

Physio Vivid magazine

2023

Volume 7_Issue 1

2024

PUBLISHED BY
SRI VENKATESHWARAA COLLEGE OF PHYSIOTHERAPY
PUDUCHERRY - 605102

UNLEASHING POTENTIAL

The vital role of physiotherapy
in Paralympic archery

REVOLUTIONIZING PELVIC HEALTH

The Emsella chair

NINTENDO WIITM EXERGAMING

One of the consoles that provide
a gaming style that enables
interaction through motion
sensors for children with Acute
Lymphoblastic Leukemia

CUEVAS MEDEK EXERCISE

A psychomotor rehabilitation
technique for DD child to
improve motor development

vividsvcopt@gmail.com
<https://svcopt.ac.in/>





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Sri Venkateswaraa Faculty
Of Physiotherapy
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Internship



From Chairman's desk



Unveiling the 7th edition of Physio **ViViD** magazine (2023- 2024) from our physiotherapy college brings me great pleasure and gratitude. I am immensely proud of the creativity and dedication that our team has poured into every page of this issue. I want to applaud everyone who has contributed to this publication. Vivid continues to be a beacon of inspiration, showcasing not only the talent among the physiotherapy fraternity but also the diverse perspectives that shape our world.

From insightful research to artistic expression, each contribution embodies the spirit of excellence that defines our institution. I encourage you to explore the diverse perspectives and compelling narratives within these pages. Thank you for your ongoing support and engagement with our group of colleges. I sincerely hope that every attempt is made to improve the present finest services to produce the best results for our institution and student's growth.

Shri. B. Ramachandhiran
Chairman, SVGI

Greetings

It is with immense pleasure and pride that I extend my warmest greetings to each of you as we launch the 7th annual issue of Physio **ViViD** Magazine 2023- 2024. This moment marks the culmination of countless hours of dedication and passion from our team of professionals and contributors.

Vivid Physio Magazine aims to be more than just a publication; it is a platform dedicated to advancing the field of physiotherapy, sharing groundbreaking research, innovative practices, and accomplishments from our physiotherapy family. Our mission is to empower practitioners, researchers, and students alike, fostering a deeper understanding and appreciation for the vital role of physiotherapy in healthcare. My profound appreciation goes out to everyone who had a hand in making this magazine a reality. Your experience and commitment shine through on every page, adding fresh insights and new concepts to the field.

Smt. Radha Ramachandhiran,
Founder Trustee, SVGI



From Founder Trustee's desk

From Managing Director's desk

My heart leaps for joy at the announcement that the ViViD physio magazine schedule for 2023 and 2024 has been finalized. I am happy to greet the magazine crew who showcases their dedication and commitment towards the advancement of physiotherapy community. I am sure that this magazine will be a suitable turning point in the path to fulfil the knowledge aim. Apart from providing a forum for knowledge exchange, this magazine acts as a driver of cooperation among physiotherapists all over. Our mission is to improve people's health and wellness via physiotherapy, and I hope you'll read this edition, connect with the material, and help us achieve it. I want to express my profound appreciation to the editorial board and all the students who put in many hours on this imaginative endeavour.



**Shri. A. R. Rajiv Krishna,
Managing Director, SVGI**

Greetings

I am delighted to greet each of you as SVCOPT proudly presents Vivid Physiotherapy Magazine 2023-24. This year's magazine exemplifies the passion, competence, and inventive spirit that comprise the thriving physiotherapy professionals. Vivid Physiotherapy Magazine continues to be a beacon of information and inspiration in our field, offering cutting-edge research, clinical insights, and personal experiences that highlight physiotherapy's transforming impact on health and wellbeing. I encourage you to look at the various perspectives and new approaches contained in this. This magazine enables you to immerse yourself in its features. May it spark new ideas, deepen understanding, and foster collaboration as we continue to push the boundaries of physiotherapy education.



**Smt. Mousmi R
Executive Director, SVGI**

From Executive Director's desk



from Chief Operating officer's desk

It brings me great joy to hear that the Vivid magazine, published by Sri Venkateshwara College of Physiotherapy, will be launching its seventh edition for the 2023–2024 academic year. Under the principal's leadership, the SVCOPT faculty and students have accomplished much, and I am proud of them.

I promise that this magazine will provide every pupil an opportunity to show off their skills, imagination, and intelligence in a wide range of subjects. The college's accomplishments and significant activities are also reflected in it. It inspires pupil to reach their full potential and fosters their complete growth. The collegiate fraternity has my utmost appreciation for their unwavering dedication to excellence and the publication of the Vivid.

Dr. B. Vidhya
COO, SVGI

Greetings

With immense pleasure, I have witnessed the VIVID 2024 a College magazine of Physiotherapy which will be released during their Graduation Day Ceremony. This Magazine helps the students to enhance their knowledge, imagination and writing skills in a systematic manner there by facilitating their interest in curricular & extracurricular activities. Usually the contents of the magazine will reflect the quality of any Educational Institution.

Considering the above facts, the editorial board of VIVID Magazine meticulously had chosen the articles from valuable contribution given by faculty members & students which adds to the value of the Institution indirectly. This magazine provides a good knowledge on the updated modalities and changing trends in Physiotherapy and there by promoting patient's health care services.

I whole heartedly congratulate the team of VIVID who have worked so hard to bring out this magazine in the most appropriate & attractive manner. I would like to thank the editorial board members for creating this magazine in a good and elegant manner. I wish the whole editorial team for making this magazine which will be very much useful for the student's community as well as all the very best for their future endeavours.

Dr. S. Ratnasamy
Director, SVMCH & RC

from Director's desk



From Medical Superintendent's desk

I am delighted to know that the Sri Venkateshwaraa College of Physiotherapy has decided to release magazine VIVID 2024.

Education is the most powerful weapon which we can use to change the world to excel in all aspects including health care system. I am sure this annual magazine VIVID 2024 will spread the strong and clear knowledge about the importance of physiotherapy in health care delivery.

I take this opportunity to convey my hearty wishes and appreciation to the Principal, Faculty, Staff and Students of Sri Venkateshwaraa College of Physiotherapy.



Dr. M. Loganathan,
Medical Superintendent, SVMCH & RC

Greetings

I am greatly delighted to find the publication of Physio vivid magazine. I sincerely appreciate the entire Vivid Team for their hard work to bring out this magazine. The field of physiotherapy is widening day by day. The importance of physiotherapy is understood by each and every patient because it improves the quality of life. The research by Physiotherapist and the publication of their findings is regularly needed.

I am quite confident that Physiovid by Sri Venkateshwaraa College of Physiotherapy, Ariyur, Pondicherry fulfils this essential need of the updation in this ever growing branch of treatment.

I sincerely congratulate the Principal SVCOPT, Faculty and students for their tireless efforts in bringing out this magazine in a short spell of time.

Dr. R. Venguattaramane
Academic advisor, SVCOPT



From Academic advisor's desk

From Principal's desk



I am delighted to introduce the 7th edition of Vivid Magazine 2024, showcasing the latest advancements in physiotherapy. As Principal of Sri Venkateshwara College of Physiotherapy, I am proud to present this publication, highlighting innovations, achievements, and the impact of physiotherapy on patient care and rehabilitation. Vivid Magazine demonstrates our commitment to excellence in healthcare education and practice.

This edition features diverse articles, research, and personal reflections, showcasing brilliant minds and innovative practices. Our aim is to provide valuable knowledge and inspiration to enhance your practice and improve patient care. I thank the editor, team, faculty, students, and alumni for their dedication and expertise. I encourage you to explore this edition with curiosity and enthusiasm, and may it serve as a source of knowledge, inspiration, and collaboration to advance physiotherapy.

Prof. Anand Babu K,
Principal, SVCOPT

Greetings

I am extremely excited to present the 7th edition of Vivid Physio Magazine 2023–24. As a founding editor from 2016 to 2019, I am filled with pride to witness the evolution of this esteemed publication. Over the years, Vivid Magazine has been a platform for revolutionary insights, innovative research, and inspiring stories within the realm of physiotherapy.

This year's edition continues our tradition of excellence, featuring a curated collection of articles that highlight the dynamic landscape of our profession. I extend my heartfelt gratitude to our esteemed chairman and the overall management for their steadfast support. Additionally, I wish to acknowledge the invaluable contributions of our dedicated student editorial team, whose hard work has been instrumental in bringing this edition to fruition. To all the authors who have contributed their time, knowledge, and passion to this publication, your commitment to advancing the field of physiotherapy is both commendable and inspiring.

With great curiosity and eagerness, I invite you to immerse yourselves in the pages of Physio Vivid Magazine 2024. May it ignite new ideas, inspire collaboration, and push the boundaries of what is possible in our field. Your feedback is invaluable to us, and we eagerly anticipate hearing your thoughts.

Prof. Paulraj Manickavelu,
SVCOPT



From Editor's desk

the team



The Student Editorial Board

EDITING AND DESIGNING TEAM



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P. SANTHIYA



A. AJITH KUMAR



J. SUBAPRADHA



G. SUGANTHI

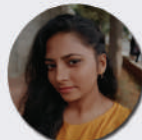
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S. SWETHA

Mastermind behind Title Precision, Content Curation, Design Conceptualization,
Compilation, and Editing

by
Prof. Paulraj Manickavelu



College Toppers

Master of Physiotherapy

Bachelor of Physiotherapy

FIRST

J. Philomina
(2021-22 neuro)



SECOND

J. Dharani D
(2021-22 ortho)



FIRST

Sinthala Saranya
(2018-19 Batch)



SECOND

G.B. Lakshna
(2018-19 Batch)



MPT Second Year
(2022-23 Batch)

MPT First Year
(2023-24 Batch)



Bachelor of Physiotherapy



Fourth Year



Third Year



Intern



Second Year

First Year



Accomplishment 2022-23

Faculty Accolade



Award of Greater contribution
in physio field
@CHETPHYSIOCON



Best Physio Star Award
@ IAPCON, Delhi

Brainy brush up



Workshop
Trigger point therapy



Seminar
@WellnessOne Kerala



Career guidance



workshop on Hand Rehab

MOU with
wellnessone,calicut



our PG as Pandy
Cricket team physio



PRESTEGIOUS MOMENTS

Research Day @ SVGI



POSTER PRESENTATION @ SVGI

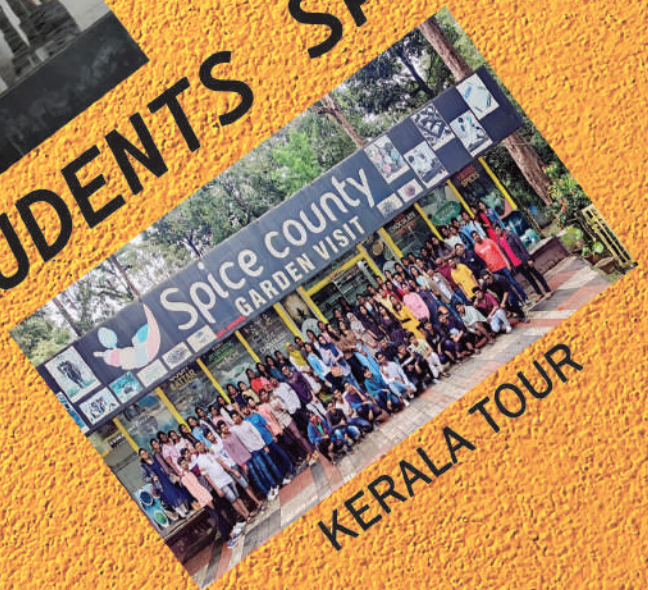


POSTER COMPETITION FOR
VIGILANCE WEEK



STUDENTS SPACE

KERALA TOUR



ACCOMPLISHMENT
2023 | 24

Faculty as Resource person



@SBV, Chennai



@Paavai institute, Salem



@MTPG & RC, Pondy



@SVDC, Pondy



@ AVMC, Pondy



@ Revathi Institute, Tiruppur



@MTPG & RC, Pondy

SYMPOSIUM

srivenkateshwaraa
College of Physiotherapy

On The Occasion Of World Cancer Day,
We SVOPTians Cordially Invite You For
the 22nd Symposium.

TOPIC:
**PHYSIOTHERAPY
IN ONCOLOGY**

Resource Person:
Dr.M.S. Satish,
Chief Physiotherapist,
Adyar Cancer Institute.

