JULY 2019

physio VIVID

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Making the senses better

DELIVER STRONG & RESTORE THE CORE

SQUAT TO FIT

mime as a THERAPY

Central sensitisation

VOLUME 4
ISSUE 1
vividmagazine2019@yahoo.com
www.svcoptpondy.com

Published by
sri venkateshwaraa
college of physiotherapy
Puducherry-605102

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Greetings From Chairman's Desk

I'm gratified, immensely to know that the College of physiotherapy is bringing up their 4 th annual release of Physio magazine "VIVID – 19". *I do desire that this physio Vivid will definitely serves as a "Flint to Fire" the enthusiastic minds of the all the physiotherapy students. It may also aspires the innovative sense of physiotherapy fraternities towards their professional growth.*

Moreover the pleasure of sharing knowledge is a supreme service to the mankind. Ignition of unknown to known may enhances the professional glory as well. I am extremely glad to congratulate the PRINCIPAL, *college of Physiotherapy, the* CHIEF EDITOR AND THE CO-EDITORS *of this vivid for their invincible efforts yielded.*

I also highly rate the dedication of the physiotherapy Student organizing batch in the successful release of the magazine. I once again appreciate all the "DYNAMIC - ARTICLE CONTRIBUTORS" AND "THE VIBRANT READERS" *of our physiotherapy Magazine* "VIVID – 19".

Shri. B. Ramachandiran,
Chairman, SVGI

Greetings From Director's Desk

Congratulations to the ***Vivid Magazine Team 2019*** *on their painstaking efforts and enthusiasm for the release of this Magazine on the 4th Graduation Day Scheduled on 16th July, 2019.*

Efforts are ours; results come from Nature and the body mechanics. As Physiotherapists they serve a very important supporting role to young and old; challenged and sports person. The small gains, step by step, make lot of difference to the persons and their families.

Best of things in your journey ahead ***SVCOPTians.***

Prof. Dr. S. Mahadevan

DIRECTOR
SVMC & RC

Greetings From Dean's Desk

I am immensely delightful to know that our College of Physiotherapy faculty members and students have prepared their college magazine **VIVID-2019** *consecutively and their periodical will be released on their convocation ceremony.*

Physiotherapy plays a major role in treating the patients with chronic illness, trauma and sports injuries. Physiotherapists are health care providers who are supporting in the management of illness of the patients there by providing relief from chronic pain and improving the range of movements in joints and promoting the quality of life of the patients.

I am pretty sure that, through this magazine it is possible to extract hidden talents of faculty and that of our students so that we are giving good opportunity to improve their knowledge and soft skills.

Every year I am admiring about the improvement reflected in the quality of this magazine and the hard work of the students in making this magazine in a grand manner and at a commentable level. Students are utilizing this magazine in order to have more academic development and to utilize this to exhibit their extracurricular activities.

I congratulate the entire team for making this very useful publication. I convey my best wishes to the young Physiotherapists to get inspired and to inspire to achieve greater academic career. I also whole heartedly wish them to have a bright and prosperous future.

Dr. S. Ratnasamy, B.Sc., M.S.,

DEAN, SVMCH & RC

Greetings From Principal's Desk

It's quite inspiring to watch and witness the potential of my faculties and students which are being unfolded day by day. In spite of their ***"trying and testing times"*** *they put forth their best in the successful release of this* ***Physio magazine – "VIVID 19"***

I am honored to thank our beloved Chairman for his immense grants and the approvals extended every year for the professional revival. I must thank the Chief Editor Mr. M Paul raj Assoc. Prof., for his determination in the release of this magazine since 2016. I also congratulate the chief Editor, Co-Editors and their team for the excellent compilation of all the enlightened in this magazine.

I must appreciate the organizing student batch of VIVID 2019 ***"The Genezens (2015-16)"*** *for their passionate accomplishment. Each and every iota of their contribution be rewarded obtaining their* ***"pinnacle of perfection"****. I thank all the bountiful Sponsors for their contributions.*

I do glad to applaud all the pen pushers of these articles for their willingness to present their valuable contents for our VIVID 19

I am sure that this magazine will enhance their physio knowledge with innovations and recent research activities in the field of Physiotherapy. Once again I would like to appreciate all the members of our department for their persistent effort in launching this magazine "Vivid 2019".

Prof. A. Pakirian

PRINCIPAL, SVCOPT

From the Editors Desk...

It is a matter of great pride and privilege for me to be a part of the magazine "Physio Vivid 2K19", which paves a platform for every student to enhance their learning skills. The main thrust of the college has been to achieve human excellence to shape the personality of pupils through a host of extracurricular and co-curricular activities and instilling in them the moral values. The enthusiastic write ups of our young writers are indubitably sufficient to hold the interest and admiration of the readers. I'm sure that the positive attitude, hard work, sustained efforts and innovative ideas exhibited by our young buddies will surely stir the mind of the readers and take them to the fantabulous world of Physiotherapy Practice. We have put in relentless efforts to bring excellence to this treasure trove.

Our budding talents have expressed their thoughts, ideas, findings, innovation, advancement, aspiration, convictions and research in a creative way. In fact, this is how they broaden their social, psychological and intellectual horizons. Thus, the Vivid reflects how the college could live up to its aim, providing quality education to the students. As you scan through the pages, it also enlightens you with the important milestones that our SVCOPTians has achieved this 2018-19 academic year.

I heartily thank our management as they had faith on my initiatives, specifically our Chairman, who has given approval for the 4th successive making of this yearly magazine "Physio Vivid 2K19". This herculean task of editing this magazine would not have been possible without the sincere support of the Editorial Board members who lined up the articles constantly flooded from our enthusiastic and inquisitive young writers. They have also sincerely edited and finally made a fair draft of it. I am thankful to all my colleagues who dipped their oars into the turbulent water of the journal and have sailed it to the shore of publication.

It is a fine thing to have ability but the ability to discover ability in others is the true test. I am really thankful to our respected Principal for entrusting me with the responsibility to lead the Editorial Board. I take this opportunity to thank all the dignitaries for sparing their valuable time to send their best wishes for our magazine which has crowned our prefaces. My heartfelt wishes to all our esteemed members of the student editorial board for their co-operation and support in contributing their best in bringing up the release of our magazine.

Finally clouds of thanks to all the sponsors for their active contributions for a good cause. At last, I wish you all a very happy reading and please do not forget to give your valuable feedback to the Editorial Board; because we hold your opinions and views in highest esteem for the enhancement of our "VIVID-2020".

Thank you all

M.PaulRaj
Editor
Vivid 2K19

ACADAMIC CREW













- **T. BHARANEEDHARAN PT** — Professor
- **K. ANAND BABU PT** — Asso. Prof
- **K. KARUNAKARAN PT** — Asso. Prof
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- **B. KANIMOZHI PT** — Tutor
- **S. VIJAYARANGAN PT** — Tutor
- **R. PRABAKARAN PT** — Tutor

Student Editorial

GENEZENS


CARMEL RENOLIN ANISTA U


BOSS CHANDAR R


DHARANI N


DIVYA K


ESWARYA G


HIMA S


ILANANGAI A


JAYANTHI R


JEVITHA J


JONAH SEDDONS J


KAVIARASAN S


KEERTHANA M


MONICA M


MONICA A


NANDHINI P


PANIMALAR P


PHILOMINA J


RANJANI R


SENTHIL S


SHARMILA D


SOUNDARIYA R


SUJITHA S


THASBIA J


VIMAL M


VISMAYA VINOD

srivenkateshwaraa College of Physiotherapy
Update Unveil Uphold

STUDENT SUPPORT AND PROGRESSION PROGRAM

ACADEMIC YEAR: 2018 - 2019

1. STUDENT MENTORING & SUPPORT

A. Student teacher counselling cell
B. Anti ragging & harassment cell
C. Placement cell (active through what's app group) – alumni are placed with this access.
D. Individual skill training hours.

2. STUDENT PROGRESSION:

A. Students teacher interaction zone: Regular evaluation of students feedbacks regarding their class atmosphere, teachings, clinical postings, etc and the needed reformations are done, periodically.

B. Alumni : providing relevant actions in specific to their placement or other problems in their workplace.

C. Physio magazine vivid has launched and so far 3 magazines were released.

D. Project Panel – to improve their research activity.

E. Clinical postings- multi speciality hospitals, rehabilitation centres in & around Pondicherry (5).

3. STUDENT PARTICIPATION AND ACTIVITY:

A. Conferences – inter and intra collegiate participation

B. Organising national level conference - Flair (5)

C. Symposiums (9)

D. Workshops/ hands on training

E. Case presentations

F. Journal presentation

G. Poster presentation

H. Sport activities (inter and intra collegiate participation)

I. Industrial visits – to promote knowledge in the evaluation & treatment of occupational specific musculoskeletal disorders.

4. Intra-collegiate Venture

It has been successfully functioning every Tuesday which witnesses the measures to be taken for the welfare of students.

1. STIZ - to identify the issues and feedbacks in person from the students and it has been used then and there.

2. Scientific Forum - to improve the quality of research activities and subject knowledge among students as well as faculties, scientific forum is being conducted.

3. Student activity conclave: in order to quench the thirst of their talents improvisation this event has been conducted.

4. Evidence based clinical practice has been conducted every fourth Tuesday in order to emphasis the importance of EBP in clinical area.

EVENTS	CO-ORDINATORS
1. Student Teacher Interaction Zone [1st Tuesday]	Ms. B. Simulia Dhinju, Asst. Professor
2. Scientific Forum [2nd Tuesday]	Mr. M. Paulraj, Assoc.Prof
3. Student Activity Conclave [3rd Tuesday]	Mr. K. Anand Babu, Assoc.Prof
4. Evidence Based Clinical Practices [4th Tuesday]	Mr. R. Prabakaran, Tutor

srivenkateshwaraa
College of Physiotherapy
Update Unveil Uphold

STUDENT SUPPORT AND PROGRESSION PROGRAM

ACADEMIC YEAR: 2018 - 2019

Accomplishment

Accomplishment

IAP Best Teacher Award 2018

University Gold Medalist

VoJta Therapy Symposium

Geriatric Camp

Second prize for duet dance at balaji college

Symposium "How to think in physiotherapeutic science"

Our student participated "Advanced paper based technology workshop at Sathya Special School, Puducherry

First prize for poster presentation at theracon

2nd place in poster presentation at SDUAHER, Kolar

Our student participated "PhysioCon" 3rd National Conference at MAHER, Chennai

Third prize for poster presentation at theracon

2015 - 2016 BATCH

2016 - 2017 BATCH

2017 - 2018 BATCH

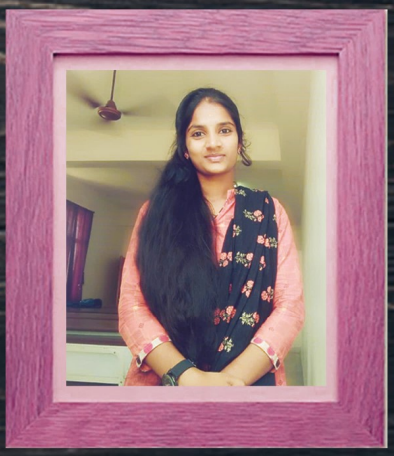
2018-19 BATCH

College Topper 2014-15 BATCH

2015-16 BATCH

PG 2017 - 18 BATCH

2018 - 19 BATCH



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Stories

Conditions

Modalities

Tools

What exactly is NeuroKinetic Therapy?

