play (RTP) is not a single event—it is a graduated, multi-dimensional process involving not just healing, but full functional and psychological recovery. It encompasses returning the athlete not just to participation, but to pre-injury performance levels—safely and sustainably.

RTP decisions are influenced by:

- The athlete's physical readiness
- Their mental preparedness
- Contextual factors such as game schedules, team demands, and stakeholder pressures

Often, a player may pass all clinical tests yet remain unfit for high-level performance. This is where clinical reasoning must be complemented with ethical consideration.

Despite scientific protocols and objective criteria, RTP remains inherently complex. Some commonly used RTP tools include:

Physical Criteria

- Full pain-free range of motion
- Strength \geq 90% of the uninjured limb
- Sport-specific drills (agility, endurance, jumping)

Psychological Readiness

- Athlete's confidence in their ability
- Absence of kinesiophobia (fear of movement)
- Resilience and mental recovery

Objective Tools

- Isokinetic dynamometry
- Surface EMG for muscle recruitment
- Patient-reported outcome measures (PROMs)

Even when all markers suggest readiness, physiotherapists must rely on experience and contextual insight to avoid premature return.

CLEARED OR COMPROMISED? ETHICAL DILEMMAS IN RETURN-TO-PLAY DECISIONS



**Jananee Shree
Sridhar**
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**Dr. Ahamed
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PhD, Mpt Sports

"Fit on paper doesn't always mean fit for play."

Welcome to the Grey Zone: When Ethics Take Over

What happens when:

- A star player is rushed back for a championship final?
- A young athlete insists they're fine—but has incomplete movement control?
- A coach applies pressure to override medical advice?

These scenarios place physiotherapists in ethically vulnerable positions.

Here, we face dilemmas like:

Scenario	Ethical Conflict
<i>Athlete demands early return</i>	<i>Autonomy vs. Safety</i>
<i>Coach pushes for comeback</i>	<i>Team Pressure vs. Clinical Integrity</i>
<i>Reinjury risk remains</i>	<i>Short-Term Goals vs. Long-Term Health</i>

In such scenarios, physiotherapists act as ethical mediators—not just clinical experts. Real Athletes. Real Risks. Real Responsibility.

Kevin Durant – NBA Finals 2019

Returning from a calf injury, Durant suffered an Achilles rupture during a high-stakes game. The incident sparked debates over RTP decisions, medical clearance, and pressure from management. The consequences were not just physical—they were reputational and ethical.

Hamstring Injuries in Indian Premier League (IPL)

Fast-tracked returns from hamstring injuries have led to multiple re-injuries among cricketers. These incidents reflect a lack of neuromuscular readiness and underline the danger of RTP under pressure.

Such high-profile cases illustrate how physiotherapy decisions can influence national narratives, contracts, and careers.

What the Research Says

- Ardern et al. (2016) describe RTP as a biopsychosocial process, not just a clinical checklist.
- FIFA's RTP Medical Consensus (2020) emphasizes shared decision-making among physiotherapists, coaches, athletes, and physicians.
- Cross et al. (IJSP, 2020) highlight that ethical decision-making is often missing from RTP protocols—but critically needed.

Physiotherapists must evolve from passive implementers to active decision influencers.

The Physiotherapist's Compass: 4 Ethical Anchors
As physiotherapists, we are more than just rehab specialists. We are gatekeepers of athlete health and performance longevity.

1. Prioritize Athlete-Centered Care

Always align decisions with the long-term health and values of the athlete—not just their team's goals.

2. Communicate with Clarity

Open dialogue with athletes, coaches, families, and physicians creates trust and transparency.

3. Combine Data with Intuition

Use clinical evidence with professional intuition. Intuition grounded in experience can reveal what tests may miss.

4. Stand for What's Right

Even when pressured, remember—you're the last line of protection for the athlete. Say "not yet" when needed.

"When in doubt, always side with caution—not convenience."

Conclusion: Why the Grey Zone Matters

In the fast-paced world of sports, where every game, tournament, or medal matters—the temptation to accelerate recovery is real. But as healthcare professionals, our duty is not to just prepare athletes for performance—it is to protect them from avoidable risks.

RTP is not simply a clinical green light. It is a holistic, ethical, and collaborative decision.