DATE: 14th Feb 2024
Time: 2:00 PM
Venue: Mary McMillan Hall



srivenkateshwaraa
College of Physiotherapy

We cordially invite You All For Our
23rd SYMPOSIUM

Chief Patron
Dr. S. S. Srinivasan
President
Dr. S. S. Srinivasan
Guest of Honor
Dr. S. S. Srinivasan
Sponsored By
Dr. S. S. Srinivasan

TOPIC
Role of Physiotherapists in Improving Mobility
Outcomes of Children with Cerebral Palsy

DATE: 22 March 2024
TIME: 10:30 AM
VENUE: Mary McMillan Hall
Dr. Senthil Velkumar,
Associate Professor
CMC, Vellore

23rd Symposium



FLAIR-2023 CONFERENCE



WOMEN'S HEALTH



WORKSHOPS



TAPPING

WOMEN'S DAY CELEB



PG ENTRANCE EXAM



CASE PRESENTATION



SEMINAR

FREE PHYSIO CAMP



@ Nainarmandabam pondy



@ Siruvanthadu Village

INDUCTION DAY



WORLD PHYSIO DAY



Physio Awareness by our Director



Rally

INTERNATIONAL YOGA DAY



WORLD CANCER DAY



CAMPUS DRIVE



APPLAUD



DAYS TO CHERISH



@SADHANA FOREST



@ CHETTINAD



SILENT RALLY



FOOTBALL WINNER



DANCE WINNER @ reJolur 2k24



FESTIVERSE - 2024



STUDENT'S

CORNER



@ CHETTINAD CON



@ EAST COST CON



@ JIPMER CON



@ MANUZEAL CON



@CMC VELLORE



@SBV CON, CHENNAI



@ SBV CON, PONDY

Content

- 17** **FATIGUE IN OBESITY - PT PERSPECTIVE**
- 18** **WILLIS EKBOM DISEASE**
- 19** **ATYPICAL COSTOCHONDRITIS**
- 20** **TECAR THERAPY**
- 21** **C-MILL**
- 22** **THE EMSELLA CHAIR**
- 23** **ROLE OF AI IN CLINICAL PRACTICE**
- 24** **SIM – A PHYSIOTHERAPIST POINT OF VIEW**
- 25** **PT IN PARALYMPIC ARCHERY**
- 26** **POPLITEAL LENGTH IN ERGONOMIC CHAIR DESIGN**
- 27** **LACHMETER**
- 28** **BLAZEPOD**
- 29** **REFLEXOLOGY AND OSTEOPATHY FOR CTS**
- 30** **UNVEILING THE ARTICULARIS GENUS**
- 31** **CARDIAC TELE- REHABILITATION**
- 32** **SOLEUS PUSHUPS FOR DIABETES**
- 33** **BOBO**
- 34** **SPENCER’S TECHNIQUE**
- 35** **FRALITY SYNDROME**
- 36** **KRAU’S EXERCISE FOR TMJ MALOCCLUSION**
- 37** **MYOTON DEVICE**
- 38** **CUEVAS MEDEK EXERCISE FOR DD CHILD**
- 39** **BRAIN GYM EXERCISE**
- 40** **BUNKIE TEST**
- 41** **RHABDOMYOLYSIS**
- 42** **GRASTON TECHNIQUE FOR COXA SALTANS**
- 43** **NINTENDO WIITM EXERGAMING**
- 44** **INNOVATIVE MANAGEMENT FOR SCAPULAR DYSKINESIA**
- 45** **V 2 VOID IBS**
- 46** **ISOKINETIC DEVICE FOR ACL RECONSTRUCTIONS**
- 47** **PRONE CART IN SCI REHABILITATION**
- 48** **SMART ORTHOTICS FOR BLOUNT DISEASE**
- 49** **BIOPSYCHOSOCIAL MODEL OF PAIN IN LBA**
- 51** **HISTORIC WOMEN**



35



49



25



21



41



39

In the complex landscape of obesity, the scenario of carrying substantial fat reserves yet feeling persistently fatigued and lacking energy, particularly during physical exertion, underscores a profound metabolic challenge. Let's delve deeper into why this paradox exists and how it impacts individuals from a physiological and clinical perspective.

Imagine an obese individual weighing 75 kilograms, carrying approximately 20 kilograms of excess fat, which equates to about 20,000 grams. Given that each gram of fat yields 9 kilocalories (kcal), this person is lugging around a substantial energy reserve of 180,000 calories stored in adipose tissue. However, despite having this considerable stored energy, they frequently experience fatigue and a lack of energy, particularly during physical activity. This situation is a common occurrence among individuals grappling with obesity. Despite the abundant energy stores available, their body system struggle to efficiently utilize them due to metabolic dysregulation. Because the system was badly tuned to not use it.

Metabolic Inefficiency: Obesity alters the body's metabolism, leading to insulin resistance and impaired mitochondrial function. These changes make it difficult for cells to efficiently convert stored fat into usable energy, despite the abundance of calories available.

Physiological Implications: Physiotherapy recognizes that addressing obesity-related fatigue requires more than just burning calories through exercise. It involves improving metabolic flexibility—the body's ability to switch between burning carbohydrates and fats for energy. Physiotherapists design interventions that focus on enhancing mitochondrial function through targeted exercise, which gradually improves the body's ability to utilize stored fat.

Exercise Prescription: Physiotherapists prescribe exercise programs that gradually increase in intensity and duration, tailored to the individual's capabilities and metabolic needs. These programs not only aid in weight loss but also improve insulin sensitivity and mitochondrial efficiency, crucial for overcoming fatigue and increasing energy levels.

Physiotherapy Perspective on Metabolic Health Benefits

Unravelling the Mystery of Fatigue in Obesity

Behavioural and Lifestyle Modifications:

Beyond exercise, physiotherapy addresses behavioural factors such as dietary habits and stress management. By promoting healthier eating patterns and teaching stress reduction techniques, physiotherapists support metabolic health improvements that enhance energy utilization.

Clinical Impact and Future Directions:

In clinical practice, physiotherapists are pivotal in breaking the cycle of fatigue and metabolic dysfunction in obese individuals. By addressing the root causes of energy inefficiency, they help patients regain vitality and improve their quality of life. Future research may focus on optimizing exercise protocols and integrating technology to personalize interventions further. By understanding and addressing the complexities of energy metabolism in obesity, physiotherapists offer hope and tangible solutions to enhance the lives of those affected by this challenging condition.

S. Valli Mayil,
BPT- II Year





WILLIS EKBOM DISEASE

'A GOOD LAUGH AND A LONG SLEEP ARE THE BEST CURES IN THE DOCTOR'S BOOK'

WED also known as restless leg syndrome.

URGE

U -urge to move legs

R- restless when you lay down at night

G- it gets better when you get up and walk around

E- it particularly occur in the evening and night

Willis ekbom disease is a condition that disrupts the sleep and affect your daily activities. It occurs in middle aged and older adult. Women are more affected than men.

CAUSES

PRIMARY

idiopathic
genetic causes.

SECONDARY

Imbalance of dopamine
Iron deficiency
Vitamin B12 deficiency
Type 2 diabetesmellitus
Venous insufficiency

SYMPTOMS

A sensation that begins and intensifies during rest, buzzing sensation, Tingling and crawling feeling, burning and pulling similar to an electric shock.

PATHOPHYSIOLOGY

Changes in iron and dopamine activity in the brain, EXCESSIVE DOPAMINE within the substantia nigra and thalamic areas of brain and Substantial nigra and thalamus also demonstrated to have DECREASED IRON.

WAY TO MEASURE THE SEVERITY

INTERNATIONAL RESTLESS LEG SYNDROME SCALE which is used to measure the severity of the wed.

WAY TO GET RID OF WED

Massage to quadriceps, hamstring and calf. Encourage ankle movement, SLR, contrast bath, stretching exercise to quadriceps, hamstring and calf, bridging and strength training.

DEVICES TO TREAT WED

NTX100 TONIC MOTOR ACTIVATION (TOMAC) SYSTEM

In 2023, FDA approved the NTx100 TOMAC System for people with RLS. This device works by applying electrical stimulation to the leg muscles. It relieves the uncomfortable sensations.

RESTIFFIC FOOT WRAPS

It provides a pressure to specific muscles in the feet. The device consists of two foot wraps that surround the foot and exerts gentle pressure on the abductor hallucis and flexor hallucis brevis muscles on the foot. These wraps send signals to the brain to relax the leg muscles, which can reduce the symptoms of RLS.

RELAXIS PAD

There is one pad placed under the legs and vibrates. this vibration stimulates the nerves, which interrupts the signals that cause the symptoms of WED.

PNEUMATIC COMPRESSION DEVICE

Compression socks that fit over the legs , it compress the veins helps to increase blood flow, and reduces the muscle contractions and nerve sensations of RLS.

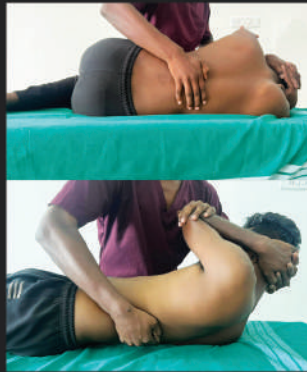


MUTHUKUMARAN .M
MPT- FIRST YEAR (ORTHO)

OMT, a practice rooted in the philosophy that the body has self-healing abilities, involves hands-on techniques to manipulate muscles and joints. In the context of atypical costochondritis, OMT focuses on restoring mobility to the ribs and sternum, easing tension in surrounding muscles, and improving overall chest wall mechanics. This approach not only targets the pain directly but also aims to address any underlying musculoskeletal dysfunctions contributing to the discomfort.



The therapist palpates the patient's ribs while the patient is on the side. Then places the 1st Metacarpo-phalangeal joint of the palpating hand over the rib at the cost-transverse joint and then glides inferiorly to cause posterior rotation of the rib. The patient is subsequently placed in a supine position by the therapist. The therapist applies a high-velocity, low-amplitude force through the patient's arms toward the therapist's hand, which stays on their back, as the patient exhales.



Adding to the efficacy of OMT, Directional Cupping Technique complements the treatment by enhancing blood circulation and reducing inflammation in the affected areas. Cupping involves placing cups on the skin to create suction, which mobilizes blood flow and promotes healing. By placing the cup at the costochondral cartilage, movement along the cartilage to the rib tips. The goal is to mobilize the soft tissues along the course of the costochondral cartilage from the sternum to the rib tips. When applied directionally around the chest area, this technique can help to relieve tightness and pain associated with atypical costochondritis.

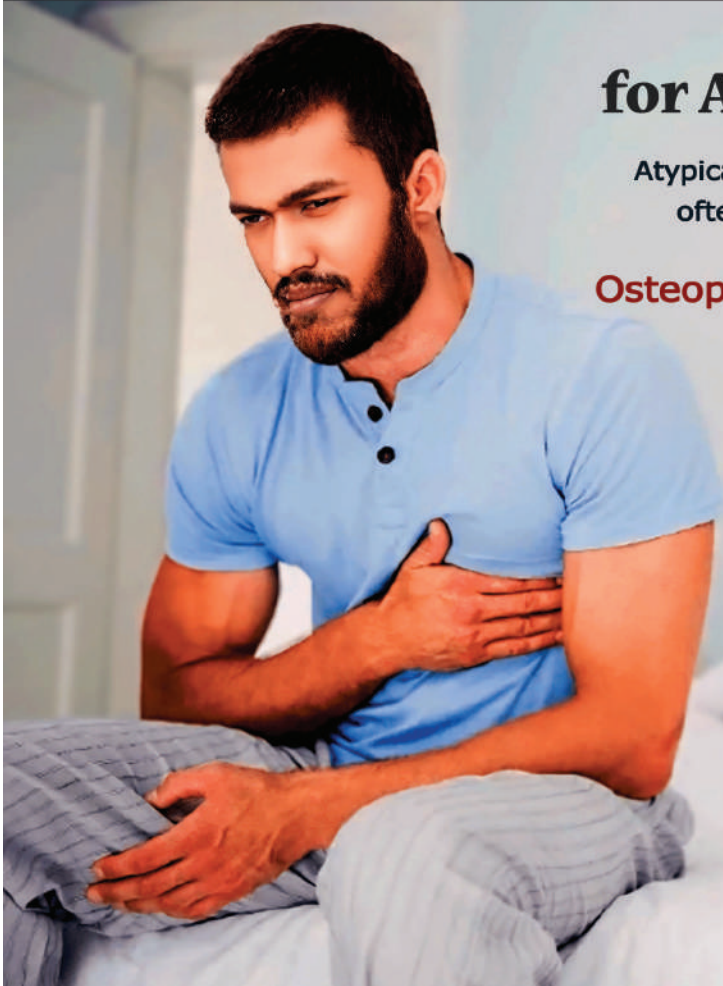
As research continues to explore integrative therapies for musculoskeletal conditions like atypical costochondritis, the combination of OMT and Directional Cupping Technique stands out as a promising option. For those seeking relief beyond conventional methods, this duo offers a gentle yet potent approach to restoring comfort and mobility in everyday life.

Healing Hands & Cupping Cups:

A Promising Duo for Atypical Costochondritis

Atypical costochondritis, a condition causing chest pain often mistaken for heart issues, can be a frustrating challenge. However, a combination of **Osteopathic Manipulation Technique (OMT) and Directional Cupping Technique** is showing promising results in alleviating symptoms and restoring comfort to sufferers.

What makes this combination particularly effective is its holistic approach to treating the condition. OMT addresses the structural aspects, such as rib misalignments or restricted motion, while cupping enhances the physiological healing processes. Together, they provide a comprehensive treatment plan that not only targets the symptoms but also supports the body's natural ability to heal.



TECAR

EVERYTHING YOU NEED

THERAPY

TO KNOW ABOUT

Tecar therapy is a recent breakthrough in the realm of pain management and rehabilitation. It is a non-invasive procedure, utilizes high frequency currents within the range of 300KHz to 1MHz to generate heat within tissues, hence facilitating natural healing processes. TECAR stands for Transfer of Energy Capacitive and Resistive. Suited in sports rehabilitation is widely used in lesions that affect the elbow, shoulder, back, knee, but also in chronic diseases such as osteoarthritis and Cervical.

WORKING OF TECAR THERAPY:

On applying TECAR therapy, heat will generate inside our body by stimulates the ionic charges naturally present in our body which activate the blood circulation that accelerate the natural regeneration mechanisms of the tissues and muscles, having the effects of healing and produces mechanical effects (better management of blood flow), chemical-biological effects (accelerating the metabolism of damaged cells) and thermal effects (heat production).

WAYS TO DELIVERED TECAR THERAPY:

TECAR can be delivered in two ways: capacitive mode is used to treat superficial layers such as skin, subcutaneous tissue, fat. Resistive mode is used to treat deeper tissues such as muscles, tendon, ligaments.