Technique:

When a muscle is injured, a cascade of events is initiated. These events can lead to the pain and other symptoms that often accompany muscle injuries. The events include an inflammatory response, where cytosolic enzymes appear in the serum, free radical damage occurs, and phagocytosis takes place within the damaged muscle sarcomeres. This technique seeks out to identify the injured muscle so that the patient and the practitioner can be sure that the source of the problems is targeted.

This therapy is considered to be both a rehabilitative technique and an assessment tool. It begins with sessions where the practitioner works to test your muscles. This is important because to know which underlying muscle functions are contributing to your discomfort, your practitioner needs to pinpoint them using localized muscle testing.

Therapy localization, or manual muscle testing, is done to evaluate muscle strength. There is a very specific protocol to identify which body part is contributing to injury or pain. In many cases, it is the muscle relationship that is problematic. This is because when a muscle is inhibited, the corresponding or opposite muscle has to work harder.

The testing phase can be difficult because the practitioner needs to differentiate between a muscle being actually strong and it just appearing strong because it is compensating for a weak muscle. They will start by testing the muscle they suspect is causing the problems due to weakness and then they will test the muscle suspected to be strong. The overall goal of testing is to find the precise, localized area where compensation is happening. From here, the practitioner will be able to reset the weak muscle, release the tight muscle and reprogram the relationship between both muscles.

Once the proper muscle is identified, deep tissue release is used. This technique is able to reach the deeper layers of fascia and muscle via slow strokes and firm pressure. There are two primary techniques:

- **Friction:** This helps to realign muscle fibers and release adhesions by applying pressure across a muscle's grain.
- **Stripping:** This technique goes along a muscle fiber's length using gliding, deep pressure with the elbow, knuckles, forearm or thumbs.

This is widely used for muscular ailments and injuries. It is one of the most common complementary techniques for low back pain, osteoarthritis and neck pain. It may also benefit fibromyalgia, headaches and relaxation.

Neurokinetic Therapy (often called NKT) is a type of natural therapeutic system that has the goal of correcting learned movements and muscle functions within the body that can contribute to poor posture, joint tenderness and muscular pain. NKT is often used in rehabilitative settings to treat injuries and chronic pain.

T.Bharaneedharan
Professor

This system was first created by a man named **David Weinstock** in the mid-1980s. He created this unique system of precise muscle tests and adjustments to help correct muscle and movement memories that were stored in the brain region that's responsible for learned motor control. Motor control center (MCC) present in the cerebellum, which will co-ordinates all movement patterns in the body and has the ability to change the programming for new pattern. When an injury was occurred in certain muscles, other muscles are forced to overwork; so by applying the slight resistance to the affected muscles to evaluate strength or weakness thereby retraining the client's body to remove the compensation patterns. Thus it is otherwise also called as Corrective movement system.

Neurokinetic Therapy is beneficial for both the young to old, the sedentary and the very active. It's commonly performed on athletes, dancers, those recovering from accidents and orthopedic patients.

THE VOILA METHOD

STRUCTURAL JOINT BALANCING

We all would have experienced pain in our life. Some time excruciating, irritating and many times debilitating.These pain may have been due to trauma, stiffness or any underlying pathology. Here comes the recent trend of alleviating our pain by the voila method of structural joint balancing.

It was created by JOEL CRANDALL, an exercise physiologist and kinesiologist. In this method both assessment and treatment is done.

Any dysfunction in the body system may lead to imbalance in the keystones namely, the cranium, manubrium, sacrum, and talus .This results in decrease in equilibrium and proprioception

The assessment should be done from the sphenoid which is the major key stone. If it is displaced the others may also be misplaced .Once it is balanced then check the other key stones.The pad of the finger is used to find the direction of strength for correction of joint balance.

The main area that has to be concentrated is the sphenoid basilar joint formed by the sphenoid and occipital bone .The rhythmic movement of the joint is important for the passage of fluid nutrient and information to and from the brain.

This method regains normal function by aligning the cranium and skeleton to correct asymmetries present. The important aim is to balance the major joint to allow both the sympathetic and parasympathetic neurons and muscular symptoms to work more effectively. Even pelvic floor dysfunction and diaphragm working can also be addressed.

The various part in our body namely the cranial bone, muscle tissues, joints, ligaments, tendons and our emotions can be out of sync and this has to be rectified to attain balance and equilibrium.

Many problems like headache, migraine, neck pain, back pain, sensory disturbances, hormonal disorders, allergy, learning disability, insomnia and other diseases can be treated effectively by this method.

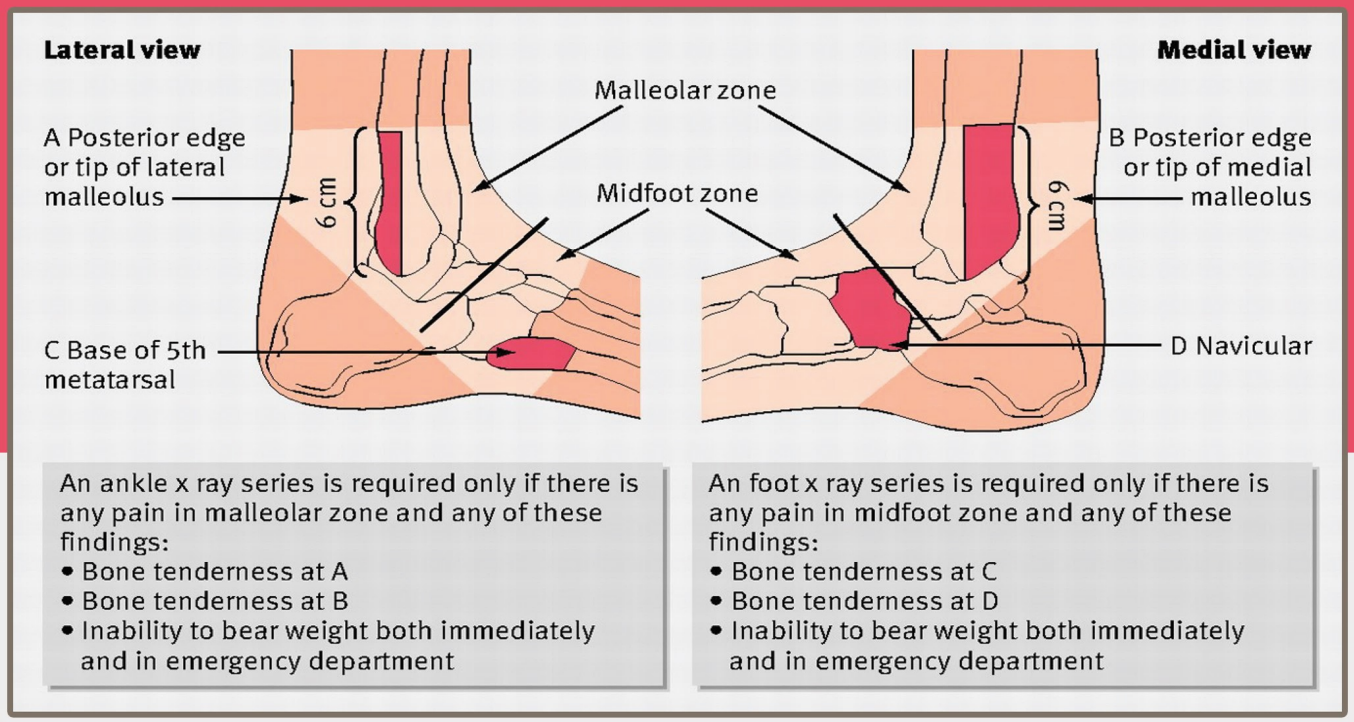
The cranial correction procedure will release the primary cranial pattern, eliminate the related secondary neuromuscular compensatory pattern which results in reduced pain, improved posture and increased muscle function throughout the body.

MRS.T.PADMA PRIYA
ASSISTANT PROFESSOR

"OTTAWA RULES FOR EARLY DIAGNOSIS AND SAVES ON RADIOGRAPHS

Now a day's physiotherapists are more frequently becoming the first contact for patients and the big concern for practitioners in this situation is to rule out fractures. Generally acute injuries of foot and ankle can make it difficult to rule out bony injuries; therefore Ottawa rules can help practitioners clinically to determine the need for radiographs in acute ankle injuries. This screening tool was developed because of the need for a rapid and accurate way to avoid unnecessary imaging.

Mrs.Jalpa Shah
Assistant Professor



COMPONENTS TO BE ASSESSED:

1. Bony tenderness along distal 6 cm of posterior edge of fibula or tip of lateral malleolus
2. Bony tenderness along distal 6 cm of posterior edge of tibia/tip of medial malleolus
3. Bony tenderness at the base of 5th metatarsal
4. Bony tenderness at the navicular
5. Inability to bear weight both immediately after injury and for 4 steps during initial evaluation

METHOD OF USE:

An Ankle X-ray is only required if:

☒ There is any pain in the malleolar zone; and,

☒ Any one of the following:

- Bone tenderness along the distal 6 cm of the posterior edge of the tibia or tip of the medial malleolus, OR
- Bone tenderness along the distal 6 cm of the posterior edge of the fibula or tip of the lateral malleolus, OR
- An inability to bear weight both immediately and in the emergency department for four steps.

A foot X-ray series is indicated if:

☒ There is any pain in the mid foot zone; and any one of the following:

- Bone tenderness at the base of the fifth metatarsal (for foot injuries), OR
- Bone tenderness at the navicular bone (for foot injuries), OR
- An inability to bear weight both immediately and in the emergency department for four steps.

PSYCHOMATRIC PROPERTIES:

RELIABILITY: The Ottawa Ankle Rules have sensitivities of 1.0 (95% confidence interval (CI), .95-1.0) for detecting malleolar fractures and 1.0 (95% CI, .82-1.0) for detecting midfoot fractures.

VALIDITY:

In children aged 2-16, the Ottawa Ankle Rules have a sensitivity of 1.0 (95% CI, .95-1.0) for malleolar fractures and 1.0 (95% CI, .82-1.0) for midfoot fractures.