"A player may win a game—but a physiotherapist can save a career."

As physiotherapists, we must hold the courage to walk the grey zone with integrity, empathy, and science. Because in protecting the athlete, we protect the very ethos of physiotherapy.

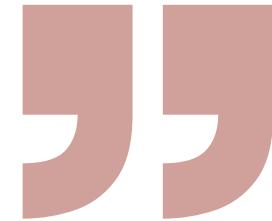
Takeaway Message:

Return-to-play isn't just about metrics—it's about meaning.

Physiotherapists must balance science with ethics, pressure with protection, and performance with personhood.

Clinical courage often lies in delaying a return to preserve a career.

Let your choices reflect your training—but let your conscience lead your practice.



MASSAGE VS MYOFASCIAL RELEASE: A PHYSIOTHERAPIST'S PERSPECTIVE ON HANDS ON HEALING



Dr Rahul Rajeev (PT)

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Introduction

One of the most frequent questions I encounter in clinical practice is:

“Massage and Myofascial Release—they both use the hands, so aren’t they the same?”

At face value, both are manual therapies involving touch, movement, and a goal of healing. However, their principles, techniques, targets, and outcomes are markedly different—even occasionally contradictory.

As a physiotherapist, I’ve come to appreciate both approaches—not just for what they offer, but for how they challenge each other. This article explores their interplay, contrasts, and how they can be used in harmony.

Massage Therapy: The Art of Soothing and Stimulating

Massage therapy involves the rhythmic manipulation of soft tissues—using techniques like stroking, kneading, and tapping to relax muscles, reduce stress, and improve circulation.

“Massage prepares the muscles—it opens the door for deeper work.”

Its primary role is often to relieve muscle tightness, enhance blood flow, and induce relaxation. This makes it particularly effective in treating acute soreness, fatigue, and stress related tension.

Key Applications in Physiotherapy:

- General muscle fatigue
- Stress management
- Warm-up or cooldown in sports therapy
- Improving local blood flow
- Enhancing patient comfort

However, massage has its limitations:

- Effects are often short-lived
- May not address deeper or chronic structural issues
- Focuses more on muscle tissue, less on the surrounding fascia
- May temporarily weaken muscles due to relaxation response
- Recommends rest post-treatment as it downregulates muscular activity - Aims to reduce overall muscle strain, but might limit performance in the short term

Myofascial Release: The Science of Depth and Structure In contrast, Myofascial Release (MFR) targets the fascia—a web of connective tissue enveloping muscles, bones, nerves, and organs. When the fascia tightens due to injury, inflammation, or immobility, it can lead to pain, postural problems, and restricted movement.

MFR involves sustained, low-load pressure applied for minutes at a time, encouraging the tissue to slowly elongate and release. “In chronic cases, the issue is often not in the muscle—it’s in the fascia that holds it.”

Clinical Uses of MFR:

- Chronic pain conditions
- Postural dysfunctions
- Fibromyalgia or myofascial pain syndrome
- Post-surgical scar adhesions
- Movement restrictions

MFR has longer-lasting results and can strengthen muscular integrity by improving fascia dynamics. It:

- Encourages lasting structural change
- Helps release specific trigger points in dysfunctional fascia
- Supports stretching and strengthening routines post-release
- Does not typically require rest post-treatment—instead, it often enables enhanced movement and exercise

Contradictions in Practice and Philosophy Massage and MFR don’t just differ in technique—they reflect opposing therapeutic philosophies:

Aspect | Massage Therapy | Myofascial Release (MFR)

Primary Goal | Relaxation, circulation |

Structural change, functional release |

Target Tissue | Muscle and superficial soft tissue |

Fascia and connective tissue network |

Technique | Rhythmic strokes, kneading, tapping |

Sustained gentle pressure, no movement |

Medium Used | Oils or lotions | Usually dry, no medium |

Effect | Immediate, soothing | Gradual, corrective |

Duration of Benefit | Short-term (hours to days) | Long-term (weeks to months)

Patient Experience | Comfortable and calming | Sometimes uncomfortable but insightful

Scientific Acceptance | Widely studied and accepted | Mixed evidence, ongoing debate

When to Use What: A Blended Clinical Approach

In my practice, I rarely choose one over the other. Instead, I often combine both modalities—a strategic blend based on:

- The patient's pain history
- Tissue texture and tension
- Response to touch
- Desired outcome: relaxation vs. correction

For example, I might begin with gentle massage to calm the nervous system and warm the tissues. Then, once the superficial tension eases, I apply myofascial release to unravel deeper fascial restrictions.