20 | VIVID 23-24



YUVANISHA .K
BPT 4TH YEAR

APPLICATION OF TECAR THERAPY:

Therapists should select the appropriate mode based on the condition and treatment goals. The therapist positioned the hand-held device (capacitive and resistive) and return plate (inactive electrode) and applied conductive cream on the hand-held device. Therapeutic heat penetrates deep into tissue and experiences a warm feeling induces vasodilatation. By using bipolar electrodes without the use of return plate, patients can perform specific dynamic actions under therapist's instructions, thus it will increase the effectiveness of treatment. The session lasts ranging from 20-25 minutes depends on the condition.

BENEFITS OF TECAR THERAPY:

TECAR can help to increase blood circulation in affected areas, promotes lymphatic drainage and tissue regeneration which helps to alleviate pain, reduce inflammation and promotes healing. It improves range of motion by reducing stiffness. It can also help to reduce the appearance of cellulite, wrinkles and face lines by promoting collagen production.

TECAR is recommended for all acute and chronic pain, sprain, strain, edema, ACL, MCL injuries, Post-operative rehabilitation, tendinitis, synovitis, plantar fasciitis, osteoarthritis.



In the evolving landscape of healthcare, physiotherapy is embracing cutting-edge technologies to redefine rehabilitation practices. Among these advancements, the C-Mill treadmill stands out for its ability to aid patients with gait and balance disorders by replicating real-life scenarios in a controlled environment.

A Breakthrough in Gait Adaptability Training

Central to its capabilities, the C-Mill excels in training gait adaptability—a crucial aspect of rehabilitation for individuals recovering from neurological conditions, orthopedic injuries, and other mobility impairments. Unlike traditional treadmills, the C-Mill introduces dynamic challenges that mimic everyday obstacles and terrain variations. This immersive approach not only promotes the relearning of motor skills but also enhances neuromuscular coordination and balance. The treadmill's ability to simulate diverse walking environments, from uneven surfaces to unexpected obstacles, provides patients with a safe yet realistic setting to practice and improve their gait adaptability. Therapists can adjust parameters such as speed, incline, and obstacle placement to tailor exercises to each patient's specific needs and progression.

Precision in Balance Assessment and Training

Beyond gait adaptability, the C-Mill offers sophisticated tools for balance assessment and training. Equipped with advanced sensors and real-time feedback mechanisms, it enables precise measurement of a patient's balance capabilities under various conditions. Therapists can monitor key metrics such as sway, weight distribution, and postural stability, gaining valuable insights into the patient's progress and areas needing improvement. The treadmill's integrated biofeedback system provides immediate cues to patients, encouraging them to adjust their posture and movements in real-time. This interactive feedback loop not only enhances engagement during sessions but also accelerates the learning process by reinforcing correct balance strategies.

Validated Efficacy

Clinical studies validate the C-Mill's efficacy with 95% confidence intervals, affirming its reliability in assessing functional mobility and effectiveness in physiotherapy.

Future Directions

Future advancements may integrate VR and AR to expand the C-Mill's functionality, offering immersive rehabilitation experiences. AI-driven analytics could personalize treatment plans based on real-time data, optimizing outcomes and patient engagement.



AJITHKUMAR A, MPT First Year (Neuro)

The C-Mill represents a transformative tool in physiotherapy, leveraging immersive technology to redefine gait adaptability and balance rehabilitation. By simulating real-world challenges, it empowers patients to regain mobility and independence. As physiotherapists adopt such innovations, they enhance rehabilitation outcomes and set new standards in patient-centered care.



REVOLUTIONIZING PELVIC HEALTH THE Emsella CHAIR

Discover the innovative Emsella Pelvic Floor Treatment—a breakthrough non-surgical procedure harnessing electromagnetic energy to strengthen and tone pelvic floor muscles. This innovative therapy utilizes High-Intensity Focused Electromagnetic (HIFEM) energy to strengthen and tone pelvic floor muscles, offering relief from conditions like stress incontinence, urge incontinence, and mixed incontinence for both men and women.

Emsella operates effortlessly: patients comfortably sit fully clothed on the specialized chair as it emits electromagnetic pulses. During a single session, up to 11,200 contractions occur, equivalent to approximately 11,000 manual pelvic floor exercises. This technology eliminates the need for patient effort, effectively enhancing muscle tone and function.

The benefits of Emsella extend beyond convenience. It's non-invasive, requires no preparation or recovery time, and ensures complete privacy during treatment. Patients can resume daily activities immediately after each session, experiencing zero downtime.

This treatment isn't limited to urinary concerns—it also addresses male and female sexual health and pelvic prolapse, making it a versatile option for comprehensive pelvic floor care. Results typically last between six to 12 months, providing sustained improvement without the need for ongoing maintenance.

Emsella represents a significant advancement in pelvic health management, offering a comfortable, effective, and discreet solution for those seeking relief from pelvic floor disorders. Whether enhancing bladder control, improving sexual health, or tightening pelvic muscles, Emsella stands as a beacon of hope for those looking to regain confidence and comfort in their daily lives.



S. SASIKUMAR
MPT (NEURO) – II YEAR

Transforming

In recent years, the field of physiotherapy has witnessed a revolutionary transformation through the integration of Artificial Intelligence (AI). Traditionally, physiotherapy relied heavily on manual techniques and expert judgment to diagnose and treat musculoskeletal conditions. However, the advent of AI has introduced a new era of precision and efficiency in clinical practice.

One of the most significant contributions of artificial intelligence to physiotherapy is its ability to evaluate massive volumes of data with remarkable speed and accuracy. AI systems can comb through medical information, radiological scans, and treatment outcomes to detect trends that humans may miss. This feature not only improves diagnosis accuracy but also allows for more individualized treatment regimens that are suited to each patient's specific needs.

Physiotherapy

Moreover, AI-powered technologies such as motion analysis systems and wearable devices are revolutionizing rehabilitation processes. These devices can monitor patients' movements in real-time, providing instant feedback on posture, gait, and exercise performance. By evaluating this data, AI algorithms can detect minor changes in movement patterns, allowing physiotherapists to adapt treatment regimens more quickly and efficiently.

Furthermore, artificial intelligence is playing an important role in patient care and engagement. Artificial intelligence-powered chatbots and virtual assistants can communicate with patients, delivering information about their condition, workout reminders, and answers to common questions. This not only promotes patient compliance, but also the overall patient experience and satisfaction.

The Role of AI in Clinical Practice

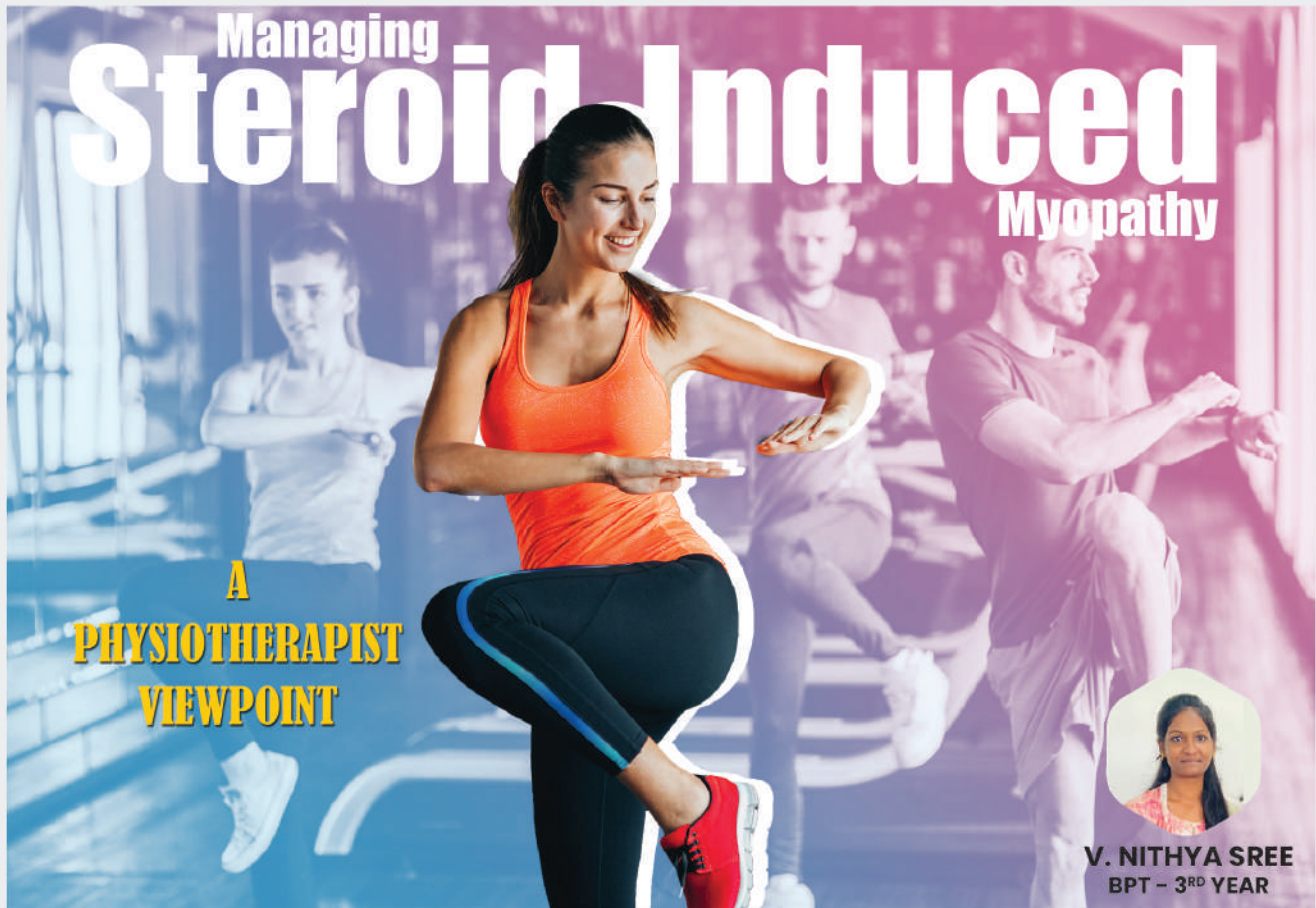
However, as with any transformative technology, AI in physiotherapy comes with its challenges. Issues such as data privacy, regulatory compliance, and the need for ongoing professional education must be addressed to ensure safe and ethical use.



In conclusion, AI is not replacing physiotherapists but rather empowering them with advanced tools and insights. By leveraging AI technologies, physiotherapy is becoming more evidence-based, personalized, and efficient than ever before. As these technologies continue to evolve, the future holds promising prospects for improving patient outcomes and advancing the practice of physiotherapy worldwide.

SUBAPRADHA.J
MPT First Year
(Neuro)





Steroid-induced myopathy (SIM) presents a significant challenge in healthcare, affecting individuals undergoing prolonged corticosteroid therapy. This condition leads to muscle weakness, atrophy, and impaired function, impacting mobility and quality of life. As physiotherapy continues to evolve, advanced techniques are emerging as effective strategies to address the complexities of SIM.

Understanding Steroid-Induced Myopathy:

SIM results from corticosteroid-induced muscle fiber damage, leading to muscle protein breakdown and decreased strength. Patients commonly experience proximal muscle weakness, fatigue, and reduced endurance, complicating daily activities.

Advanced Physiotherapy Techniques:

Neuromuscular Electrical Stimulation (NMES): NMES is a sophisticated technique that involves applying electrical currents to specific muscle groups. This therapy helps maintain muscle mass and strength, particularly beneficial for patients with severe weakness who may not initially tolerate active exercises.

Progressive Resistance Training: This method involves gradually increasing resistance to exercise, promoting muscle hypertrophy and strength gains. Physiotherapists tailor resistance exercises to individual capabilities, focusing on improving muscle function and mobility.

Functional Mobility Exercises: Targeted exercises aim to enhance functional capacity and restore mobility. Therapists incorporate activities that simulate daily tasks, improving muscle coordination and endurance essential for independent living.

Manual Therapy: Hands-on techniques such as soft tissue mobilization and joint mobilizations help reduce muscle stiffness, improve range of motion, and alleviate pain associated with SIM.

Clinical Application and Effectiveness:

Physiotherapy interventions for SIM are evidence-based and tailored to individual patient needs. By combining these advanced techniques with personalized care plans, physiotherapists optimize recovery outcomes and enhance overall quality of life for patients.

Future Directions:

Ongoing research explores innovative approaches including regenerative therapies and integrative rehabilitation strategies to further advance SIM management. These developments aim to improve treatment efficacy and patient outcomes in managing this challenging condition.

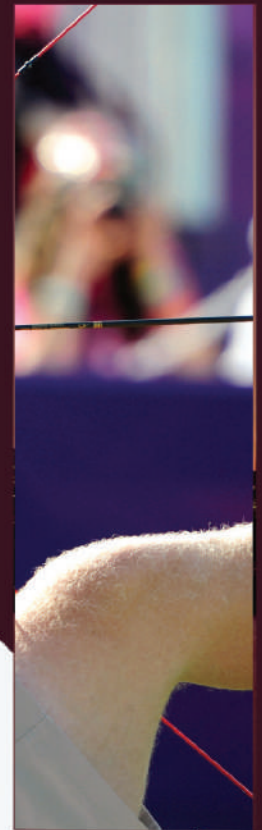
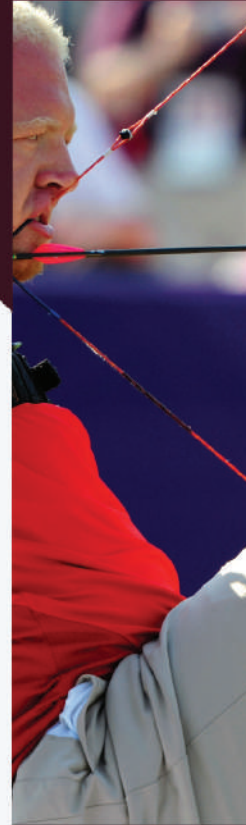
Conclusion:

Advanced physiotherapy techniques represent a cornerstone in the comprehensive management of steroid-induced myopathy. By integrating cutting-edge therapies and personalized rehabilitation programs, physiotherapists play a crucial role in improving muscle function, mobility, and overall well-being for individuals affected by SIM. Embracing these advancements underscores the evolving landscape of physiotherapy in enhancing recovery and optimizing long-term outcomes in patients with steroid-induced myopathy.