CLINICAL SIGNIFICANCE:

☒ When implementing the Ottawa Ankle Rules in the emergency or clinic setting, the relative reduction in ankle radiography was reduced by 28% compared to a 2% increase in a control setting not using the rules (P<.001).

☒ Foot radiography was reduced by 14% at an intervention hospital and increased by 13% at the control hospital (P<.05) emergency department (P<.0001) and a lower estimated total medical costs for physician visits and radiography (P<.001) were also found.

Ensure to apply the Ottawa Ankle Rules accurately by...

1. Palpating the entire distal 6cm of the tibia and fibula
2. Not neglecting the importance of medial malleolar tenderness
3. Using the rules only on those over the age of 18 Years

Be sure to give written instructions and encourage follow-up in 5-7 days if pain and walking ability have not improved. It must be noted that certain groups are excluded, in particular pregnant women, those with diminished ability to follow the test (for example; head injury or intoxication).

Scrambler Therapy

P. Nandini Eshwari
SVCOPT Alumni

The way we think of it, pain is about the most protective instinct and impulse known to humans! If you touch a hot plate, you retract your hand even before you actually feel the pain. Then, the pain comes – very localized – such that you can plunge the hand into cold water. After that, usually the pain goes away. But sometimes, the pain signal gets stuck in the "on" position, even though your hand has healed. There has been some damage to the nerve endings, and they are continuing to send the "pain" impulse when it is not doing you any good. The pain pathways in the spinal cord and the brain actually get bigger and more active; neurologists call this "wind-up." Pain has come to the attention of most oncologists because chemotherapy agents; we call it chemotherapy induced peripheral neuropathy.

Of course, there are other neuropathic pains that we know all too well. The pain from a pinched nerve leaving a collapsed or damaged vertebra, shooting down the leg. The pain after shingles, "post-herpetic neuropathy" that can last for years. The pain after chest surgery, or mastectomy, or radiation. An increase in accidental death related to prescription opioid abuse prompts the identification of novel strategies to treat chronic pain at a low risk to patients and their communities. Scrambler therapy (ST) has recently emerged as a viable treatment option for patients with neuropathic pain (NP). Scrambler Therapy decreases chronic neuropathic pain by replacing the "pain message" with a corrective "non-pain" message via electrodes applied to the skin around the area of your pain. This therapy is non-invasive, drug free, has no reported side effects and numerous studies show that it is safe and effective. The technique was invented by Giuseppe Marineo at the University of Rome Tor Vergata.

What are the pain conditions does scrambler therapy treat?

Chemotherapy-induced Peripheral Neuropathy (CIPN)
Chronic Cancer Pain
Failed Back Surgery Syndrome (FBSS)
Sciatic and Lumbar Pain
Phantom Limb Syndrome
Postherpetic Neuralgia (PHN)
Post-surgical Neuropathic Pain
Brachial Plexus Neuropathy
Low Back Pain (LBP)
Chronic Neuropathic Pain

How does it work?

The MC5-A Calmare scrambler therapy device provides treatment by using rapidly changing electrical impulses to send a "non-pain" message along the same pain fibers that are sending the "pain" message using Dermatomes. Basically, it changes the message to the brain from pain to non- pain.

How does this treatment administered?

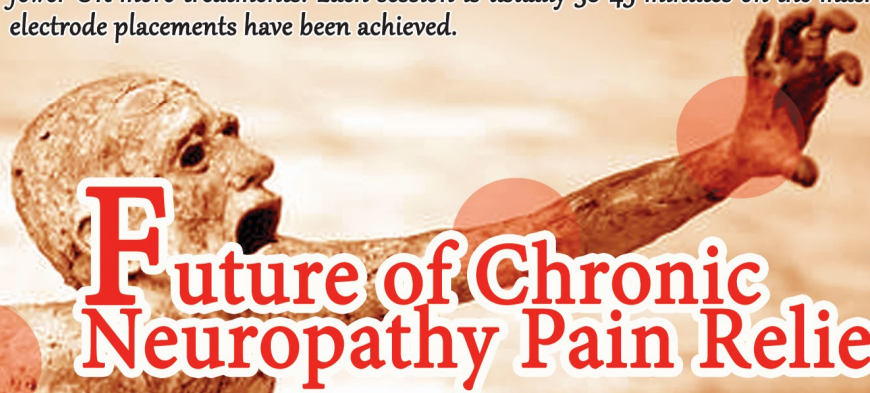
Scrambler therapy is administered by a trained professional who has undergone specialized training in this device and therapy. Electrodes (very similar in appearance to an EKG) are applied to the skin around the affected area of pain. These electrodes will then deliver a very mild electrical impulse.

How does it feel?

Initially you may feel a very mild pinch/bite/prickly sensation, then as the dosing is gradually increased you will feel a vibration/buzz/hum/pulsing sensation.

How long it has to be given?

Initial scrambler therapy is given daily for 10 days with 2 days off for the weekend. (Ex: Daily: Monday-Friday for 2 weeks). Depending on results of therapy, you may need fewer OR more treatments. Each session is usually 30-45 minutes on the machine once electrode placements have been achieved.



Future of Chronic Neuropathy Pain Relief

What it cannot do?

Scrambler therapy cannot cure or correct the underlying condition that is causing the pain. It treats chronic neuropathic pain as a separate and distinct problem by changing the messages of the nerves sends to the brain from pain to non-pain.

It cannot eradicate your pain forever. Eventually your pain will return in 1 to 6 months. This can happen sooner or later, based on the time frame of the individual's response to therapy. When pain reoccurs we can then provide booster therapy. This is usually 2-3 treatments to regain previously experienced comfort levels.

What are the research needed to be done to prove it effect significant?

Larger controlled studies are necessary to validate the findings and provide more definitive evidence for the efficacy of ST for the relief of Neuropathic Pain.

Want To Get A 1ST Rank?

V.Sasikala
SVCOPT ALumni

As individuals, we all learn best in different ways. Some students like to make notes, copy information, test themselves as they go along, discuss the topic with a group, create mind maps, carry out projects, design and make things, watch videos, look at diagrams, read facts and figures - the list goes on. There are so many approaches we can take towards learning, but there are simply too many children in a classroom to cater above all of these individually. Instead, we have three main learning categories that most people will fall into: visual, auditory, and kinetic. In this article, we will be taking a look at kinetic learning. what it is? how learners of this type work? and what kinds of activities they may find useful.

Exercise promotes brain health by releasing hormones like brain delivered neuro-tropic factor (BDNF) from the muscles, which encourage the growth of new brain cells (Neuro-plasticity). Regular exercise also enlarges our brain's memory center by 1 to 2% per year. Nowadays, childrens aren't having recess in order to accomodate the accademic rigor of the school days and thus there is a need of Physiotherapy to play a major role. As a style, kinetic learning could be described as 'hands-on'. Pupils who struggle to sit still and concentrate for a long time, but rather act very fidgety, are likely to be learners of this type. Kinetic learning is one of four learning styles that are defined by Neil Fleming and colleagues: visual, auditory, reading/writing, and kinetic. It's worth has to be considered while making lesson plans; teachers should build in small breaks for students to let off a bit of steam and rejuvenate, so that they're ready for the next session. Kinetic learning occurs as students engage in physical activity: learning by doing, exploring & discovering.

SCIENCE BEHIND THE MOVEMENT:

Without entering deep into the brain's anatomical structure, our scientific research supports one major claim about movement and learning i.e., the same part of the brain that processes movement also happens to process learning, attention and memory – the cerebellum. So, doing physical activities regularly not only strengthens the muscle but also strengthen and construct the neural pathway.

KINETIC LEARNING:

Kinetic learning is a learning style in which students learns along with physical activities, rather than listening to a lecture or watching demonstrations. Here, instead of seeing learning time and recess time as separate entities, instruction and learning would be embedded in same time with movement.

For Example,

In Class room,

- Using Swiss balls instead of traditional class room chairs.
- Standing/ high top desks as opposed to typical desks.
- Rotation/ station activity to promote constant movement.

In home,

- Simply rolling a bouncy ball across the desk while studying will improve our memory and reasoning.
- Listening to audio-book while jumping on the trampoline.

Every Kinetic Learning Course is built on four cornerstones:

Align learning objectives with the project's strategic objectives
Engage the learner in self-directed learning that is based on the simple premise that people learn best by doing
Involve the learner in rich and practical but risk-controlled exercises that challenge him or her to acquire and demonstrate new or improved job and problem-solving skills.
Reinforce the knowledge and skills the learner acquires and demonstrates.

CONCLUSION:

From the science of theories, we can say that our brain has the capacity to regenerate throughout our life and movement is a major key for all brain boosting process. And also these movement based strategies works best in improving attention, memory and logical reasoning. Regardless, it's time to get a move on kinetic learning.

Then, it's time to get a move on kinetic learning

I AM PHYSIO Part 2

An Autobiography of a Student

As I said in my previous article "At the time of my internship programme with no distinct order I have explored myself to the various places and experienced a lot."

Now reflecting upon my past 6 months , I have learnt much about ...what will take me to become a physical therapist and also about myself in general. These experience was my first major stepping stone along my career journey.

My internship experience has consisted of various challenges and excitements , as my strength and evidence have become more evident. Preceding my internship, I was apprehensive with working with patients and unconfident in communication skills in a professional setting.

Each and every day I was given new responsibilities, tasks, and freedom, which only contributed to a continual learning and growing experience. My tasks includes: paperwork,daily charts, set up and cleaning, guidance with patients exercise regimes and assistance with various modalities.

As time progressed and my experience and connections with staff and patients grew.i found myself looking forward to my next interning day during the week everytime. All of the patients that I had the opportunity to work with truly made my experience whole.They were all so awesome,fun,patient and understanding throughout my learning and incessant question asking.

And the staffs I met at the time of the internship was simply incredible. They helped guide and teach me throughout the entire way. My questions were always appreciated. There are so many experience and people that I have established relationship with during my internship that I will never forget.

Furthermore , I have now realised and experienced the difference that physical therapist can make in patients lives everyday. It has been absolutely amazing to see progressive changes that patients have made since I have been at the time of internship. My experience opened my eyes to a broader prespective ,better understanding and greater passion toward physical therapy as my future career.

Although one door is closed as this internship ended, the experience has opened many more doors for my future journey.

Allegedly, starting a career needs a lot of motivation and energy... I got those from my whole family and my staffs. If we are confident and know what we want, taking the first step is easy. But if we don't know where to begin, is much more difficult.

Foremost, I fabricated my own curriculum vitae that comprise of all my particulars. Subsequently added my resume in all the career linked websites and in all hospitals as my desire. In the result of, I dealt with lot of calls and interviews.