“You can’t change the structure unless you treat the system that holds it together. That’s fascia.” – John F. Barnes, PT

Conclusion: The Harmony in Contradiction Massage and Myofascial Release are not enemies—they are complementary forces in manual therapy. One soothes, the other reconditions. One comforts, the other corrects. The key is understanding when to use which—or both—and why.

“Massage treats the present. MFR reshapes the future. But true healing often requires both.”

If you're experiencing chronic stiffness, pain, or postural issues, consult a trained physiotherapist. Whether your body needs the flow of massage or the depth of fascia work, the right technique is the one that helps you move freely again.

The Academic Foundation of a Physiotherapist
Physiotherapy is not just about hands-on treatment—it is built on a solid academic foundation rooted in science and human movement. A qualified physiotherapist undergoes rigorous training in core subjects such as:

- Anatomy – Understanding the structure of the human body down to the finest detail.
- Physiology – Studying how the body systems function, both in health and disease.
- Massage Therapy – Learning techniques to relieve pain, enhance circulation, and promote healing.
- Biomechanics – Analyzing human movement and mechanical principles of the musculoskeletal system.
- Physics – Applying principles such as force, motion, and energy to understand therapeutic interventions.

These subjects form the scientific backbone of the profession, equipping physiotherapists to assess, diagnose, and treat a wide range of conditions.

In addition to foundational sciences, physiotherapists are extensively trained in various manual therapy techniques such as:

- Manipulation – High-velocity, low-amplitude thrusts used to restore joint function.
- Mobilisation – Gentle, graded movements to improve joint range and decrease pain.
- Visceral Manipulation – A more advanced technique that focuses on the mobility of internal organs and their impact on musculoskeletal health.

These are not random techniques, but methods that require precise anatomical knowledge and clinical reasoning—skills honed through years of formal education and hands-on practice.

In short, physiotherapists are not just trained to treat—they are trained to understand, analyze, and restore function with clinical precision.





AGEING STRONG - MOVEMENT AS THE ULTIMATE MEDICINE

Ageing: A Journey of Adaptation

Many people believe that ageing means weakness or decline. In reality, ageing is a natural process of adaptation. Even in our 70s and beyond, the human body has the capacity to respond to physical activity. With regular movement, we continue to build strength, restore function and renew energy at every stage of life.

Why Movement Matters

Modern science has linked inactivity—often described as “Sedentary Death Syndrome”—to more than 33 chronic illnesses, including heart disease and diabetes. The best prescription is simple: Keep Moving. From daily walks and gentle stretches to structured exercise programs, movement remains the safest and most effective preventive medicine available to us.



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Living Longer vs. Living Better

Adding years to life is not enough; what truly matters is adding life to those years. While lifespan reflects the total years we live, health span reflects the quality of those years—our ability to stay active, independent and engaged. Through physiotherapy and purposeful exercise, we can expand not only how long we live, but also how well we live.

Muscles and Bones: Engines of Longevity

Muscles and bones are not passive tissues—they are living, active organs. The ages between 35 and 45 are particularly important, as they play a pivotal role in your life journey. Strength training during this period offers benefits that last decades. It is just like investment. The encouraging truth is this: it is never too late to begin. Gains in strength, mobility and function can be achieved at any age.

The FACE Framework for Ageing Well

To maintain lifelong vitality, follow the simple FACE method:

- F – Flexibility: Daily stretching to preserve mobility.
- A – Aerobic activity: Walking, swimming or cycling to protect the heart and lungs.
- C – Carrying loads: Safe weight training or resistance exercise to build bone and muscle.
- E – Endurance: Activities such as brisk walking, jogging, or yoga to enhance stamina.

Three 3-G's Essentials for Older Adults

For seniors, three practical strategies improve day-to-day independence and reduce disability risks:

1. Grip strength – vital for everyday tasks like lifting, carrying, or opening bottles.
2. Gluteus strengthening – supports posture, balance and fall prevention.
3. Group exercise – boosts motivation, reduces isolation and improves consistency.