UNLEASHING POTENTIAL

Physiotherapy plays a pivotal role in the Paralympics, offering specialized care that enhances the performance and well-being of athletes with physical disabilities. In disciplines like archery, where upper body injuries are prevalent, physiotherapists provide essential support through tailored treatments.

Physiotherapists in the Paralympics are integral members of the multidisciplinary team dedicated to optimizing athletes' physical function and performance. They assess biomechanics, design personalized exercise regimens, and employ techniques such as manual therapy and modalities like ultrasound and extracorporeal shock wave therapy to prevent injuries and promote recovery. In the event of injuries, immediate and ongoing care is provided to manage pain and facilitate healing, ensuring athletes can return to peak condition swiftly and safely. Rehabilitation programs are meticulously crafted to restore optimal movement and strength post-injury or surgery, closely monitoring progress to adapt treatments as needed.



THE VITAL ROLE OF PHYSIOTHERAPY IN PARALYMPIC ARCHERY

In sports like archery, where repetitive motion poses risks, physiotherapists address common conditions such as rotator cuff injuries and tendonitis through targeted exercises and therapeutic interventions. They also focus on biomechanical analysis to refine shooting techniques, optimizing accuracy and reducing strain on the upper body.

Beyond physical care, physiotherapists offer crucial psychological support, aiding athletes in managing the mental demands of training and competition. Their holistic approach not only enhances athletic performance but also ensures athletes' overall well-being on the global stage of the Paralympic Games.

In summary, physiotherapy in the Paralympics, particularly in archery, plays a multifaceted role in preventing injuries, facilitating recovery, optimizing performance, and supporting athletes' mental health, contributing significantly to their success and competitiveness.



M. VAISHNAVI @ DEVASENA
BPT – 2ND YEAR

THE SIGNIFICANCE OF POPLITEAL LENGTH IN ERGONOMIC CHAIR DESIGN

In the modern era of prolonged sitting, designing ergonomic chairs isn't just about comfort—it's about safeguarding long-term health. Physiotherapists emphasize several key factors crucial to crafting chairs that prioritize both comfort and well-being.

When it comes to designing ergonomic chairs that truly prioritize user comfort and health, considering the popliteal length—the distance from the back of the knee to the heel—plays a crucial role. Physiotherapists emphasize several reasons why popliteal length is important in this process.

1. **Optimal Seat Depth:** The length of the seat pan should accommodate the user's popliteal length. A seat that is too short may not provide enough support for the thighs, leading to pressure points and reduced circulation. Conversely, a seat that is too long can cause pressure behind the knees, leading to discomfort and potential circulation issues. By matching the seat depth to the popliteal length, chairs can provide adequate support while allowing the user to maintain proper posture.
2. **Prevention of Musculoskeletal Issues:** Incorrect seat depth can contribute to musculoskeletal disorders such as lower back pain and knee discomfort. Physiotherapists stress the importance of maintaining a neutral posture with feet flat on the floor or supported by a footrest. Properly fitting seat depth helps to achieve this, reducing the strain on the lower back and lower limbs during prolonged sitting.
3. **Customization and Adjustability:** Ergonomic chairs should ideally offer adjustable seat depth to accommodate different body types and preferences. This feature allows users to tailor the chair to their specific popliteal length, ensuring optimal comfort and support throughout the workday.
4. **Enhanced Comfort and Productivity:** Chairs designed with proper consideration of popliteal length promote comfort, which in turn enhances productivity. Users are less likely to experience discomfort or distractions, allowing them to focus more effectively on their tasks.

In conclusion, understanding and integrating popliteal length into ergonomic chair design is essential for creating chairs that not only support physical health but also enhance overall well-being and productivity in the workplace. By prioritizing this aspect, manufacturers can contribute significantly to the comfort and satisfaction of users, ultimately leading to healthier and more productive work environments.

INSIGHTS FROM PHYSIOTHERAPISTS

SUGANTHI .G
MPT 1ST YEAR(NEURO)



LACHMETER-THE DIGITAL ROLIMETER

Accuracy of observation is the equivalent of accuracy of thinking.

Get to know the most remarkable way to measure the lachman test to be more objective in assessing ACL injuries. The ACL can be injured or torn in a few different ways. The most common mechanism is that of a sudden pivoting or cutting maneuver during sporting activity. An ACL tear can be diagnosed by a physician through a history and physical examination.

The lachmeter is very much useful for pre and post operative cases and research. Decisive in cases where there is doubt between partial or total lesions of the Anterior Cruciate Ligament. No heavy or complex equipment is needed, the lachmeter is light weight, accurate, in expensive, easy to carry and handle. This new arthrometer is made of stainless steel and uses high precision digital measurement. It comes with a cushion which facilitates its use, it doesn't need to be calibrated.

In ACL patients, intra-tester reliability was moderate to excellent (ICC range: 0.53-0.94, SEM range: 0.14-0.88 mm, and SDC range: 0.38-2.44mm), with the exception of one measurement (ICC: 0.26 95% CI [-3.43; 0.89]), whereas inter-tester reliability was overall good (ICC range: 0.61-0.89, SEM range: 0.29-0.71 mm, and SDC range: 0.79-1.97 mm) and therefore good validity.

To perform the Lachman test, follow these steps: Position the cushion behind your thigh and place the device on your knee, ensuring your hamstrings are relaxed. Support the device on your leg and reset it. Slowly pull your leg up to its maximum limit, just like you would in a regular Lachman test. Record the value. Repeat steps 1-3 times on the same knee. Compare the results with those from the other knee."

P. SANTHIYA
MPT – 1ST YEAR
(Ortho)

The lachmeter make it easier and faster for personal to read the test. Reliability estimates were generally higher with the device versus the anterior drawer grip.



BLAZEPOD

A FLASH REFLEX TRAINING SYSTEM

BlazePod Training is an advanced technology that uses visual stimuli and real-time feedback to improve responsiveness, cognitive skills, and physical performance. The system comprises of many wireless, interactive pods with LED lights that may be readily installed on various surfaces using special holders, straps, or suction cups. It was founded by "Yaniv Shneiderman" in 2015.

BlazePod activates your body's natural sensitivity to sensory stimuli, allowing for superior, rapid, and coordinated movement. Tap-sensitive Pods with the BlazePod app deliver visual clues, resulting in the ultimate Flash Reflex training system. The BlazePod consists of wireless LED sensors that may be handled via a tablet, PC, or smartphone app. The user is responsible for deactivating an optical signal that lights up a sensor by touch or proximity.

The LED pods emit various colors and patterns, acting as visual cues for athletes and patients to respond fast. The device's software provides real-time feedback, allowing users to judge outcomes with precision of 0.001 seconds. These pods are exceedingly tough; you can bash and kick them really hard; they are shatterproof. They are also weatherproof, so they can be used indoors or out, rain or shine. The pods themselves feature eight bright LED colours. It charges up to 6 Pods at the same time, with a charge that lasts for eight hours.

BLAZEPOD HAS SHOWN TO BE HELPFUL FOR INDIVIDUALS WITH A WIDE RANGE OF DISABILITIES, INCLUDING BUT NOT LIMITED TO:

AUTISM SPECTRUM DISORDER (ASD)

Individuals with ASD can benefit from blazePod by improving their motor skills, hand-eye coordination, and response time.

ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD)

BlazePod can assist ADHD patients enhance their focus and attention while also developing better impulse control.

CEREBRAL PALSY (CP)

BlazePod can help people with CP with their balance, coordination, and motor abilities.

DOWN SYNDROME

Individuals with Down Syndrome can utilize BlazePod to enhance their hand-eye coordination, response time, and spatial awareness.

INTELLECTUAL DISABILITY

It can enhance cognitive functions like memory, attention, and problem-solving in those with intellectual disability.

VISUAL IMPAIRMENT

BlazePod can be used to improve auditory processing and spatial awareness in individuals with visual impairments.

Conclusion:

BlazePod is a smart reaction training platform. Whether you're a pro or a beginner, healthy or recovering, young or old, BlazePod unequivocally improves your reaction time & agility in sports performance, fitness, and therapy in the most engaging and exciting way.

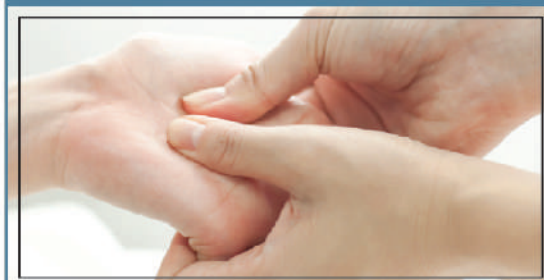


M. SHEERIN HARSHINI
BPT ALUMNI, (2018-19TH BATCH)



REFLEXOLOGY AND OSTEOPATHY

EMERGING TRENDS IN MANUAL THERAPY
FOR DENTAL PROFESSIONALS



Carpal tunnel syndrome, the most common medical condition, occurs when the median nerve is squeezed or compressed as it travels through the wrist. It is characterized by pain in the hand, numbness, and tingling in the distribution of the median nerve, resulting in a reduction in grip strength and hand function. Biomechanics of dental procedures Stage II Carpal Tunnel Syndrome was present. Repetitive wrist movement to catch the device aggressively with ulnar deviation (during exfoliation and canal cleaning) can compress the median nerve. Both dentists and dental hygienists have been linked to a high prevalence of upper extremity musculoskeletal problems, including Carpal Tunnel Syndrome. It occurs 10 times more frequently in women than in men. It is ranked sixth among known occupational illnesses.

Management: For Osteopathy:

The patient is resting in supine with their forearms pronated. The therapist should sit on the side that is affected. The physical therapist places their thumb pads on the proximal carpal row of the affected hand while their fingertips are in contact with the thenar and hypothenar eminences. The physician then moves the wrist fully flexion and extension, incorporating radial and ulnar gliding. A crucial part of the treatment involves the physician fully extending the patient's wrist while simultaneously applying lateral traction to the thenar and hypothenar eminences and distraction pressure to gently separate the carpal bones.

For Reflexology:

The patient is seated, laying their affected side on a table. The therapist should sit on the patient's affected side. The therapist will roll his thumb over the entire affected hand and anywhere there is pain. The first one has a depression in the center of the inner wrist crease. You must knead at that point. Moreover, there is a central indentation on the opposite side, once again on the outer wrist crease. Breathe deeply and hold these places for a maximum of one minute. Three finger widths below the first set of points is the second set. Three finger widths below those spots, and once more on the opposite side. Holding your deep breaths, press the points for around a minute. The last one is located below the thumb on the outer wrist crease. When you open your thumb, it passes between the two tendons. Press this point for up to one minute while focusing on your breathing.

Conclusion:

Manual therapies such as reflexology and osteopathy show promise as effective treatments for dentists with Stage 2 Carpal Tunnel Syndrome. By addressing the root causes through hands-on techniques, these therapies offer a tailored approach that complements existing medical interventions, enhancing overall patient care and quality of life.

Reference:

Modern Reflexology. Everything about Carpal Tunnel Syndrome and Reflexology helps. 2016 Aug 16 How to Treat Carpal Tunnel Syndrome with Reflexology Treatment (modernreflexology.com)

Kelvin, Kunz Barbara. Hand Reflexology. Great Britain: Dorling Kindersley Limited, 80 Strand, London WC2R ORL A Penguin Company. 2006.



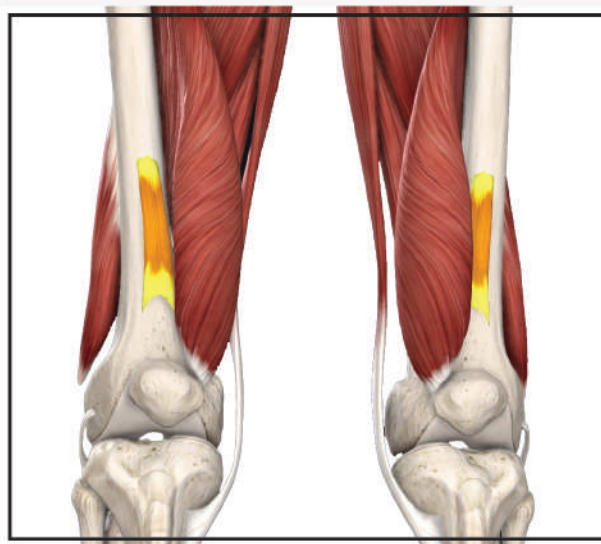
KEERTHANA .R
MPT 1st YEAR (ORTHO)

In the realm of human anatomy, certain muscles often escape the spotlight despite their crucial roles. One such hidden gem within the quadriceps group is the Articularis Genus, a small yet significant muscle that plays a pivotal role in knee joint function. Located within the quadriceps femoris muscle group, the Articularis Genus spans from the distal part of the femur to the knee joint capsule. Its primary function is to assist in stabilizing the patella (kneecap) during movements, particularly when the knee is extended.