To an end, as I said in my previous one, "I will make use of my opportunity and be an eminent physio",Comparably got an opportunity from the private physio center in Bangalore,there attended interview and shortlisted. Now, myself well connected with my team ,learning and working for my life goals..... To achieve...!!!!

I assure that my life will never stop with this.....sure, one day "I will be the one what I wish to be"

Yours Professionally,
B.SUMITHA PT

INTEGRATED MULTI JOINT FREE WEIGHT RESISTANCE EXERCISE For ERECTOR SPINAE

Erector spinae is a group of muscle at the back,which extends to the vertebral column. It is also called as sacrospinalis and extensor spinae. Erector spinae consists of 3 paired group of mucles and tendon. They run more or less vertically throughout cervical, thoracic and lumbar region. Its action is bending backward and bending side wards. It also helps in stretching the opposite side and twisting the back in either side.
(Eg; erector spinae muscle weakness causes low back ache).

INTEGRATED MULTI JOINT FREE WEIGHT RESISTANCE EXERCISE(IMJFWRE)?

Integrated multi joint free weight resistance exercise plays a vital role in strengthening the erector spinae which was found to be effective in the management of NSLBP. Subjects who usually work in head-stooped posture for a longer duration are susceptible to core muscle weakness which is the principle motive of low back ache in students.

MECHANISM OF IMJFWRE:

Squatting causes activation of erector spinae muscles. Strong and effective core is essential for preserving proper muscle balance in the course of the entire human movement system. Stability of the core deals with local as well as global stabilization system. The muscle tissues which directly connect to the vertebrae are basically fabricated from sluggish twitch of type 1 fibres. Spine activation for the duration of the sets confirmed that this muscle is an essential prime mover in squats. The functionof these muscle tissue is to inhibit extra compressive, shear and rotational forces among spinal segments. Whereas the muscles of stabilisation which include quadratus lumborum, psoas, external obliques, rectus abdominis, gluteus medius and adductor complex have their attachment from pelvis to spine. Thereby switching the loads among upper extremity and lower extremity, provides

PROTOCOL:

R.BOSS CHANDAR
BPT Intern

The integrated multi joint free weight resisted exercise program which, strenghten the erector spinae consists of, barebell squat, bench press, prone bridging, back & front squat and prone superman exercise.

SLOUCHING POSTURE AND ERECTOR SPINAE:

Main function of erector spinae is to keep the spine upright. It is the important postural muscle. When we are tired the brain singnal the body to take rest. For most of us the rest signal manifests as slouching posture. Overtime body recognise the slouching posture as a preferred posture and feel comfort to maintain in slouch. Sitting in slouched posture causes excessive strain over the back musculature resulting in excessive pressure on the joints, muscles, disc causing pain. So, the important step to be taken in strengthening the erector spinae, which could retrain ideal posture of the back. Thereby, exercising the erector spinae prevents further complication related low back pain by maintaining the spinal alignment.

CONTRAINDICATIONS:

- LBA Secondary to any other orthopaedic condition such as acute disc buldge, IVDP ETC.
- Any neurological condition which affects the coordination.
- Any recent fracture or injuries at upper limb.
- Any recent history of injury to knee & ankle joint especially ligament instability.

CONCLUSION:

The integrated multi joint free weight resistance training were effective in reducing the chronic non specific low back pain especially for erector spinae muscle.

SWITCH TO PLAY IN WRITING, WITHOUT WRITERS CRAMP

WRITERS CRAMP

N.Dharani.
BPT- INTERN

Now a days, our life has been completely alls as well. As the children are using smart phones for a longer time which could weaken the hand musculatures affecting their writing ability Recently it has been found, one of such condition is called as writer's cramp. It is a commonly unnoticed muscular disorder caused by the spasms of certain muscle group, especially the intrinsic muscles of hand & fingers of the writing hand. It is said to be profoundly affecting the student's population and most preferably get worsen during the time of speed writing. Recent reliable studies states that the quality of writing were affected due to writer's cramp. The reason for the present younger generation experiencing difficulties and hesitating to write is because of writer's cramp which hurts their hand while writing.

Certain articles reviewed the mechanics of writing - the proximal muscle of the upper limb provides stability and the distal hand muscle provides mobility. Hence, my article emphasizes the importance to increase the mobility of the writing hand and the speed of writing.

REASONS FOR CRAMP:

- Intrinsic muscle weakness.
- Pen holding position
- Aging process
- Reduce glycaemia production in muscle
- Muscle fatigue
- Reduce pincer grip

HOW TO GET RID OUT OF CRAMPS:

So my friends don't be worried, I am here, not to say "stop using Smartphone's, tabs or other electronic goods. Instead I wish to share you a trick to prevent these unpleasant Cramps. "THERAPUTTY" is a Simple exercise which can do wonders. There are set of exercises hand (squeezing, Finger spread, web pinch) that could improve hand muscle strength such as power web, hand gripper, table with pulleys, free weights etc.

Though these exercise sounds like an older technique, the creative technique of using colorful hand theraputty with different resistance marks its significance. [Resistance with 6- color coding: Tan- xx soft, yellow-X- soft, Red-soft, Green-medium, Blue-firm, and Black-firm resistance].

The theme of this article is all about – "Start to use Theraputty strength training" daily for 10 minutes. [10 repetitions of each exercise per day with a rest period of 3 minutes in between the 2 exercises]. Do it regularly for about 5 weeks - 10 minutes per day, three days in a week.These simple exercises will improve the intrinsic muscle power which has greater impact in the betterment in the handwriting variables.

THE BENEFITS OF THIS TECHNIQUE INCLUDE:

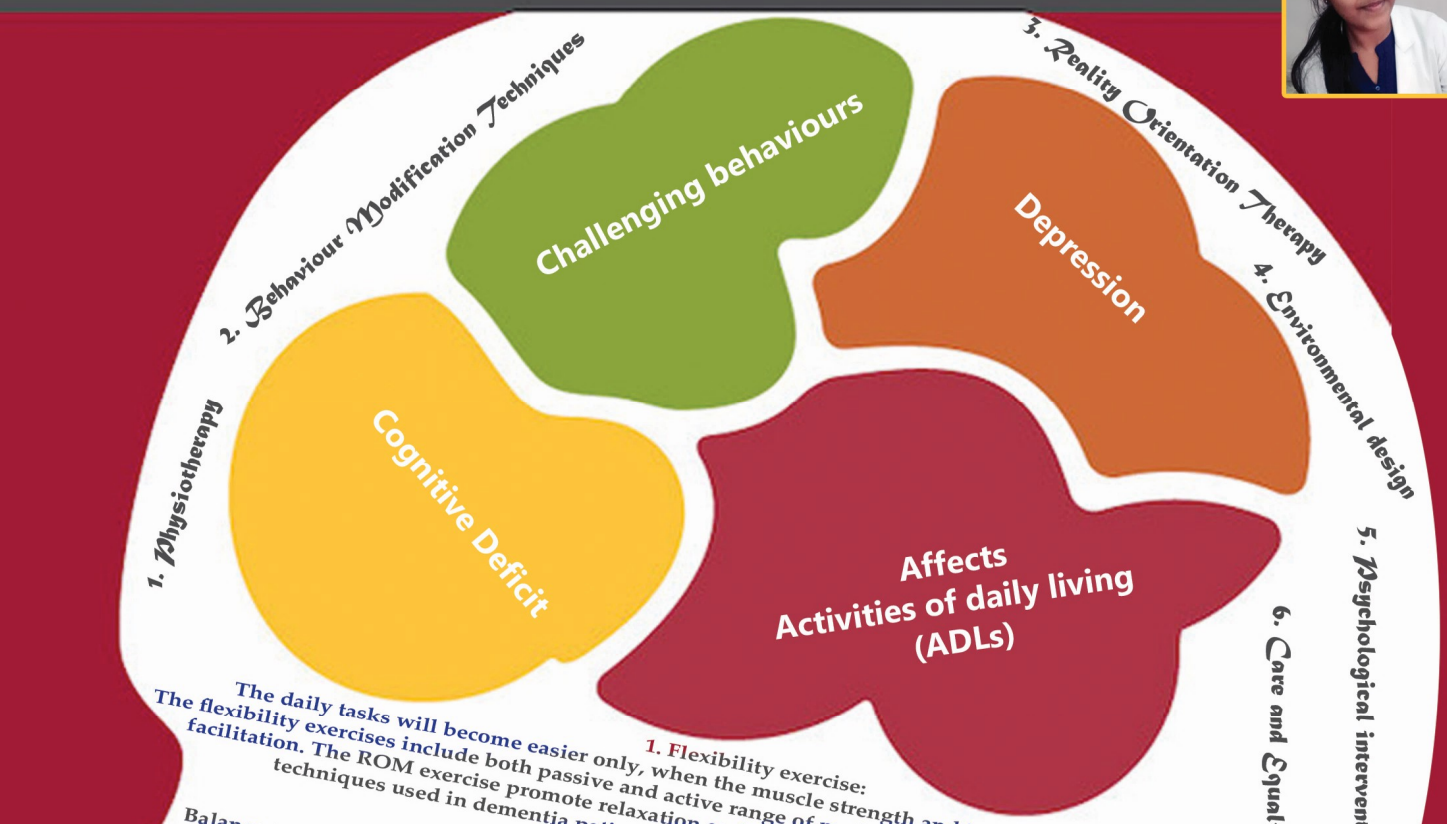
Reduce stress.
Increases muscular blood supply.
Increases the protein synthesis in muscle.
Reduce muscle fatigue & stress.
Increases the muscle power.
Increases the Speed of handwriting
Increase the quality of writing

Discard Dementia

Dementia is the chronic disorder produced by brain disease or injury. In dementia there is a significant loss of intellectual abilities like lack of memory capacity, difficulty in involving with occupational or social functioning. It affects memory, perception, language, cognitive skills and behavior. The prevalence of dementia increases by the age of 65, its estimated prevalence is 5-10% and at 85 it is 25-50%. It is expected that the incidence of dementia will rapidly increase from 2015 to 2050. In 2015, 47 million people were living with dementia, in 2030, 75 million and in 2050, 135 million people will be affected. People usually don't want to lose their independence and quality of life as a consequence of ageing. Exercise has a positive effect on older patients with dementia and results in a significant improvement in cognitive and functional activity. Thereby, I'm going to narrate about the exercise routine to discard dementia.

aN exercisE to attaiN sanitY

K. Divya
BPT Intern



1. Flexibility exercise:

The daily tasks will become easier only, when the muscle strength and joint range of motion is good. The flexibility exercises include both passive and active range of motion exercise and proprioceptive neuromuscular facilitation. The ROM exercise promote relaxation and the PNF hold relax and contract relax are the common techniques used in dementia patients. This technique will help to improve joint flexibility.