Go Go Go.....

On the occasion of World Physiotherapy Day and with a theme of Healthy Ageing just remember it is not left to chance—it is created by choice. By incorporating movement, strengthening muscles and embracing strategies such as FACE and the 3 G's, anyone can add not only more years to life but also more energy, freedom and joy to those years.

Because ageing is not about decline—it is about finding new strength at every stage of life.

THE ECONOMIC ROLE OF PSYCHO-PHYSIOTHERAPY IN CRIMINAL PSYCHOLOGY

Bridging Minds, Bodies, and Society

In recent years, there has been growing interest in how rehabilitation can serve as an alternative to punishment in the criminal justice system. One innovative approach is the integration of psycho-physiotherapy—a method that combines psychological therapy with physical rehabilitation techniques. While its therapeutic benefits are often highlighted, what deserves equal attention is its economic value. Can psycho-physiotherapy save money for the state and society while helping individuals re-integrate? The answer is a clear yes.

Tools and Techniques for Behavioural Control

To effectively manage and rehabilitate prisoners, a combination of physiotherapy and psychology tools are employed:

Physiotherapy Tools & Techniques

Relaxation Exercises: Progressive muscle relaxation, deep breathing, yoga-based stretches to reduce aggression and stress.

Neuro-motor Rehabilitation: Exercises improving body coordination, which indirectly enhance self-regulation and impulse control.

Biofeedback Therapy: Helps prisoners monitor and control physiological responses like heart rate and muscle tension.

Group Physical Activities: Team-based sports or exercises that build discipline, cooperation, and emotional regulation.

Beyond Costs: The Social Multiplier Effect

The true impact goes beyond immediate savings. When young offenders or addicts receive psycho-physiotherapy, they:

- Learn emotional regulation
- Develop physical and mental discipline
- Gain the capacity to undergo skill-based training

Instead of remaining a burden, they rejoin the workforce as productive, tax-paying citizens. Over time, this reduces dependency on welfare systems and builds a healthier social fabric.

A Comparative Glimpse

Metric	Without Therapy	With Psycho-Physiotherapy
Annual Prison Cost	₹200,000	₹0 (if avoided)
Recidivism Rate	60–70%	< 20%
Rehab Program Cost	₹0	₹20,000 (one-time)
Economic Productivity (5 yrs)	₹0	₹4–5 lakh
Societal Burden	High	Low

This simple comparison shows how rehabilitation isn't just humane—it's economically rational.

Conclusion: From Punishment to Prevention And Cost-Benefit Analysis

Category Traditional Punitive Approach With Psycho-Physiotherapy

Judicial & Policing Costs High due to repeat offenses Reduced through lower recidivism

Healthcare Costs Increased due to prison-related stress & illness Reduced via therapeutic intervention

Productivity Minimal reintegration into workforce Higher reintegration, leading to economic contribution

Social Impact Negative cycles of crime Restored community harmony

The Rehabilitation Economy

When rehabilitated offenders rejoin society as productive individuals, the state saves on direct costs while also gaining through taxation, reduced dependency on welfare, and overall community stability. Psycho-physiotherapy plays a catalytic role here by addressing both neurological and psychosocial dimensions of behaviour.

A Preventive Investment

From an economic perspective, psycho-physiotherapy is not an expenditure but an investment. Every unit of currency spent on rehabilitation through psycho-physiotherapy potentially saves multiple units in reduced crime-related costs and enhanced workforce participation.

Conclusion

The integration of psycho-physiotherapy into criminal psychology is more than a therapeutic innovation—it is an economic strategy. By shifting the focus from punishment to rehabilitation, societies can break the cycle of crime, foster human dignity, and optimize economic efficiency. In essence, investing in psycho-physiotherapy today means building safer, healthier, and more economically stable communities tomorrow.



Dr. Usha Purohit (PT)



Dr. J.B. Bohra

A HOLISTIC APPROACH TO WELLNESS: YOGA AND PHYSIOTHERAPY INTEGRATION



The integration of yoga and physiotherapy represents a viable interdisciplinary strategy to improving rehabilitation outcomes and pain management. Both share foundation principles centered on improving physical function, strength, and mental well being; however, their combined application offers a more holistic pathway to recovery.