Despite its relatively understated presence, this muscle is vital for maintaining knee joint integrity, especially in activities involving repetitive knee extension and flexion. Its precise role in patellar alignment and knee joint mechanics highlights its importance in both everyday movements and athletic endeavors. Moreover, understanding the Articularis Genus contributes to comprehensive rehabilitation strategies for knee injuries, enhancing recovery outcomes by addressing its specific function and interactions within the quadriceps group.

In rehabilitation settings, this understanding has led to refined treatment protocols. Physiotherapists employ targeted exercises and techniques to strengthen the Articularis Genus, improving its supportive function within the quadriceps group. Advanced modalities such as electromyography (EMG) and ultrasound imaging allow for precise monitoring of muscle activation and response during rehabilitation, facilitating tailored interventions for optimal recovery.

Furthermore, integrating knowledge of the Articularis Genus into rehabilitation programs enhances outcomes for patients recovering from knee injuries or surgeries. By addressing this muscle's specific role in knee joint mechanics, physiotherapists can effectively restore function and mobility, promoting long-term joint health and preventing recurrence of injuries.



As physiotherapy continues to evolve, the Articularis Genus stands out as a vital component in understanding and treating knee joint conditions comprehensively. Its hidden secrets unveil new possibilities for enhancing patient care and improving outcomes in orthopedic rehabilitation. Understanding and harnessing the potential of the Articularis Genus underscores the ongoing pursuit of excellence in physiotherapy, enriching our understanding of musculoskeletal function and paving the way for enhanced patient care in the future.



S. RAJAGANAPATHY
BPT – FINAL YEAR

UNVEILING THE ARTICULARIS GENUS

HIDDEN SECRETS OF QUADRICEPS MUSCLES

Cardiac telerehabilitation

CTR being explored as an alternative to traditional center-based CR, allowing patients to receive rehabilitation services at home through wearable technology and remote monitoring. This approach, aim to extend care to patients, improve exercise outcomes, enhance patient safety, and increase access to rehabilitation services.

CARDIAC TELEREHABILITATION FOR CORE COMPONENTS OF CR:

Cardiac telerehabilitation offers a personalized, multidisciplinary approach to cardiac rehabilitation, addressing patient needs and goals through assessment, physical activity counselling, exercise training, diet, risk control, education, and vocational advice. It includes, patient assessment and monitoring, exercise-related core components: PA counselling, exercise training and non-exercise related core components.

PATIENT ASSESSMENT AND MONITORING:

Digital health technologies in cardiac rehabilitation (CR) programmes improve patient assessment and

statistics, psychosocial status, and physical fitness. Wearable sensors, validated questionnaires, and remote communication enable patients' digital readiness, crucial for eligibility evaluation in CR programmes.

EXERCISE-RELATED CORE COMPONENTS: PA COUNSELLING AND EXERCISE TRAINING:

An expert panel has simplified exercise prescription in chronic pain (CR) by identifying five clusters: reducing anxiety, exploring physical limits, optimizing exercise capacity, and maintaining a physically active lifestyle. The best training modality is MICT, with home-based aerobic training recommended after supervised training. Long-term programs may support long-lasting lifestyle changes, but optimal form and duration remain unknown.

NON-EXERCISE RELATED CORE COMPONENTS:

Studies have shown modest improvements in cardiovascular risk profiles in middle-aged and older individuals with cardiovascular risk factors or established disease, particularly in shorter follow-up periods and blended interventions. E-coaching strategies have also shown positive effects on nutrition knowledge and self-management.

Cardiac telerehabilitation (CTR) is a cost-effective alternative to traditional cardiac rehabilitation programs, addressing barriers like geographical accessibility and limited resources. It can extend CR and prevent cardiovascular risk factors but requires standardized interventions.

- SUHARA.S,
MPT 1st YEAR.
(Ortho)

CARDIAC TELE REHABILITATION

- Distance is not an obstacle anymore.

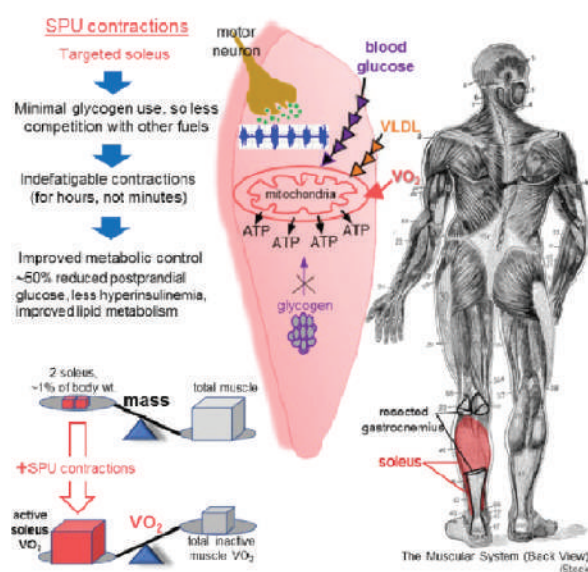
We are dedicated to enhancing the quality of care for anybody living with diabetes, prediabetes, or at risk of acquiring diabetes. Your calf is made up of two major muscles, the soleus and the gastrocnemius, with the soleus being the smaller of the two. Jenna Moore, a certified strength and conditioning coach and Programming Specialist at Tonal, explains that the gastrocnemius, which is composed mainly of fast-twitch muscle fibers, assists in explosive movements such as sprinting, jumping, and plyometrics. In contrast, the soleus consists of fatigue-resistant, slow-twitch muscle fibers that allow you to stand, walk, and run for long periods of time. While standing calf raises target the gastrocnemius, seated calf raises, or soleus pushups, are more effective at isolating the soleus.

PROCEDURE

Soleus pushups are a simple, seated exercise that you can do with no equipment at home, and that might just be the greatest health hack for your diabetes. Sit in a chair with your knees bent and your feet flat on the floor. Push your toes into the ground as you raise your heels. Lower your heels and repeat.

MECHANISM:

Flat muscles within your calf called Soleus to turn into a sugar-burning machine. Soleus muscle could enhance local oxidative metabolism to high levels for hours without fatigue, during a sort of soleus-dominant activity while sitting.



Soleus pushups: A Better exercise with walking for diabetes



Isolated contractions significantly improved systemic VLDL-triglyceride and glucose homeostasis, resulting in a 52% reduction in postprandial glucose excursion (50 mg/dL between 1 and 2 h) and 60% reduction in hyperinsulinemia. Targeting a modest oxidative muscle mass (1% body mass) with local contractile activity is an effective way to improve systemic metabolic regulation and extend the benefits of oxidative metabolism.



Conclusion:

Finally, let's finish off by reflecting on what we've learned. Walking is a good exercise, but on its own, it's not enough for diabetes control. Soleus push-ups are a new exercise, but on its own, it's not enough for diabetes control. Starting a new habit like soleus pushups along with walking is beneficial. And most importantly, your exercise needs are varied and personal.



MALARVIZHI M
ASSISTANT PROFESSOR,
SVCOT



BOBO

SYNC YOUR MOVEMENT WITH THE GAME



INTRODUCTION:

In this technological era of rehabilitation, patients feel bored with traditional rehabilitation exercise. So, patients are motivated with game-based exercises like BOBO devices. An innovative and unique cloud-based product that emphasizes effectual digitizing training and rehabilitation. It is the product of a smart, integrative and interactive training platform which makes the workout more challenging, engaging, fun, motivating the patients to stick with their training program. It helps to speed up recovery and outcome of the patient via interactive training and gamified experience. Physiology behind BOBO is the INTERACTIVE COGNITIVE - MOTOR TRAINING (ICMT).

TYPES

1. Bobo balance board.
2. Bobo dices.
3. Bobo motion.



CHITRA .B
MPT 2ND YEAR (NEURO)



MOHAMED THOUFEEQ .N
MPT 2ND YEAR (ORTHO)

PROCEDURE:

Turn on the bobo motion device and get connected with your device screen. Place the bobo device at required region and strap it. Select the mode for the desired moment and select the game that will best motivate the patient. Set the repetitions and speed for the moment. Educate the patient to sync their movements with the game motions. The patient must both achieve certain targets and avoid certain obstacles in the game. Thus, bobo helps a patient to achieve quality of movement and increases proprioception.

USES:

Neurological conditions such as parkinson diseases, stroke, spinal cord injuries, GBS, musculoskeletal conditions and sports injuries.

CONTRAINDICATIONS:

General physiotherapy contraindications, poor cognitive level, psychiatric illness, poor cardiopulmonary endurance, recent injury.

ADVANTAGES:

It Improves the balance, coordination and strength, increase the flexibility and stability it also reduces the kinesiphobia.

DISADVANTAGES:

It Cost high, requires a calm environment and big screen for better understanding and also a delicate device.

CONCLUSION:

Hence, we conclude that BOBO devices will be helpful in bringing up their recovery by giving more involvement in rehabilitation exercises.

Spencer's technique

MOVE IT
OR
LOSE IT

Spencer's technique is a mobilization technique that consists of seven-step techniques that are used to relieve the stiffness and improve joint mobility. It was developed by Spencer D.O

The seven steps are as follows:

1. Shoulder extension
2. Shoulder flexion
3. Circumduction with compression
4. Circumduction with distraction.
5. Shoulder abduction and adduction with external rotation
6. Shoulder internal rotation
7. Lymphatic pump

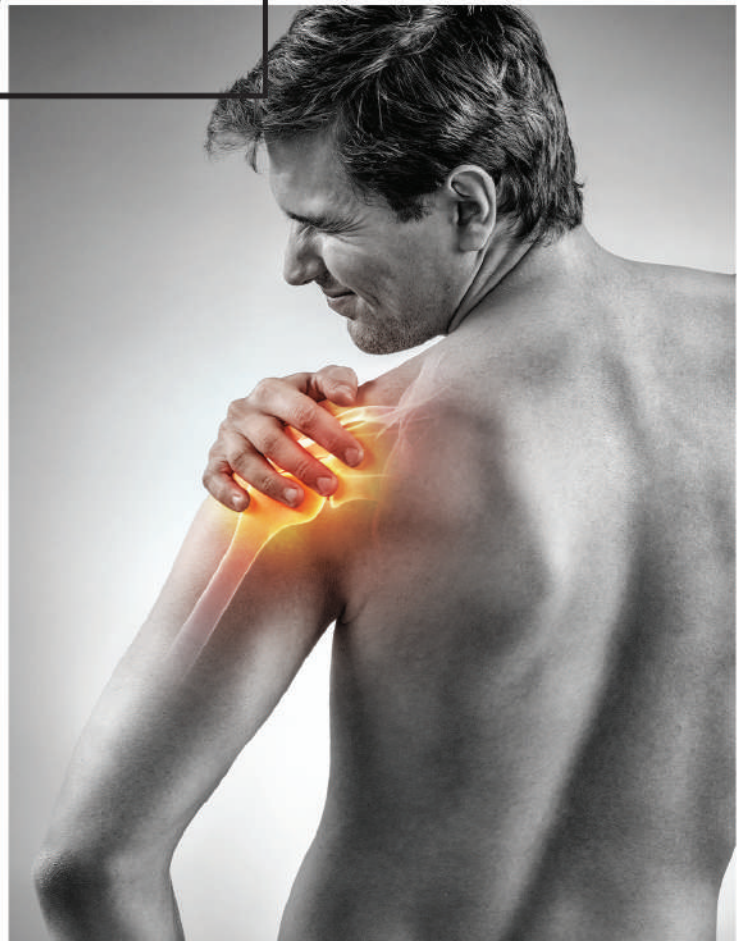
BIOMECHANICS BEHIND SPENCER'S TECHNIQUE

The Passive, repetitive translation movements, traction, or gliding, increase the nutrition of the joint structure, including the capsule, glenoid labrum, articular surfaces, circulation, and lubrication. Arthokinematic glide and roll motion are regained, and the pathomechanical alterations in the joint are repaired. Increased accessory movement, such as gliding, promotes the recovery of shoulder mobility by allowing the osteokinematic glenohumeral rotation to return to normal biomechanics.

BENEFITS

Spencer's techniques offer several benefits, including:

1. Improved joint mobility: Enhanced range of motion and flexibility.
2. Pain relief: Reduced discomfort and stiffness in joints.
3. Injury rehabilitation: Aids in recovery from joint injuries and surgeries.
4. Arthritis management: Helps manage symptoms of osteoarthritis, rheumatoid arthritis, and other forms of arthritis.
5. Improved muscle strength: Increases strength and control around joints.
6. Enhanced function: Improves ability to perform daily activities and maintain independence.
7. Reduced stiffness: Decreases morning stiffness and joint rigidity.
8. Improved circulation: Enhances blood flow and circulation around joints.
9. Relaxation: Helps reduce stress and promote relaxation.
10. Long-term benefits: Can lead to long-term improvements in joint health and function.



Conclusion

This technique has a significant effect on improving the range of motion of the shoulder, reducing pain and further reducing the functional disability associated with frozen shoulder, and it can be beneficial not only for immediate effect, but also for a longer period of time.



RUBAN RAJ .C
MPT 1ST YEAR (NEURO)



Do not be Afraid of **FRAILTY SYNDROME** GET READY TO TAKE THE LEAD

Frailty is a clinically identifiable state of increased susceptibility caused by aging-associated reduction in reserve and function across various physiologic systems, compromising the ability to cope with daily or acute stressors. Frailty and cardiovascular disease are linked by the same physiologic factors.