2. Balance training:

Balance training is given to prevent the risk of falling and refine confidence. They help the patient to raise general body coordination and contribute better sense of surrounding space and environment.

3. Strength training

In dementia the patient's has lean muscle mass. By giving strength training the blood sugar will be kept under control and there is increase in metabolic rate. Normally 10-15 repetitions of 8-10 exercises should be performed thrice a week. Resistance may be applied with dumbbells, therabands, springs, etc.

4. Gait training :

Gait re-education helps to improve functional ability and mobility without support. The intention are to broaden BOS (Base of Support), lengthen stride, improve stepping, improve heel–toe gait pattern, increase contralateral movement and arm swing and pledge a routine regular walking.

5. Aerobic exercise :

Aerobic training helps to improve cardiovascular health, nourish the hormones of immune system. Aerobic exercise includes cycling, jogging for utmost benefits 30 minutes session thrice a week is suggested. Depending on the fitness level the treatment time starts with 10-20 minutes.

Conclusion:

Dementia is the most common disease affecting the aged person. The physical therapy used as a measure to magnify the quality of life of the patient via enhanced self esteem, improve memory capacity and have positive impression on counteracting the depression, anxiety, stress, boost in confidence and helps to sleep better as well. Thus physiotherapist acts as a mediator to improve mental health of the patients.

Pain is described as an unpleasant sensory and emotional experience leading to discomfort or agony and is associated with actual or potential tissue damage while the chronic pain implies biological factors interacting with psychological factors and both are further influenced by patient's social, cultural and environmental factors, contributing to the individuals experiencing pain. Treatment of chronic pain has always been a challenging field for therapists and researchers.

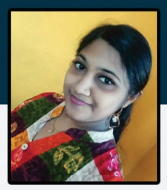
CENTRAL SENSITISATION

Biological Factors in Chronic Pain:

1. Nociceptive pain is a response to a local noxious stimuli (thermal, mechanical or chemical).
2. Peripheral neuropathic pain occurs as the result of a disease or damage affecting peripheral nerves.
3. Centrally-mediated pain, involves central sensitization, which results in an hyper-responsiveness, or hypersensitivity, of the ascending nociceptive input in the CNS, while the descending anti-nociceptive pathways are inhibited. It is now recognized as one of a major key factor in the diagnosis and management of chronic centrally - mediated pain.

Central Sensitization may be present in many conditions such as fibromyalgia, chronic fatigue syndrome, chronic neck and low back pain, osteoarthritis etc. It leads to pain, which is not in accordance to the anatomical features of the injury or diseas. It persists beyond recovery of tissue injury, and accounts to pain mechanism due to spontaneous discharge of central neurons without any peripheral driver.

A PAINFUL CHALLENGE FOR PHYSICAL THERAPISTS



S. DEEPIKA SHRISTHDHI
SVCOPT ALUMINI

Assessing and differentiating central sensitization pain from others:

The history that documents the individual's medical history, comorbidities, employment and lifestyle, as well as information on their pain history, including: Pain characteristics (subjective account), Pain beliefs and its biases, Previous treatment and its effectiveness, Expectations for care, Sleep patterns and Medications - dosage and its compliance.

BIOMARKERS:

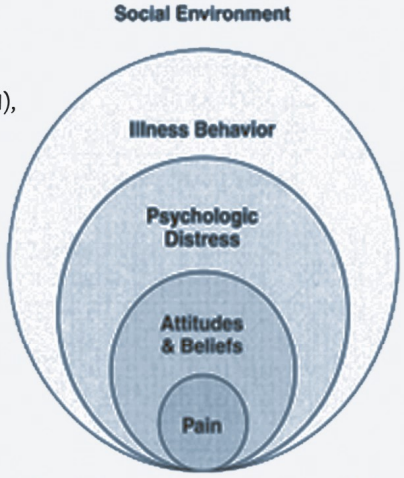
(1) alpha-1 antitrypsin,
(2) myeloperoxidase (MYP),
(3) soluble tumor necrosis factor, alpha receptor II (TMF II),
(4) erythrocyte sedimentation rate (ESR),
(5) C-reactive protein (CRP),
(6) brain derived neurotropic Factor,
(7) resistin,
(8) apolipoprotein,
(9) cortisol,
(10) prolactin, and
(11) epidermal growth factor.

OUTCOME TOOLS:

1. The Pain Detect Questionnaire
2. The Neurophysiology of Pain Questionnaire
3. The Central Sensitization Inventory
4. Fear Avoidance Beliefs Questionnaire

APPROACHES FOR PAIN MANAGEMENT:

The biopsychosocial model for chronic pain management proposes that the experience of pain can best be understood as a combination of pathology (e.g., tissue damage, physiological disease processes), psychology (e.g., mood, emotional distress, fear, thoughts and beliefs) and social or contextual factors (e.g., culture, environment or resources). Thus, the biopsychosocial model warrants the need for physiotherapists to incorporate assessments and treatments program that reflect the inter-connections of biological, psychological and social factors in the people with pain.



The biopsychosocial model

Fear Avoidance belief:

7 R'S TO RECOVERY

1. Rule out
2. Reassurance
3. Reactivation
4. Relieve
5. Re-evaluation
6. Rehabilitate/recondition
7. Refer

SAY GOODBYE TO SCIATICA, IVDP & SPINAL PAIN USING "SDT WITH DTS"

MRS. M. MALARVIZHI
ASSISTANT PROFESSOR

One of my student, 19 years old girl studying in our college was diagnosed with IVDP almost 1 year back. She has lot of difficulties during class time and examination time due to prolonged sitting and standing. She had complaints of severe back pain and weakness in right side lower limb. So she had undertaken treatment of traction, IFT in our department and medication too. Because of her I had searched for recent technique of spinal decompression that was when i came to know about Decompression Traction System (DTS).

DTS is used for spinal decompression therapy (SDT), it is a current form of spinal traction to relieve pain and facilitate healing. Back pain affects up to 90% of the population. LBA is a very common health issue worldwide. It can be acute, sub acute, and chronic and affects people of all ages from children to elderly.

The global burden of disease (2010) estimated that LBA is one of the top 10 disease and its prevalence is 60% to 70%. It may compress the underlying structures as result of irritation on the spine there may be compression pain. It induces numbness and muscle weakness in the area where the nerve travels.

What condition does spinal decompression treat?

It is an effective treatment for herniated disc, multiple herniated disc, sciatica, Post surgical patients, Facet syndrome, Spinal stenosis, Hypomobility, Compression fracture, Degenerative joint disease (DJD) and Degenerative disc diseases (DDD).

How does spinal decompression traction system work?

SDT is an automated decompression table in both face up and down positions, as the table pulls on your spine it slowly stretches your spine and increase space between 2 spinal bones, it creates a negative pressure in the disc, which helps to suck the disc back inwards and away from the nerve that is being pinched. There is provision to give lateral pull as well, this facilities are not available in conventional traction system.

The main difference between normal spinal traction and DTS is that it is designed to sense the reaction to the pull and force of the pull, it is able to lessen the pull. In this machines, there is constant measurement of force being between the machine and the patient to determine any muscle guarding during treatment.

The purpose of this measurement is to allow machines to adjust the distraction force and secondly the pumpimg action of the table pushes nutrients out creating a nutrient exchange in the disc level. Its speed up the healing process, it can increase 1-3mm IVspace over the treatment cycle. Research has shown that there is reduction in the disc bulge. Studies proved up to 85% of pain relief.

FINANCE

A. GENESIS/INITIAL

1. PERSONAL INVESTMENT
2. LOVE MONEY (WELLWISHERS)
3. VENTURE CAPITAL
4. ANGELS
5. BUSSINESS INCUBATORS
6. GOVERNMENT GRANTS &SUBSIDIES
7. BANK LOANS

B. RETURNS

1.PROFESSIONAL EXCELLENCE AND STEWARDSHIP
2.INTEGRITY
3.EMPLOYEE FOCUS
4.TEAMWORK
5.COLLABORATIVE RELATIONSHIPS
6.ACQUISITION OF SKILLS
7.TURN OVERS

MARKETING

1. LOYALITY TO CONSCIENCE
2. STAY POSITIVE
3. MEASURE PATIENT LOYALLY
4. BUILD A WEBSITE
5. START A BLOG
6. PHYSIO SEARCH ENGINE OPTIMIZATION (SEO)
7. PAY-PER-CLICK (PPC) CAMPAIGN
8. CLEAN UP YOUR LAYOUT
9. PUBLIC ACCESSIBLE HEALTH CAMPAIGN
10. SOCIAL NETWORKING
11. MEDIA FRIENDLY

BEHOLDING & BECOMING

SCHEMA TO BE A PHYSIOPRENEUR

ATTITUDE

1. CONFIDENCE TO TAKE OWNERSHIP
2. GOOD PURSUATION & NEGOTIATION SKILLS
3. FOCUSED SET & ACHIEVED SKILLS
4. STRONG DECISION MAKING SKILL
5. CRYSTAL CLEAR MOTIVE

REGISTRATION WITH RELIABLE STATE AND CENTRAL COUNCIL OR ASSOCIATION IS MUST

B.SIMULIA DHINJU PT,
Asst. Prof

MANAGMENT

1. WHOLISTIC IN APPRAOCH
2. INITIATIVE OF NEW IDEAS
3. ACCEPTING HEALTH COMPETITOR
4. TIME MANAGEMENT - BALANCING AND AVOIDING DISTRACTIONS BLOCKING YOUR ACCOMPLISHMENTS)
5. STABILITY OF TENURE
6. ANALYSIS OF CURRENT ECONONMY AND PLAN OF TREATMENT TARIFF
7. SUBORDINATION OF INDIVIDUAL INTO GROUP INTEREST
8. EQUITY IN DELIVERING PHYSICAL THERAPY
9. PARALLELISM OF AUTHORITY AND RESPONSIBILITY
10. FITTEST FOR THE SURVIVAL (BRIDGING THE GAPS OF KNOWLDGE)
11. QUALITY ASSURANCE

Most people have heard of ergonomics in relation to the office and computer work stations. Ergonomic services for a variety of environments and industries besides office in cluding but not besides those areas, there are many other areas and specialties of ergonomics like Forensic ergonomics, Aerospace, Military, farmers. There is the myth that ergonomics takes too much time and cost. The fact is, if observe the nature of work for a while will make us easy to assess and advice for modification which take a minimal time without dither their routine.The cost is far minimal compare to the loss for company due to failed Ergonomics. Many ergonomic programs are focused on reducing and eliminating hazards at work, decreasing the risk for injury and minimizing discomfort for workers also.