A practical interdisciplinary approach to enhancing pain management and rehabilitation results is the combination of yoga and physical therapy. Although the fundamental ideas of each are focused on enhancing mental health, physical function, and strength, their combined use provides a more comprehensive rehabilitation approach.

Physiotherapy traditionally focuses on restoring movement and function through targeted exercises, manual therapy and modalities designed to address specific musculoskeletal impairments. By combining postural alignment, mindful breathing techniques, and meditation exercises that promote increased bodily awareness and psychological resilience, yoga enhances these approaches. This coordination not only accelerates physical healing but also addresses the chronic pain and injury recovery often overlooked in conventional rehabilitation protocols.

The benefits of Incorporating yoga into physiotherapeutic treatment plans go beyond symptom relief; they also help to enhance patient adherence by encouraging active engagement in self-care routines, which increases autonomy over one's health journey.



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The facilitates enhanced rehabilitation outcomes by incorporating yoga techniques that support gradual strength building, balance improvement, and neuromuscular re-education within therapeutic protocols. Moreover, the combined application addresses not only physical impairments but also psychological stressors commonly associated with injury and chronic conditions. The incorporation of mindfulness and controlled breathing exercises from yoga contributes significantly to stress reeducation when integrated into physiotherapeutic regimens, thereby fostering mental resilience alongside physical healing.

The relationship between yoga and physiotherapy has been increasingly recognized in recent years as both practices share a common goal of promoting physical, mental, and emotional well-being. Yoga, an ancient Indian practice, combines physical postures, breathing techniques, and meditation to achieve a state of balance and harmony. Physiotherapy, on the other hand, is a modern medical discipline that focuses on the prevention, diagnosis, and treatment of physical disorders and injuries. The integration of yoga and physiotherapy can lead to a more holistic and effective approach to healthcare, adequately addressing the complex needs of individuals with a wide range of conditions.

Furthermore, significant areas where yoga and physiotherapy converge include the treatment of musculoskeletal problems. Physiotherapists often use exercise and manual therapy to manage conditions such as back pain, arthritis, and sports injuries, while yoga with its emphasis on gentle stretching, strengthening, and mobilization, can be a valuable adjunct to physiotherapy. Numerous yoga poses, including warrior and downward-facing dog poses, can help reduce pain and inflammation while simultaneously increasing strength, flexibility, and balance. Additionally, yoga's focus on breathing and relaxation techniques can help reduce stress and promote relaxation, which can be beneficial for individuals with chronic pain or anxiety.

Brain balance yoga/ Yoganeurology : Another area where yoga and physiotherapy intersect is in the realm of neurological rehabilitation. Physiotherapists often work with individuals who have suffered stroke, spinal cord injury, or other neurological conditions, aiming to restore mobility, balance, and coordination. Yoga can be a useful tool in this, as it can help improve balance, flexibility, and strength while also enhancing cognitive function and overall well-being. Certain yoga postures such as tree pose and eagle pose can help improve balance and proprioception. While others, such as shoulder stands and plow pose can help strengthen the muscles and improve flexibility and strength, while also enhancing cognitive function and overall well-being.

Certain yoga postures.

The relationship between yoga and physiotherapy can also be seen in the area of chronic disease management. Conditions such as diabetes, & chronic obstructive pulmonary disease (COPD) often require a multidisciplinary approach to management. Medication and rehabilitation, yoga can be a valuable component of this approach as it can help to improve & reduce blood pressure. Physiotherapists can work with individuals to develop yoga programs that address their specific need and goals taking into account any physical limitations or health concerns.

In conclusion, the integration of yoga and physiotherapy can have a positive impact on mental health.

The relationship between yoga and physiotherapy emphasizes the necessity of addressing emotional and psychological elements during the healing process.

Yoga emphasizes serenity, breathing, and relaxation techniques, which can help reduce stress, anxiety, and depression, whereas physiotherapy focuses on physical ability and exercise, which can help improve mood and overall sense of well-being.

By integrating the principles and practices of yoga with the expertise of physiotherapy, individuals can experience an effective approach to managing pain, improving mobility, and enhancing overall well-being.





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