Global frailty rates were 8.5% for women and 4.1% for men. In India, 26.5% of seniors were feeble. Based on severity, FS has three stages. Even if an early intervention works, the body's diminished skills are initially seen in the early period (pre-frail). Next comes the middle phase (frailty), which shows a fall in independence and well-being. The third stage, frailty complications, occurs when a person's capacity to accomplish everyday duties is substantially reduced and their conduct may raise the danger of death. Losing weight, feeling weak, and being weary are frailty symptoms, whereas shortness of breath, chest pain, coughing, and an irregular heartbeat are heart symptoms.

Tool to assess the frailty syndrome:

Essential Frailty Toolset (EFT). The EFT rates individuals from 0 (least weak) to 5 (most weak) based on four criteria: anemia before the procedure, low levels of albumin, weakness in the muscles of the lower body, which is indicated by taking more than 15 seconds to perform 5 sit-to-stand exercises, and cognitive decline, measured by a score below 24 on the Mini-Mental State Examination (which is highly improbable if the individual can accurately remember 3 out of 3 words after being distracted, potentially eliminating the necessity for additional testing).

Exercise intervention:

The individual should be given 1-3 minutes for recovery periods between sets, incorporating both slow and fast-paced exercises. The major muscle groups should be focused through exercises that involve multiple joints (like squats and bench presses) and key single-joint exercises (such as triceps extensions, knee extensions, and hip abductions). The intensity of your cardio workouts should match your heart rate or your level of effort, and you might begin with 5-10-minute intervals and work your way up to 15-30 minutes. Activities that challenge balance include reducing the base of support, disrupting the stability of the ground, diminishing the sense of body position, reducing visual cues, shifting the body's center of mass from vertical to stationary, and performing tasks that require multitasking (such as adding a mental challenge or a second physical activity while focusing on balance). Get ready to take the lead.

"Old age is not a disease- it is strength & survivorship, triumph over all kinds of vicissitudes & disappointments, trials & illnesses."

- Maggie Kuhn

GOKUL .R
MPT 1ST YEAR (NEURO)



TMJ Therapy Triumph

Kraus' Exercises for Mandibular Distal
Malocclusion



Imagine enjoying a meal or speaking without the discomfort of jaw malalignment. It's a common challenge known as malocclusion – a malalignment between upper and lower teeth. This condition, affecting many due to genetic factors (63%), early artificial feeding habits (34%), thumb sucking or pacifier use (40%), and other causes like premature milk molar removal (28%) and health issues such as nasal breathing problems and rickets (24%).

Diagnosis involves X-ray examinations and detailed measurements of jaw and tooth alignment using static cephalometric techniques. Soft tissue assessment includes photo anthropometric methods to measure range of motion.

PHYSIOTHERAPY MANAGEMENT:

Kraus' TMJ exercises are a set of exercises designed to help alleviate temporomandibular Joint (TMJ) pain and discomfort. It was developed by physical therapist Steve Kraus, these exercises focus on relaxing the muscles responsible for chewing and improving tongue placement. The exercises include:

1. Tongue position at rest: Place the tip of your tongue on the palate, just behind your front teeth.
2. Teeth apart: Keep your upper and lower teeth slightly apart to relax your jaw.
3. Nasal-diaphragmatic breathing: Breathe through your nose to help position your teeth and tongue correctly.



M. NISMA PARVEEN
BPT – FINAL YEAR

4. Tongue up and wiggle: Place your tongue on the palate, then move your jaw from side to side.
5. Strengthening: Place a stack of tongue depressors between your upper and lower teeth, and hold for up to five minutes.
6. Tooth and bite: Place your index finger on an upper canine tooth, and try to bite your finger. Repeat five to 10 times.

Remember to perform these exercises gently and within your comfort range. If you experience pain or discomfort, stop immediately and consult a healthcare professional.

CONCLUSION:

A collaborative effort between physiotherapists and orthodontists can significantly enhance treatment outcomes. By incorporating Kraus' TMJ exercises into regular oral care routines, individuals can potentially alleviate discomfort and improve overall jaw function, leading to better quality of life.



Myoton Device

A PORTABLE OBJECTIVE DIAGNOSTIC ASSESSMENT OF MUSCLE HEALTH

Palpation is a traditional and essential way for assessing muscle health. It is particularly important for diagnosing anomalies in soft tissues and is a fundamental skill for a Physiotherapist. Myotonometry is an advanced technique that provides a fast and non-invasive method for assessing the viscoelastic properties of muscles. These qualities include compliance, stiffness, tone, elasticity, relaxation time, and creep. The main objective of the Myoton gadget is to detect initial indications of rigidity to aid in the prevention of muscular injuries associated with sporting activities. Additionally, it can be utilized for the diagnosis of musculoskeletal and neurological issues, as well as for the frequent monitoring of the outcomes of Physiotherapy interventions.

Application of Equipment:

There are 4 primary steps in the Myometry measurement process, they are as follow. Applying pre-compression to fat tissue beneath the skin: With a metal probe equipped with a linear range of transducers, the Myotonometer assesses the muscle's ability to deform in response to several repeated perpendicular stresses (ranging from 0.25 kg to 2 kg, at intervals of 0.25 kg), applied to the skin during rest or isometric contraction. Applying light mechanical impulse to the muscle. Recording the acceleration signal produced by the muscle response: A built-in accelerometer records the damped natural oscillation response, which is used to compute dynamic stiffness, which is the soft tissue resistance to an external



force. Subsequently calculating the parameters (Tone, elasticity, and stiffness).

Limitations:

- The measures listed below cannot be made with Myoton technology:
- Single muscle
- Thin muscles (<3mm)
- Muscle with small mass (<20g)
- Un-Palpable muscles.
- Deep muscles situated beneath layers of other tissues.
- Muscle covered with subcutaneous fat (>20 mm).
- Tissues not classified as biological soft tissues.

Myotonometry is a reliable and valuable supplemental technique for assessing the viscoelastic properties of muscles during stroke rehabilitation. It is a trustworthy instrument for evaluating the stiffness of the Achilles tendon under different conditions, such as when the tendon is relaxed or under strain. This device could be used as a reference standard in the development of a digital palpation scale that would facilitate accurate diagnosis of mechanical properties of muscles by measuring muscle tone, muscle rigidity (stiffness) and muscle elasticity.

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A. KIRTHIGA

ASSISTANT PROFESSOR, SVCOPT

VIVID 23-24 | 37

FLY High

Cuevas Medek Exercise helps to Improve DD child

Are you seeking a rigorous and efficient physiotherapy program that produces beneficial and practical improvements in the lives of your exceptional child? I would like to share you that ever since I started learning Cuevas Medek Exercise (CME), I have quickly observed the remarkable phenomenon of brain reorganization as a direct outcome of this exercise.

Physiotherapist Ramon Cuevas created the Cuevas Medek Exercises (CME), a psychomotor rehabilitation technique that has been applied to paediatric physiotherapy since 1972. MEDEK stands for "Dynamic Method for Kinesthetic Stimulation." This method attempts to treat children three months of age and older who have motor developmental delay due to a central nervous system problem. The main feature of the approach is to expose the child to antigravity positions, provoking the postural control response.

The mechanism of this technique is to create new neuronal networks in the damaged central nervous system by using scientific parameters related to neuroplasticity (such as repetition, progression, meaningful exercises, and an enriched environment) This approach applies the progressive distal holding principle, in which hand positions progress from proximal to distal. It improves agility, flexibility, balance, and coordination by using antigravity posture, ROM, weight bearing, and stretching factors integrated into functional exercise.

ADVANTAGE OF THIS TECHNIQUE. :

- There is no need of external aids such as walkers or splints. Instead, the child's brain is forced to create an appropriate response.
- Stretching is dynamic, not static. These dynamic stretches embedded in functional exercises are much more effective than the static stretches in Bobath.
- If child has severe spasticity in lower limb into a standing position, this method will force the child to an orthostatic position to develop vertical control of the body.
- A specialized treatment table to be used from head control exercises until the child can hold an assisted standing position and a series of boxes to encourage standing balance reactions.
- It is not important if the patient is motivated, cooperative or concentrated. In addition, the emotional state does not prevent the continuation of therapy.

*"Stop thinking in the term of limitations
Start thinking in the term of possibilities"*



PRIYANKA .N

BPT ALUMINI (2018-19TH BATCH)

BRAIN GYM EXERCISE

A SERIES OF SIMPLE WORKOUTS THAT HELP TO IMPROVE COGNITIVE FUNCTION



G. ARULMOZHI
BPT 2ND YEAR



INTRODUCTION

Brain Gym is a method of learning that focuses on physical activities and muscular development to assist students prepare for learning. It is a type of educational kinesiology, which involves employing movement to aid with information retention, to foster play-based learning and enhance natural intelligence, to emphasize the ability to detect and respond to movement-related demands and to promote creativity and self-expression. It helps students improve their communication skills.

Brain gym activities are based on the premise that specific movements, such as hand shaking, rocking, and stretching, might improve brain function. However, a significant amount of study has discovered that exercise, in general, can help ease anxiety and sadness by producing endorphins and boosting blood flow in the brain. It increases your confidence, boost your self-esteem, enhance concentration and memory, enhance thinking and decision-making skills, boost your inherent healing abilities, improves vision, restore health and harmony.

BRAIN GYM WORKOUTS

Brain Buttons	Massage your temples and the back of your neck to relax and increase blood flow to the brain.
The Thinking Cap	Place your hands on your head, fingers splayed, to stimulate the brain's electrical activity.
The Owl	Rotate your head from side to side, then tilt it from front to back, to improve flexibility and brain oxygenation.
The Elephant	Move your arm in a broad circle, as if you were clutching a trunk, to activate your brain's motor abilities. They aim to connect the brain's hemispheres and increase coordination.
Hook-ups	Cross your arms and legs, then uncross them, to integrate the cerebral hemispheres and increase coordination.
Step touch	Also known as the dancer's warm-up, is ideal for lateral or side-to-side movement coordination.

CONCLUSION

Brain gym exercises have become popular for improving learning and academic performance. While they were originally intended for children, they may also benefit adults with Alzheimer's disease, Parkinson's disease, cancer, type 2 diabetes, cardiovascular disease, respiratory difficulties, and depression and anxiety.

The 'BUNKIE' test is a functional performance test consisting of five different plank positions held bilaterally. It was initially designed to detect imbalance of musculoskeletal chain linked via connective tissue. The test is easy to understand and to conduct it is neither time nor cost intensive and no special equipment is needed. This test is frequently applied in daily practice. In this test can identify the functional performance, imbalances and weakness in the fascial lines which can indicate potential future injuries.

A. JEEVANANDHAM
MPT FIRST YEAR
(ortho)



DO YOU THINK YOU HAVE GOOD CORE STRENGTH? OR MAY BE BAD? HAVE YOU DONE THIS BEFORE???

The BUNKIE test procedure is comprised of five different tests for specific fascial lines. The duration in seconds was recorded for each position separately up to 40 seconds. The individual had to hold each position with the body in a straight line (no rotation no bending at the joints) until they felt any discomfort like a burning sensation, cramping or joint or muscle pain while holding the position. Each position of the Bunkie test was performed with the feet on a small bench (30cm) bench and arms on a non slip-mat. Each session utilized a different rest interval of either 30s, 1min, or 2min between each of the plank positions. The positions are as follow:

A lack of core muscle strength led to development of back pain. For some patients assessing muscle strength and endurance capacity of the core muscle with functional test may result significant weakness. The Bunkie score can correlate with other quantitative tests and qualitative findings. Bunkie can use for both assessment and treatment.

THE ASSESSMENT AND APPLICATION



ANTERIOR POWER LINE



LATERAL STABILIZING LINE



POSTERIOR STABILIZING LINE



POSTERIOR POWER LINE

BUNKIE TEST



MEDIAL STABILIZING LINE

RHABDOMYOLYSIS MISCONSUMED AS CAUDA EQUINA SYNDROME



STOP! THINK! ACT!



Knowing when to stop!

Dear Physiotherapists, I know you are well versed with a lot of management techniques but, here is something you need to know before implementing your protocol. There is a condition which mimics cauda equina syndrome, if not carefully diagnosed you may lead your patient's death. Rhabdomyolysis is a relatively uncommon disease yet potentially fatal condition with an incidence of approximately 29.9 patient per 100,000 people. It results from injury, disintegration of skeletal muscle and necrosis. This is seen among the athletes due to exertion. Rhabdomyolysis leads to release of intra cellular muscle components like myoglobin and creatine kinase into the bloodstream and extracellular space which may ultimately leads to electrolyte imbalance, ventricular fibrillation, hyperkalemia, acute renal failure and death.

Pain in the low back is a common ailment. It is likely to misdiagnose a patient with rhabdomyolysis as having cauda equina syndrome if they arrive with low back discomfort, bilateral lower limb paralysis, and acute urine retention. If the patient is overexerted by the treatment given, it may worsen the condition and even lead to death.

CHAMP PROTOCOL:

- Phase 1
- Rest for 72 hours and encourage oral hydration
 - 8 hours of sleep nightly
 - Follow-up after 72 hours with a repeat serum CK level and UA
 - If the CK has dropped to below 5 times the upper limit of normal and the UA is negative, the athlete can progress to phase 2, if not, reassessment in 72 additional hours is warranted
- Phase 2
- Regain light activities, no strenuous activity
 - Physical activity at own pace/distance
 - Follow-up with a care provider in 1 week
 - If there is no return of clinical symptoms, the athlete can progress to phase 3
- Phase 3
- Gradual return to regular sport/physical training
 - Follow-up with care provider as needed

MANAGEMENT: Early diagnosis and treatment of rhabdomyolysis and its underlying cause can recover the patient fully. The patient should not be overexerted as exertion may further worsen the muscle breakdown. Passive and active ROM exercises, aerobic exercises and gradual resisted exercises can be given. A protocol for conservative return to sports was described by Consortium for Health and Military Performance (CHAMP), Which is mentioned above.