The benefits of integrating ergonomics into all business operations include: Increasing work productivity and work quality,Improving employee engagement and morale,Increasing worker retention rates and increasing turnover,Promoting a better safety culture. Another important concern that no two workers are exactly the same as far as height, size, weight, and shape are concerned, there is no "one-size-fits-all" solution to accommodate everyone.

WORK WITH HEALTHY MIND AND BODY

K.ANAND BABU PT
Associate Professor

INDUSTRIAL ERGONOMICS

A DAY OUT TO VISIT WORKERS ONSITE

With all my expectations I entered the visitor's gate of the company. It was a company which produces our personal products like soap, shampoo, powder etc. India's leading personal brand Production Company which have more than 2000 workers for 4 shifts.

While we got to introduce ourselves to the team HR of that company. They started to take us to the tour. The company has 4 different units for different products which have different nature of work.

We observed each and every workers from diverse nature of work in each unit. All have individual need of ergonomics.

We started assessing them on their workstation itself without disturbing the production.

What makes us wonder is at most the factory equipped with ergonomically designed machines. Like all products shifted from one place to other by conveyer belt. Which was previously 3 feet height so the workers use to bend back to reach one place to other place. Now it converted spiral conveyer, which made it with the height of six feet. It was ergonomically reduce their back strain. Our work made very simple.

We access all workers in the general shift and personally taught the modification in the work station & their body mechanics. Which include weight lift, posture, and alignment. Shifting the product with minimal strain. Also gave the psychological support to all the workers.

End of the day, we got good feedback from workers that the session was very useful and they want to make it routine. So we left with lot of positve vibes.

J.THASBIA
BPT-INTERN

MUSCLES WITH SPECIAL NAMES

1. Boxer's Muscle - Serratus Anterior.
2. Climbing Muscle - Latissimus Dorsi.
3. Cheating Muscle - Superior oblique.
4. Anti rape Muscle - Gracilis
5. Safety muscle of tongue - Genioglossus
6. Tailors muscle - Sartorius
7. Muscle of marriage - medial rectus
8. Muscle of divorce - lateral rectus
9. Swimming muscle - Pronator quadratus
10. Swing muscle - Pectoralis Major, Gluteus Maximus
11. Red muscle - postural muscle
12. White muscle- extra occular muscle
13. Spurt muscle - brachialis
14. Shunt muscle -brachioradialis
15. Quadrilateral - thyrohyoid.
16. Straplike - sternohyoid & Sartorius.
17. Straplike with tendinous intersections - rectus abdominis.
18. Fusiform - biceps, digastrics.
19. Triangular - adductor longus, temporalis.
20. Shawl muscle - Trapezius.
21. Laughing/Smiling muscle - Zygomaticus major.
22. Unipennate (fibres arranged to insert in a diagonal direction onto the tendon allowing great strength) - Flexor policis longus, extensor digitorum longus, peroneus tertius.

23. Forgotten Muscle - Subscapularis
24. Circumpennate - Tibialis anterior.
25. Spiral or Twisted fasciculi - Trapezius, Pectoralis major, Latisimus dorsi, Supinator.
26. Cruciate muscles - Sternocleidomatoid, Adductor magnus, Masseter.
27. Subcutaneous muscles - Platysma, Palmaris brevis.
28. Longest muscle - Sartorius (tailor muscle).
29. Smallest muscle - Stapedius.
30. Locking muscles - Popliteus.
31. Casser's perforated muscle - Coracobrachialis.
32. Coiter's muscle - Corrugator supercilli.
33. Rider's muscle - Adductor muscle of thigh.
34. Valsalva's muscle - Muscle of Tragus.
35. Sommering's muscle - Levator glandulae thyroidae
36. Thelle's muscle- Superficial transverse perinea muscle.
37. Toynbee's muscle - Tensor tympani.
38. Wilson's muscle - Sphincter urethrae.
39. Wrinkler muscles - Corrugator supercilli (Coiter's muscle).
40. Sibson's muscle - Scaleneus minimus.
41. Gavard's muscle - Oblique fibres in the muscular coat of stomach.
42. Oehl's muscle - Strands of muscle fibres in the chordae tendinae of the left A-V valve.
43. Rotator Cuff muscles(SITS) -Supraspinatus, Subscapularis, Infraspinatus, Teres Minor

Mime as a therapy


R.Prabakaran
Tutor

The effectiveness of exercises have always been debatable, till it is achieved functionally. Various studies describes the evidences from the trials that does not become integrated in clinical practices.

A non–verbal technique of narration human gestures and body movements has shown to improve learning, as an evidence of role of motor cognition. The utilization of emotional input to access better movement pattern is referred to as mime therapy. Mime therapy's effect is best noted in facial synkinesis. Though the basis of synkinesis is multifactorial, it causes functional limitation and may lead to social isolation. This article narrates about the evolution of mime therapy and its importance.

Mime is a performance art based on non-verbal expression. The best known form of mime is pantomime; the word deriving from 'pan' meaning all (of the body), and "mime" meaning to convey a message without words. Pantomime is telling a story without words and may be compared to figurative painting; the picture tells the story.

Mime is an abstract form of acting and is based upon three physical aspects: the skeletal, nervous and muscular systems. The movements used in mime are distilled from reality; real life is analysed and interpreted as new theatrical signs and images. Mime demands a highly refined control of the body, in acting the body is the means of expression.

Mime Corporel

A new form of mime, 'mime corporel', was founded by Etienne Decroux (France, 1898-1991), the father of modem mime. The body and movement analysis in 'mime corporel' is fundamentally different from that of the medical world. Whereas practitioners such as physiotherapists analyse the body in terms of its anatomical structure and relate movement to function, 'mime corporel' analyses the body and its movements entirely in terms of expression possibilities in space.

The basic principles of 'mime corporei' are: movement is rhythm of the body in space and time; the essence of a movement is made visible by 'parasite' movements. To perform, the mime artist has to leam to 'isolate' and 'articulate', respectively to move and to emphasise specific movements. The most important training aspects in 'mime corporei' are 1. Respiration. 2. Articulation of movement. 3. Alertness and awareness of direction.

From mime to Mime therapy:

Jan Bronk, one of the pioneering Dutch mime artists, took the analysis of Dccroux a step further. As a teacher at the mime school (a department of the College of Arts in Amsterdam) he developed the analytical principles into a teaching model.

In addition, he adapted mime for a wider social application and was especially interested in its possibilities in the area of health care. He was convinced that mime could assist in giving a powerful impulse to mental and physical activity in handicapped people He developed a way of working using functioning capabilities to assist activation in less well functioning areas Based on 'mime corporei', he made an analysis of the face, especially emotional expressions, in order to help patients with facial nerve paresis.

Elements of physiotherapy entering Mime therapy

Considering the fact that in 1980 Jan Bronk trained physiotherapists in Mime therapy, the content of the treatment changed from mime to a combination of mime and physiotherapy Specific items were elaborated such as stretching of facial muscles, inhibiting synkineses by counteracting movements, and co-ordination exercises between the affected and normal side of the face. The medical history and examination were improved by the introduction of standardised intakes and measurements.

Mime therapy in its present form

Mime therapy as applied these days is a combination of stimulation of facial emotional expression and functional movements. Furthermore the therapy is on an individual basis, as is the follow-up. The present form of Mime therapy consists of: a. information about treatment and prognosis; b. auto-massage of face and neck; c. breathing and relaxation exercises; d. specific exercises for the face to co-ordinate both halves and to decrease synkineses; e. eye and lip closure exercises; f. letter and word exercises; g. expression exercises.

The aim of the treatment is to promote symmetry of the face at rest and during movement, the patient being simultaneously taught to control synkineses.

Future Forecast

Mime therapy is used mainly in the Netherlands and based upon clinical reports it is a promising treatment. For an international introduction, Mime therapy has to be based on scientific evidence. The results of a randomised controlled trial in the effectiveness of Mime therapy will provide evidence for this treatment approach. As there is little known about the working mechanisms of Mime therapy, further research has to be carried out concerning this aspect.

Eswarya G.
BPT Intern

THE ROLE OF PHYSIOTHERAPY IN PRE AND POST NATAL WOMEN

Deliver Strong & Restore the Core

The physical changes to a women's body during pregnancy are multiple. The centre of mass changes, there is more pressure on the organs, and there is increased weight to be carried. All of these in a relatively short span of time often leads to back pain, pelvic pain and urinary incontinence. In fact, over two thirds of pregnant women experience back pain, one fifth experience pelvic pain and over 40% experiences urinary incontinence in their first pregnancy – with half remaining incontinent at 8 weeks of post-partum, and one third experiencing a new onset of incontinence after childbirth.

Evidence shows that group training programs designed and delivered by physiotherapists can relieve low back pain, pelvic pain and urinary incontinence in pregnant women.

A randomized controlled trial by Morkved et al., reported that 289 pregnant women were taken under 12 weeks of specially de-signed group training by the physiotherapist where found to be effective in preventing the lumbo-pelvic pain at 36th week of pregnancy. The trial group participated in physiotherapy, exercised 60 minutes a week from the 20th onwards. There were significantly fewer women in the training group that reported lumbo-pelvic pain during pregnancy and after delivery.

A Cochrane review conducted in 2007 looked at interventions for preventing and treating back and pelvic pain in pregnant women, they found the evidence for strengthening exercises, pelvic exercises, and water gymnastics reduces low back pain intensity better than standard prenatal care.

Another study by Morkved et al. with 301 pregnant women showed strong evidence for the prevention of urinary in-continence after a 12 week intensive pelvic floor muscle training supervised by physiotherapists at both 36 weeks of pregnancy and 3 months post-partum. Harvey's 2003 study of pregnant women showed that post-partum pelvic floor muscle training appeared to be effective in decreasing post-partum urinary incontinence.

In 2005 the Canadian Physiotherapy Association and the Society of Obstetricians and Gynecologists of Canada issued a joint policy statement on Postural Health for Women and the Role of Physiotherapy. With respect to pregnant women, the joint policy statement recommends:

1. Physiotherapists directed the pelvic floor muscle training to prevent urinary incontinence during pregnancy and after delivery.
2. Physiotherapist directed core stability training to prevent and treat back and pelvic pain during and following pregnancy.
3. Utilize an individualized approach – even in a group setting;
4. Enable group discussion and education regarding pre and post natal issues.

The goal of such a program would be to offer women improved prenatal fitness – that would lead to a healthier and easier pregnancy and delivery. A good program would also offer an integrated approach to health care – and share detailed assessment findings with the participant's primary and pregnancy health care providers. As well, for women who are experiencing a high risk pregnancy, private sessions should be arranged with strict observation of the health care provider's restrictions with a focus on maintaining the pelvic floor and alleviating pain. In researching this subject matter, the author discovered that the ideal program as described above – does not exist in our area. The program will be delivered in two parts

– one for pre natal mothers called —Deliver Strong, and
– one for post natal mothers called —Restore the Core.