LAKSHNA G.B
MPT – 1ST YEAR (ORTHO)

SILENCING THE SNAP

GRASTON TECHNIQUE FOR COXA SALTANS MANAGEMENT

In the field of sports medicine and rehabilitation, the Graston Technique has become a pioneering method for addressing Coxa Saltans, commonly known as snapping hip syndrome. This innovative approach utilizes specialized instruments to target restrictions in soft tissue and scar tissue adhesions that contribute to the snapping sensation in the hip joint.

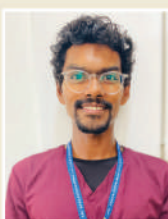
Coxa Saltans is characterized by a snapping or popping sound during hip movement, often caused by tightness or inflammation in the tendons, muscles, or ligaments surrounding the hip joint. Athletes such as dancers, runners, and gymnasts are particularly susceptible due to repetitive hip movements and overuse.

During Graston Technique sessions, trained practitioners employ stainless steel instruments to identify and treat areas affected by soft tissue fibrosis or chronic inflammation. Through gentle stroking motions over these areas, the technique effectively breaks down scar tissue, enhances blood flow, and reduces muscle tension, thereby promoting healing.

Patients undergoing Graston Technique therapy typically experience reduced pain, improved range of motion, and enhanced functional movement patterns over time. This non-invasive approach is often integrated into comprehensive rehabilitation programs alongside exercises aimed at strengthening and stabilizing the hip joint.

As advancements in physiotherapy progress, the Graston Technique continues to distinguish itself for its targeted effectiveness in treating Coxa Saltans and various soft tissue injuries. By alleviating symptoms and restoring optimal function, it plays a crucial role in enhancing recovery and performance for athletes.

Through the application of the Graston Technique, practitioners empower individuals to overcome the challenges associated with Coxa Saltans, facilitating their return to activities with confidence and a decreased risk of recurrence. This approach underscores a commitment to comprehensive care and improved outcomes in sports rehabilitation.



WILFERD ARUL STEPHEN
MPT 2ND YEAR (ORTHO)



ARUNA .A
MPT 2ND YEAR (ORTHO)



nintendo

wiitm exergaming

applicability & intensity for
children with acute
lymphoblastic
leukemia

Conclusion:

Kids with ALL can play Nintendo Wii exercise games in a safe and suitable manner. Using an exergaming gadget, children can engage in moderate-intense physical exercise for sixty minutes while being watched over. As a result, they can be used clinically to support ALL recovery.



Acute lymphoblastic leukemia (ALL) is the most common type of childhood cancer. Treatment like Chemotherapy and Radiotherapy cause long term health and function effects, Muscle strength, neuromuscular, co-ordination, balance & flexibility. Physical activity (PA) has been associated with various physiological and psychological health benefits for life. It affects cancer-associated symptoms positively. Nintendo Wii™ is one of the consoles that provide a gaming style that enables interaction through motion sensors.

The Guidelines of [CSEP, ACSM, WHO, CDC] showed that a higher intensity of PA is related to higher health benefits and recommended at least 60 minutes of daily moderate-to-vigorous intensity PA for children.

PROCEDURE:

Anthropometric measurements were collected at base line. Nintendo Wii was set up in an empty room where the Wii sensor rested on a table under the screen; 2 Wii remote were available and the Wii balance board was fixed on the ground a two meter distance from the screen. Sensors measure every 15 minutes & at the end of the session. Session was conducted on the same day as a chemotherapy dose, just before it was administered or 2 days later. Before the session, the supervisor - a senior paediatric physical therapist demonstrated how to play each game using the Wii remote or the WBB by the avatar & exergaming protocol followed the oncology PA guidelines. to give an overall workout of varying intensities, the game session altered between 7 Wii sports resort & 23 Wii fit plus exergaming [4 aerobic, 12 training plus, 7 balance games]. The children could select and play games for one 60 min session. There was no limit how many games are the child played within 60 min of session. Suppose a child had below 92% of SpO2 or above the predicted HR they are asked to take rest until the vital signs are normalized.

Measurement of the applicability of Nintendo Wii exergaming:

The video games applicability questionnaire was used to test the applicability of exergaming. It consists of 7 statements 2 related to usability, 3 related to engagement & 2 related to enjoyment. These statements are to be rated on a five -point likert scale represented by five faces with smiles ranking from one-strongly disagree to five-strongly agree.

Measurement of Exergaming Intensity:

At the end of the session, all children were asked, "How hard do you feel you are working?" using a valid facial rating of perceived exertion [FRPE] Scale & their responses were recorded.



MOHANA PRIYA .R
MPT 1ST YEAR (ORTHO)



SNEHA S
B.P.T FINAL YEAR

Innovations in Assessing and Managing Scapular Dyskinesia

Innovative Therapeutic Techniques and Future Directions:

Physiotherapy advancements also encompass innovative therapeutic techniques. Manual therapy modalities such as soft tissue mobilization and joint mobilizations play a crucial role in restoring tissue flexibility and joint mobility. These techniques complement exercise-based interventions, facilitating faster recovery and improved functional outcomes for patients.

Looking ahead, the future of physiotherapy in managing scapular dyskinesia holds promise with ongoing advancements in technology and treatment modalities. Emerging trends may include the integration of virtual reality for interactive rehabilitation programs and wearable devices for continuous monitoring outside clinical settings.

Conclusion:

In conclusion, the evolution of physiotherapy in managing scapular dyskinesia underscores the field's commitment to precision, innovation, and personalized care. By leveraging these advancements, therapists can effectively alleviate symptoms, enhance functional recovery, and improve quality of life for individuals affected by this challenging condition.

In the realm of physiotherapy, the understanding and treatment of scapular dyskinesia have seen remarkable advancements in recent years. Scapular dyskinesia, characterized by abnormal movement patterns of the shoulder blade, can lead to pain, reduced range of motion, and functional limitations. It is caused by clavicle fracture, AC joint muscle detachments, GH instability, soft tissue injury, AC arthritis, muscular weakness, incoordination and tightness. It is classified as Type 1: prominence of inferior border, Type 2: prominence of medial border and Type 3: prominence of the superomedial border. Addressing this condition effectively requires a thorough assessment and tailored management strategies, both of which have benefited from cutting-edge developments in physiotherapy.

Evaluation:

Static evaluation- Isometric scapular pinch test, wall push- ups, scapular retraction test.
Dynamic evaluation- Lateral scapular slide test, scapular assistance test.

MUSCLE TEST:

- Manual resistance of the arm at 130° of flexion (for the serratus anterior)
- Manual resistance of the arm at 130-150° of abduction (for the lower and middle trapezius)
- Extension of the arm at the side (for the rhomboid)

Advanced Diagnostic Tools:

One of the key advancements lies in diagnostic accuracy. Traditional methods often relied on visual observation alone, which could be subjective. Today, physiotherapists utilize advanced motion analysis technologies such as 3D motion capture systems. These systems provide precise measurements of scapular movement in real-time, allowing therapists to identify subtle deviations from normal kinematics with greater accuracy. This objective data not only enhances diagnostic confidence but also guides the development of personalized treatment plans.

P Advancing Physiotherapy



VISCERAL MANIPULATION AND VAGUS NERVE GLIDE RELAXATION TECHNIQUE



C. PRETHEKA
BPT – 3RD YEAR

Physiotherapy is increasingly recognized for its role in managing complex gastrointestinal disorders such as irritable bowel syndrome (IBS), which manifests with symptoms like abdominal pain, diarrhoea, constipation, and varying stool patterns, significantly impacting quality of life. IBS involves visceral hypersensitivity and disrupted gastrointestinal motor function, influenced by factors like infections, immune responses, serotonin imbalances, and the brain-gut axis, often exacerbated by psychological factors and genetic predispositions.

Physiotherapy interventions focus on stress reduction, improving mobility, and enhancing intestinal motility once dietary factors are ruled out. Techniques such as visceral manipulation and Vagus nerve glide relaxation are emerging as effective treatments for managing symptoms and improving overall gastrointestinal function.

Visceral Manipulation:

This hands-on approach targets abdominal and pelvic organs to release restrictions and improve mobility, aiming to alleviate discomfort and normalize gastrointestinal function by addressing structural and functional contributors to IBS symptoms.

Vagus Nerve Glide Relaxation:

Techniques focusing on the Vagus nerve aim to optimize nerve function, alleviating symptoms associated with stress and anxiety, which can exacerbate IBS symptoms. This technique involves exercises and stretches designed to stimulate and enhance vagus nerve function.

Clinical Application and Future Outlook:

Physiotherapy, through innovative approaches like visceral manipulation and Vagus nerve glide relaxation, plays a crucial role in managing IBS symptoms and improving gastrointestinal health. As research continues, these therapies hold potential to address the complex needs of individuals with IBS, emphasizing the evolving role of physiotherapy in holistic healthcare. Supported by scientific evidence, these physiotherapy techniques are increasingly integrated into comprehensive treatment plans globally, offering promise in enhancing patient well-being and quality of life.

Innovations in Treating Irritable Bowel Syndrome V 2 Void IBS

Optimizing ACL Reconstruction Recovery

After anterior cruciate ligament (ACL) reconstruction surgery, the road to recovery can be challenging but crucial for athletes and active individuals aiming to return to peak performance. One of the most effective tools in this journey is isokinetic testing and training, a specialized method designed to assess and enhance muscle strength and joint stability post-surgery.

Understanding Isokinetic Testing:

Isokinetic testing involves assessing muscle function at constant speeds, providing precise measurements of strength and endurance. This objective assessment helps physiotherapists and sports medicine professionals gauge the progress of ACL rehabilitation, identify any muscle imbalances or weaknesses, and tailor treatment plans accordingly.

Benefits in ACL Reconstruction:

For patients recovering from ACL reconstruction, isokinetic testing serves multiple purposes. Firstly, it allows therapists to quantify muscle strength deficits and asymmetries between the injured and uninjured legs. This data guides the development of targeted rehabilitation programs focused on restoring strength, stability, and functional movement patterns.

Isokinetic Training Protocols:

Isokinetic training utilizes specialized equipment that controls the speed of muscle contraction throughout a range of motion. This targeted approach enables patients to safely and progressively increase muscle strength and endurance without compromising joint stability or risking injury.

Exercises typically include concentric and eccentric movements, which are essential for rebuilding muscle tissue and enhancing overall joint function.

Clinical Evidence and Success:

Clinical studies consistently demonstrate the effectiveness of isokinetic testing and training in optimizing ACL reconstruction recovery. By systematically monitoring and addressing muscle deficits, patients can achieve faster and more complete rehabilitation outcomes, reducing the risk of re-injury and promoting long-term joint health.



Integration into Rehabilitation Protocols:

In modern sports medicine, integrating isokinetic testing and training into ACL rehabilitation protocols has become standard practice. This approach ensures a comprehensive recovery plan tailored to each patient's specific needs, facilitating a safe and successful return to sports and daily activities.

Conclusion:

Isokinetic testing and training represent integral components of ACL reconstruction rehabilitation, offering precise assessment and targeted strengthening protocols to optimize recovery. By leveraging these advanced techniques, healthcare professionals empower patients to regain confidence, functionality, and athletic performance following surgery. As research continues to evolve, isokinetic methods will continue to play a pivotal role in enhancing outcomes and shaping the future of sports rehabilitation.