Thus, exercising during and following pregnancy will make sure that your pregnant patients are at their best for the birth of their baby.

ARE YOU AWARE OF PONSETI TECHNIQUE FOR NEGLECTED CLUBFOOT?

S.HIMA
BPT Intern

Clubfoot, also referred to as congenital talipes equinovarus (CTEV) is a congenital contracture of the joints of foot showing the signs of ankle downward flexion and forefoot adduction. The common conservative treatment for clubfoot in children below the age group of 2 years is by manipulation and casting. There are distinctive remedy techniques for correcting club foot deformity relying upon the severity and versatility of the deformity. Nowadays the Ponseti technique is the fine choice of remedy that gives clubfoot sufferers 95% to 100% result if followed appropriately. The Ponseti's technique is painfree, less expensive and victorious in all clubfoot cases in and around the world. It is recommended and authorized by World Health Organization.

PONSETI TECHNIQUE IS....

The combination of conservative manipulation and casting followed by surgical correction of the Achilles tendon known as Achilles tenotomy. The ponseti technique was introduced in existence by means of Dr. Ignacio Ponseti on the Iowa university in United States.

The manipulative treatment is based on the properties of the human body that reciprocate to involuntary stimuli which results in scaling down of the deformity. Under mild manipulations, the joints, tendons and ligaments are stretched. As an end result, the displaced bones are gradually added into the proper alignment, which are progressively remodelled but retaining congruence. After months of manipulation followed by casting, the foot seems barely over corrected. However, after some weeks in splints, the foot looks ordinary.

Foot manipulations require an intensive knowledge of the constitution and basis of normal foot and about the abnormality in the clubfoot. Substandard manipulations will in addition complicate the deformity seen in clubfoot. Non-operative treatment will be triumphant better if it begins a few days or weeks after childbirth.

HOW TO DO???

The Perani scoring is one of the simple tool used to determine the severity of the deformity and to supervise the progress of the treatment. Ponseti Method requires 5 Series of Casting. They are as follows.....

STEP 1:

For Score 6/6, manipulation is done over the head of talus for minimum of 15 repetitions and is held in a position with the application of pressure for 8 seconds to confirm complete stretching of Abductor Hallucis Longus (AHL) and Tibialis Posterior (TB) muscles. Following manipulation POP Cast is applied.

STEP 2:

For Score 5/6, the same procedure is followed as in step 1 but by applying more stretch on the AHL and TP muscles with the feet preserved in a supinated position with intense abduction.

STEP 3:

For Score 4/6, same manipulation is performed following which casting with more stretch than in step 2 is applied to the AHL, TP, FDLL and counter stress is carried out for deformity correction.

STEP 4:

For score 3/6, same manipulation is done and in addition to which dynacast is applied over the POP cast for the conservation of position in the deformed foot.

STEP 5:

For score 2/6 it is definite that the foot needs over correction following tenotomy by means of POP cast.

TENOTOMY & BRACING:

Following the perani scoring a BP blade of size 15/11 is placed parallel to the tendoachillis tendon, just 1cm over the insertion at calcaneus. The blade is fixed perpendicular to the tendon at 90 degree. The tendon is cut in medial to lateral orientation. Later 10 to 15 degrees of dorsiflexion is obtained. Following tenotomy POP cast is applied.

After 3 weeks of surgery the perani scoring is done which is completely normal ie., 0/6. Thereafter, Dennis brown splint is fixed with an angle of 70 and 20 degrees of abduction and dorsiflexion.

Current studies have indicated that there is 41% rate of early recurrence following the use of ponseti method which can be corrected by further lengthening of the Achilles tendon followed by Mitchell bracing shoe. In order to prevent future recurrence it has to be followed periodically by the physiotherapist up to 4 years of age.

KLAPP METHOD FOR IDIOPATHIC SCOLIOSIS

DO YOU KNOW SOMETHING ABOUT KLAPP METHOD?

Klapp's method also known as Kriechmethode (crawling method) which developed in Germany in the beginning of the 20 century as a method for treating idiopathic scoliosis. This concept was created by orthopedist Bernhard Klapp and soon after if was developed by his son Rudolf Klapp. It was a non surgical method established with the aim of correcting the spinal curvature by stretching and strenghthening the back muscles.

It was noticed that during crawling on all fours, at a certain moment the spine gets exposed to a mobilizing, exercising and corrective influence so he established exercise programme where children with idiopathic scoliosis were treated on all four positions. The therapy of the idiopathic scoliosis with help of complex exercise on all fours became not only the most used therapy in Germany for treating scoliosis. but also used as a prevention of wrong body posture by children in the school age and it is slowly gaining momentum all over the world.

Scoliosis is a progressive and deforming musculoskeletal dysfunction of the spine. It is characterized by a three-dimensional vertebra deviation, which has lateral inclination in frontal plane, along with contralateral rotation in transverse plane and alignment in sagittal plane. Scoliosis has been associated with uneven growth of intervertebral disks, pubertal growth, as well as imbalance of stabilizing deep spinal muscles. However, in most cases (80–85%) the cause is unknown, and it is called idiopathic scoliosis.

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LET ME KNOW ABOUT KLAPP EXERCISE?

The Klapp method sequence are as follows: Relaxation, Crawling near to the ground, Horizontal shifts, Side shifts, Crawling sidewards, Big arches, Turning the arm and Making a big curve.

To perform the relaxation exercises, the subject was positioned in a supine position, with their hips and knees partially flexed and with the palms of their hands on top of the anterior diaphragmatic area. Deep and slow breathing patterns were used so that the subject could decrease tensions and worries. The rest of the exercises were performed with the subject in the cat and kneeling positions, such as quadrupeds. Verbal commands were used with exact and secure voice rhythms and appropriate volumes in association to constant spinal correction suggestions.

In the "crawl posture close to the ground" exercise, the subjects was supported over their elbows at 90°, with their fingers and hands in a forward position, sustaining their heads upright, hips and knees at 90° while doing thoracic hyperkyphosis and lumbar hyperlordosis. In the "horizontal sliding" exercise, the subject was in the cat position, with hips and knees at 90° of flexion, and in this position they were requested to extend their trunk and upper limbs forward without touching their elbows on the ground, while simultaneously sustaining their head upright and maintaining the distance between their hands at the width of their shoulders. After this exercise, the subjects were requested to slide their trunk and upper limbs towards the convex side of the scoliosis, which was the "lateral sliding" exercise.

In the "lateral crawl" exercise, the subjects were placed in a quadruped position, with their hands directed inwardly, bringing the upper limb forward and the lower limb ipsilateral to the concavity backwards, while sustaining the head in rotation towards the convexity. In the "big arch" exercise the subjects, also in quadruped position, extended their upper and lower limbs ipsilateral to the concavity in a diagonal pattern. Both the ipsilateral knee and elbow were kept close.

In the following exercise, the "arm turn", the subjects were once again positioned in the cat positions, with the upper limb ipsilateral to the concave side in extension and with 90° of abduction, while performing a trunk rotation followed with the head, also towards the concavity. Finally, in the last exercise, called "big curve", the subject in the cat position, performed an extension of the upper and lower limbs ipsilateral to the concavity.

In a total therapy duration of 70 minutes, each posture was sustained for 8 minutes twice a week, for 20 sessions. In order to keep the subjects posture with any aids, verbal commands from the therapist were essential to request postural corrections and support.

FREEING FLAT FOOT FOR CHILDREN

Is your children often complains of severe pain at his/her foot ?

Foot pain is common in kids. Although it's typically not serious, proper diagnosis and prompt treatment is recommended. As a parent, there are always a million things on your mind: meals,milestones, memories, and much, much more. Your child's feet are probably pretty low on that list. But if you notice flat feet, that's not something to ignore. As the name suggests, flat feet (also called pronation, flexible flat foot, and pes planus) are pretty easy to spot. Normally, feet have an arch. But for kids with flat feet, most or all of their foot touches the floor.

VIBRATE TO OBLITERATE

Although this seems like a foot problem, it actually begins in the heel. Your child's calcaneus (heel bone) rotates inward. This causes the foot to collapse inside where the arch should be. So instead of body weight being distributed evenly, your child is walking on the inside part of the foot.

There's a simple way to check. Have your little one stand barefoot, facing away from you. Take a picture from directly behind. If you can see a pinky toe and big toe, his or her feet are likely fine. If you can see a pinky toe, ring toe, but not big toe, your child is likely pronating. Although untreated flat feet can cause problems, they're not always a cause for alarm. As toddlers learn to stand and walk, flat feet are common. Your child is still developing. But if he or she has been walking for more than six months and you still see flat feet, keep an eye on them.

The treatment used for flat feet mainly includes custom-made orthosis, exercise therapies and rarely surgical procedures. Custom made orthosis is applied for pain, arthritis, unusual morphology of the foot and in case of poor response to other treatments. Various studies on exercise therapy indicate the role of foot intrinsic muscles in stabilizing and supporting the medial longitudinal arch during the stance phase of gait. Additionally, the role of extrinsic muscles in stabilizing the medial longitudinal arch during the propulsion. Studies have also shown the effects of short term exercises on decreasing navicular drop and increasing the arch height index. The problem of treating flat foot with exercises is not ensure that children have performed properly. Therefore, there is a need for a more accurate treatment with the ability to monitor the correct procedure. Whole Body Vibration has been recently proposed as an exercise intervention because of its potential for increasing force generating capacity in the lower limbs.

One of the strengths of WBV device is to control the treatment process more precisely, using a frequency range of 5 to 25Hz in stepwise manner with the gradual warm up and cool down of the body. Vibration is a mechanical stimulus characterized by an oscillatory motion. It has been studied extensively for its dangerous effects on humans at specific amplitudes and frequencies. On the other hand, recent work has suggested that low amplitude, low frequency mechanical stimulation of the human body is a safe and effective way to exercise musculoskeletal structures.

In fact, increases in muscular strength and power in humans exercising with specially designed exercise equipment have been reported. In particular, the effects of whole body vibrations (WBVs) have been studied with subjects exercising on specially designed vibrating plates producing sinusoidal vibrations. The exercise devices currently available on the market deliver vibration to the whole body by means of oscillating plates using two different systems: (a) reciprocating vertical displacements on the left and right side of a fulcrum; (b) the whole plate oscillating uniformly up and down.

WBV exercise devices deliver vibrations across a range of (15–60 Hz) and displacements from, 1 mm to 10 mm. The acceleration delivered can reach 15 g (where 1 g is the acceleration due to the Earth's gravitational field or 9.81 m/s2).