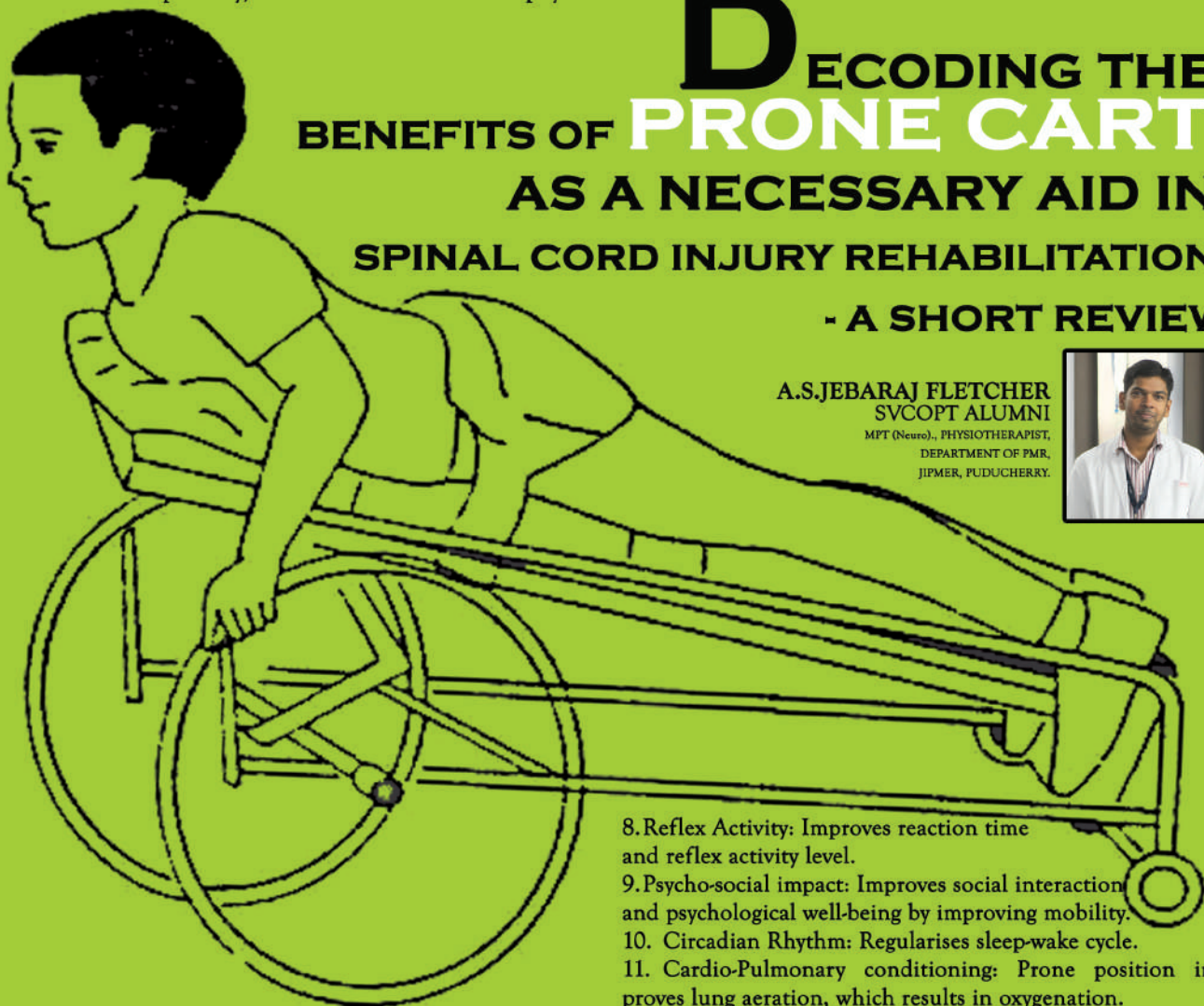
S. RAMKUMAR
ASSISTANT PROFESSOR
SVC OPT



Prone carts are the lesser-known mobility aids employed for individuals with spinal cord dysfunctions who were confined to bed. It is a flat horizontal stretcher, propelled by a patient while lying in the head-down position. They are typically useful in SCI rehabilitation centres that treat patients long-term.

IMPACT OF IMMOBILISATION IN SCI INDIVIDUALS
Prolonged immobilisation following SCI injury may result in many disadvantages,

1. Decrease in cardiac reserve and stroke volume.
2. Increases in spasticity, contractures & muscle atrophy.



3. Increases the risk of pathological fractures.
4. Increases the risks of bladder and bowel issues.
5. Results in circulatory complications like Pulmonary embolism & orthostatic hypotension.
6. Increases the risk of developing pressure ulcers.
7. Reduces intestinal motility.
8. Along with physical problems, result in psychosocial concerns like depression, perceptual changes, and fatigue.

THERAPEUTIC BENEFITS OF USING PRONE CARTS IN SCI REHABILITATION

1. Healing: For an individual with SCI lying prone is the best way for their body to heal.

2. Pressure Injury: They aid in preventing and managing pressure ulcers.
3. Mobility: It provides mobility during the healing process, by lessening the pressure on risk areas and ill effects of prolonged bed immobilisation.
4. Conditioning: Prevents deconditioning of the body.
5. Prehabilitation: Helps in Prehab body muscle strength build-up.
6. Muscle stiffness: Helps in reducing associated trunk and leg muscle stiffness.
7. Tone Regulation: Normalises the muscle tone in the cases of incomplete spine injuries.

DECODING THE BENEFITS OF PRONE CART AS A NECESSARY AID IN SPINAL CORD INJURY REHABILITATION

- A SHORT REVIEW

A.S.JEBARAJ FLETCHER
SVC OPT ALUMNI
MPT (Neuro), PHYSIOTHERAPIST,
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JIPMER, PUDUCHERRY.



8. Reflex Activity: Improves reaction time and reflex activity level.
9. Psycho-social impact: Improves social interaction and psychological well-being by improving mobility.
10. Circadian Rhythm: Regularises sleep-wake cycle.
11. Cardio-Pulmonary conditioning: Prone position improves lung aeration, which results in oxygenation.
12. Bladder & Bowel impact: Enhances peristalsis of the alimentary canal and improves bladder functions.

CONCLUSION: Prone carts are the necessary adjunctive aids that can be used during the early part of SCI rehabilitation. The take-home message of this short review is to encourage the use of a prone cart, as an additive aid in the early part of SCI rehabilitation to prevent life-threatening debilitating complications.

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A. ROSHINI
BPT – FINAL YEAR



Blount disease, a growth disorder affecting the shin bone (tibia), leads to pronounced bowing of the legs in children, impacting their mobility and quality of life. While severe cases often require surgery, emerging physiotherapy techniques and advanced orthotic devices are proving a valuable outcome in managing the condition. Gait training is another crucial component of physiotherapy for Blount disease. Using assistive devices, children learn to walk correctly, minimizing the abnormal stress on their legs. Orthotic devices, such as KAFO (Knee-Ankle-Foot Orthosis) braces, are often used to support proper leg alignment and enhance mobility.

Smart Orthotics:

The latest advancements in smart orthotics offer a groundbreaking approach to managing Blount disease. These advanced braces, equipped with sensors and microprocessors, provide both support and real-time monitoring to ensure effective treatment. Smart orthotics continuously monitor the child's gait, alignment, and movement patterns, providing immediate feedback and adjustments to optimize support and correct deformities.

Key Features and Benefits:

Real-Time Monitoring: Sensors embedded in the orthotics track the child's movements, detecting any deviations from the desired alignment. This data helps clinicians make precise adjustments to the device, ensuring optimal correction.

Adjustable Support: The microprocessors in smart orthotics allow for dynamic adjustments, offering varying levels of support as needed. This adaptability is crucial for growing children, ensuring that the orthotic remains effective as they develop.

Enhanced Comfort and Compliance: Smart orthotics are designed to be lightweight and comfortable, encouraging consistent use. Real-time adjustments reduce the need for frequent clinic visits, making the treatment process more convenient.

Data-Driven Insights: Continuous data collection provides valuable insights into the child's progress, helping healthcare providers refine treatment plans and track improvements over time.

Improved Mobility: By promoting proper leg alignment and reducing strain on the joints, smart orthotics enhance overall mobility. Children can participate in physical activities with greater ease and confidence.

Conclusion:

Smart orthotics represent a significant advancement in treating Blount disease in children. By combining real-time monitoring, adjustable support, and data-driven insights, these devices offer a highly effective and user-friendly solution. As technology evolves, smart orthotics will likely become a standard in pediatric orthopedic care, providing children with the best possible outcomes and improved quality of life.

SMART

ORTHOTICS FOR CHILDREN WITH
BLOUNT DISEASE
A REVOLUTIONARY APPROACH



CRACKING THE CODE OF LOW BACK PAIN

A HOLISTIC APPROACH TO RELIEF

Effectively managing low back pain demands a holistic approach that extends beyond merely alleviating symptoms. It involves a deep understanding of how biological, psychological, and social factors intricately interact to shape the pain experience.

Biological Insights: Low back pain often stems from conditions like muscle strains, herniated discs, or spinal degeneration. Treatment typically involves a combination of physical therapy, medication, and occasionally surgery to alleviate pain and restore mobility.

Psychological Well-being: Mental health significantly affects how pain is perceived and managed. Conditions such as stress, anxiety, and depression can intensify symptoms and impede recovery. Therapeutic strategies like cognitive-behavioral therapy (CBT) equip patients with effective coping mechanisms to alleviate pain-related distress.

Social Influences: The social environment plays a crucial role in pain management and recovery. Factors like work conditions, socioeconomic status, and support networks profoundly impact treatment outcomes. Interventions such as occupational therapy, social support programs, and community engagement contribute to overall well-being.

Collaborative Care: Implementing the Biopsychosocial Model requires a coordinated effort among healthcare professionals—physicians, physical therapists, psychologists, and social workers. Together, they develop personalized treatment plans tailored to each patient's unique needs.

Empowering Patients: The heart of this approach is patient-centered care, which emphasizes educating patients and involving them in decision-making. Encouraging lifestyle adjustments, promoting ergonomic practices, and teaching self-management techniques empower patients to actively engage in their recovery.

By embracing the Biopsychosocial Model, healthcare providers can deliver comprehensive care that addresses the underlying causes of low back pain holistically. This approach not only improves treatment outcomes but also enhances patients' overall quality of life, paving the way for sustained health and well-being.



N. PRIYADHARSHINI
BPT – FINAL YEAR





Anandha's

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HISTORIC WOMEN'S OF PHYSIOTHERAPY



M. VASANTHRA
MPT 2ND YEAR (NEURO)



MARY MCMILLAN

Often referred to as the "Mother of Physical Therapy" in the United States, she was a key figure in establishing the profession in the U.S. and served as the first president of the American Women's Physical Therapeutic Association, which later became the American Physical Therapy Association (APTA).

she spent much of her career developing novel approaches to treating spasticity in children with cerebral palsy and adults with hemiplegia. Together with her pediatrician/surgeon husband Karel, Bobath worked to address neurological disabilities and functional impairments and developed an approaches to improve patients' lives called "bobath Approach".



BERTA BOBATH



FLORENCE KENDALL

Florence Kendall is famous for her work in muscle testing and function, she co-authored the seminal book "Muscles: Testing and Function," which remains a fundamental text in physical therapy education. she devoted nearly 70 years of her life to advancing the physical therapy profession. She played a huge role in establishing the legality of PT practice in Maryland, and she even served on President John F. Kennedy's council on physical fitness, helping to establish exercise standards for school-aged children. Another member of a wife-husband power couple, Kendall worked with husband Henry to treat polio victims using PT interventions.

"Maggie" Knott significantly advanced physiotherapy through her co-development of the Proprioceptive Neuromuscular Facilitation (PNF) technique. This innovative approach enhances motor function and coordination by using diagonal and spiral movement patterns along with sensory inputs. Maggie Knott's extensive teaching, workshops, and publications helped disseminate PNF globally, making it a fundamental method in both neurological and musculoskeletal rehabilitation.



MARGARET



DR. JACQUELIN PERRY'S

work has left an enduring legacy in physiotherapy, particularly in the areas of gait analysis where biomechanics of walking and running have been fundamental in diagnosing and treating gait abnormalities and she developed innovative rehabilitation techniques for polio patients, significantly improving their mobility. She authored "Gait Analysis: Normal and Pathological Function," a key textbook widely used in physiotherapy and medical education. Also Dr. Perry's development of the Rancho Los Amigos Gait Analysis Lab set new standards for clinical assessment and research in movement disorders.

Her work laid the foundation for physiotherapy in Canada, she helped found the Canadian Physiotherapy Association (CAP) in 1920. she played a key role in developing educational programs and curricula in establishing educational standards of physiotherapy also her advocacy for the profession raised the profile of physiotherapists, and leaving a lasting impact on the field.



ENID GRAHAM



HELEN HISLOP

Helen Hislop made significant contributions through her work in Educational Leadership and She conducted pioneering research in the areas of muscle physiology and biomechanics also contributing to the development of doctoral programs in physical therapy. She held significant leadership positions, including serving as the head of the Division of Physical Therapy at the University of Southern California (USC).

Woodruff became the first African American to join the PT faculty in the School of Medicine at the University of North Carolina at Chapel Hill in 1974. The Physical Therapy Association of Georgia awarded her the Education Achievement Award in 2004 for her commitment to student growth and the advancement of research. In addition to establishing APTA's original Advisory Council on Minority Affairs and the Office of Minority Affairs, she also set up the Minority Scholarship Fund and the Minority Scholarship Award for Academic Excellence.



LYNDA WOODRUFF



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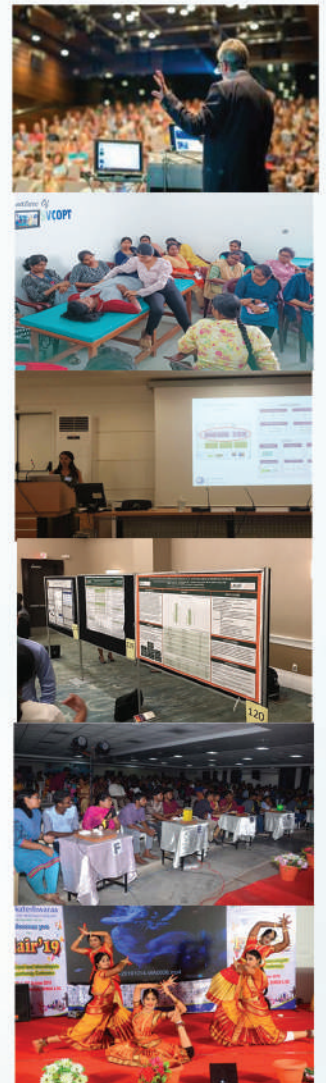
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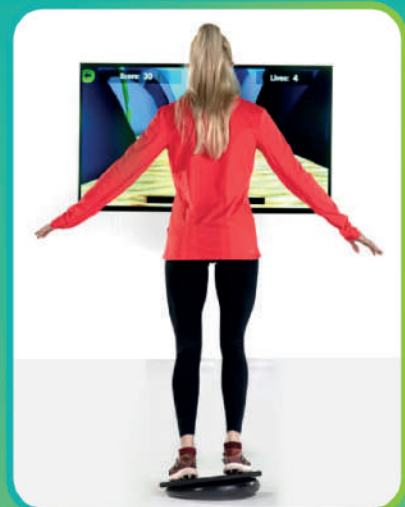
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