Considering the numerous combinations of amplitudes and frequencies possible with current technology, it is clear that there are a wide variety of WBV protocols that could be used on humans. Vibration exercise is quite a new topic in the treatment of Flat Foot. So, get ready to run behind your child.

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Breath is such an awesome tool in labor. It's free, available to everyone, and can be used in any position or circumstance. Breathing brings oxygen to a woman and her baby. It helps with relaxation — both physical and emotional. It brings a birthing person's awareness deep into their body, and it can be a helpful tool for rhythm and connection. Once upon a time, the hallmark of Lamaze childbirth education was "breathing" (hee, hoo, hee, hoo). Over the years, Lamaze has evolved into a comprehensive approach to childbirth, part of which are comfort measures for labor.

Breathing For Birth

This is a method of psychological preparation for child birth developed in the 1950s.It requires classes, practice at home and coaching during labor and delivery. The classes will be given during the pregnancy which includes:

- Teach the physiology of pregnancy and child birth.
- Exercises to develop strength in the abdominal muscles and control of isolated muscles of vagina and perineum.
- Technique of breathing and relaxation to promote control and relaxation during labor.
- The woman is conditioned by repetition and practice to dissociate herself from the source of a stimulus by concentration on a focal point by consciously relaxing all muscles and by breathing in a special way at a particular rate. The pattern and rate of breathing changes with the advancing stages of labor.

a. During the early first stage of labor:

- When the cervix is <5 cm dilated,contractions occurs at 2-4 mts and lasts for 40-60 sec. Then with frequency of mild to moderate strength, the mother should slow chest breathing during contractions.
- Her fingers may rest lightly on lower ribs to feel them rise and fall. She may perform an effleurage or rhythmic finger tip massage of her lower abdomen during the contractions.
- The rate of respiration is 10 or fewer breathes in a minute, increasing to 12/min as labor intensifies.

b. During active part of first stage of labor:

- From active part of first stage of labor, up to second stage, the cervix is 5cm to nearly fully dilated. Now the mother breathes quickly and shallowly in her chest.
- The rate of her breathing varies with the strength of the contractions; to as fast as once a second at the peak and slowly to every 6 sec as the uterus relaxes.
- She is coached to concentrate at the focal point she has selected, to perform the effleurage of her abdomen to relax her perineal and vaginal muscles, and to take a cleansing breathe at the beginning and end of each contraction.

c. At the end of first stage of labor:

- The cervix is almost completely dilated, and the contractions are strong, occurs every 1.5-2 mts and lasting for 60-90 sec.
- The mother feels the urge to bear down. She aids pushing before full dilatation by combining several light, shallow breathes in the chest with short puffing exhalations.

d. During second stage of labor:

- The mother head and shoulders are supported with pillows. During contractions, she is helped to draw her legs back, flexing the thigh against the abdomen, holding them behind the lower thigh with her hands.
- Her chin is tucked on her chest, the air is blocked from escaping from her lungs, her perineum is relaxed and she bears down forcibly.
- Depending on the length of the contraction, several pushes of 10-15 or more seconds, may be possible during the contractions.
- As the baby head crowns, she is asked to push lightly, so that head may be delivered slowly.

The conscious relaxation and controlled breathing of the Lamaze method can be a useful and effective comfort strategy during childbirth.

If you're pregnant or planning on becoming pregnant, you should schedule regular visits with your consultant to ensure optimum health for you and your baby. During one of those visits, you can discuss comfort strategies such as Lamaze breathing.

From this method pregnant women to keep away from fear approximately during delivery time. It will keep the rhythm and slow/deep breathing and also induce the positive vibes, decreasing ache at the time of delivery.

"DURUOZ HAND INDEX"

BACKGROUND: The Duruoz Hand Index (DHI) is a functional disability scale which was first designed in the year 1996 and was initially used to assess the hand function in rheumatoid arthritis patients. It is a questionnaire that can be used easily to assess the functional disability in different hand arthropathies. This scale has also been used to evaluate patients with scleroderma, stroke, trauma and diabetes mellitus. Assessment of hand function is usually achieved with the dynamometer and various instruments; however this scale can be used as an accurate evaluation tool to assess the hand function easily. Functional assessment of the patient is very essential in the planning of the treatment. The DHI is a practical scale which is useful in accurate assessment of hand dysfunction in various hand arthropathies.

DURUOZ HAND INDEX

Answer the following questions regarding your ability without the help of any assistive device.

C1- In the kitchen.

1. Can you hold a bowl?
2. Can you seize a full bottle and raise it?
3. Can you hold a plate full of food?
4. Can you pour liquid from a bottle into a glass?
5. Can you unscrew the lid from a jar opened before?
6. Can you cut meat with a knife?
7. Can you prick things well with a fork?
8. Can you peel fruit?

C2 - Dressing.

9. Can you button your shirt?
10. Can you open and close a zipper?

C3 - Hygiene.

11. Can you squeeze a new tube of toothpaste?
12. Can you hold a toothbrush efficiently?

C4 - In the Office.

13. Can you write a short sentence with a pencil or ordinary pen?
14. Can you write a letter with a pencil or ordinary pen?

C5 - Other.

15. Can you turn a round door knob?
16. Can you cut a piece of paper with scissors?
17. Can you pick up coins from a table top?
18. Can you turn a key in a lock?

Answers to the questions:

0 = Yes, without difficulty,
1 = Yes, with a little difficulty,
2 = Yes, with some difficulty,
3 = Yes, with much difficulty,
4 = nearly impossible to do,
5 = Impossible.

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Interpretation:

The scale comprises of 18 questions on hand functions in the kitchen, while dressing up, self-care activities, office tasks, and other general items. It has to be administered by an interviewer (physical therapist). The first component signifies activities requiring force and rotational movements (questions 2, 3, 5, 6, 11, 12, 15, and 18), the second component signifies activities requiring dexterity and precisional activities (questions 1, 4, 7, 8, 9, and 10), and the third component signifies dynamic movements requiring flexibility of the first 3 digits (questions 13, 14, 16, and 17). Patients score their ability from 0 (no difficulty) to 5(impossible to do). The questionnaire provides a total score from 0 to 90. A higher score suggests greater limitation of hand function or greater difficulty.

Advantages of Duruoz Hand Index:

The unique features of DHI are clarity in usage, it is easy to understand, simple to answer, it only takes few minutes to assess the patient using this scale, it is easy to ascess and also cost effective. As it comprises of various components representing various factors it also enables to individualize the treatment program according to the needs of the patient. It's being used in various researches inorder to evaluate the functional scoring of hand. It is reported that it is an valid and reliable scale.

DHI has been found to be an accurate and efficient tool to assess the hand function of patients in various conditions which causes functional limitation of hand. Thus the Duruoz Hand Index is an easily accessible scale which can be used by Physical Therapists to evaluate patients with hand arthropathies clinically and design the treatment programme accordingly.

we find only one tool, neither created nor invented, but perfect - "The Hand of man"

BOOST

(Better Outcomes for Older adults with Spinal Trouble)

INTERVENTION FOR OLDER PERSON WITH NEUROGENIC CLAUDICATION

Does your parents, grandparents, relatives or your geriatric cases have ever complained of fatigue, lower limb muscle weakness, tingling sensation, numbness, spasmodic type of pain. If so, Nothing to get panic because its a condition called as NEUROGENIC CLAUDICATION.

Neurogenic claudication (NC) is the symptom of lumbar spinal stenosis (LSS), causing impingement or irritation of the nerves emanating from the spinal wire. Symptoms include spasmodic type of pain, tingling sensation, numbness present over the leg, lower limb muscle weakness, fatigue, radiating into the buttocks and legs frequently observed via lower back pain. NC is a common cause of disability in adults over 65 years of age.

BOOST INTERVENTION:

A standardized program comprises the treatment duration of 90 min ie., Group conversations 30 min + 60 min exercise programme warm-ups(5 min), circuit training (30 mins), walk exercise (20 mins) and cool down (5 mins). Group based sessions delivered over a 12 week period wil show substantial improvement in muscle strength & mobility through innovative resistance training in older adults

The progressive exercise programme, starts with four set warm-up exercises, targeting joint kinematics. The exercising circuit consists of four exercises, focusing on power, stability, and stretchability and the walking circuit.

Warm-up exercises:

- Single arm raises
- Trunk rotation
- Pelvic tilting
- Single knee lifts

Strengthening exercises:

Exercising guidelines advise older adults to perform 8–10 important muscle group workout, 8–12 repetitions each, at mild to vigorous intensity, at least two times weekly to strengthen the targeted muscle groups.

- Sit to stand

- Knee extension

- Hip abduction

- Hip extension

Balance exercises:

Reduced balance is related to terrible immobility in patients with NC and related to an increased falls risk in older adults. Series of static and active balance exercises can reduce balance impairment.

Static series: Feet together, semi tandem stance, full tandem stance

Active series: Forward and backward tandem walking

Flexibility exercises:

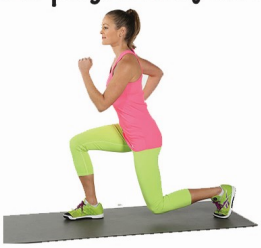
Static leg stretch: (repetition – 3 times. Hold time – 15 counts)

Walking exercise:

Impaired strolling is an identified treatment goal for older adult with NC. Walking probably reduces NC by way of enhancing blood delivery to the spinal vessels impacted by LSS. Walking can also mitigate age-associated lack of hip mobility, therefore complementing the flexibility exercising in the boost programme. intervention includes a 20-minute walking circuit.

Walking circuit:

Laid out on a flat surface to permit use of walking aids, with included limitations to progressively task mobility.



Conclusion:

This article demonstrates, the development of a physiotherapist conveyed psychological (conversation between physiotherapist & patient) and the physical exercises for older person with Neurogenic Claudication.

"Lets try BOOST To BOOST UP your livelihood"

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Make a

M
Mobility

O
Opportuinities

V
via

E
Education/
Experience

MOVE…… is a way of life..
The individual with disabilities can learn to sit, stand, walk and transfer.

M.O.V.E. program was founded by Australian born Linda Bidabe. When she was a special education teacher, she observed the difficulties in disabled persons then she created the M.O.V.E program to enable the movement of disabled persons.

M.O.V.E program is designed to help the families and learners. It is a task oriented approach in which the concepts were imbibed from the current motor control and motor learning theories. Move program that changes their attitude and way of life thus improve the life expectancy.

What is MOVE?
Is an activity based training that improves the gross motor skills with the help of instruction process and facilitate an available movement pattern.
The equipments used in the M.O.V.E program is gait belt, rolling commode, rifton solo lift, activity chair, dynamic stander, gait trainer help to achieve the level of independence in out door.

CONCEPTS:
Top down approach:
looks at learners current skills and improve their ability to move forward.
Teaching basic motor skills:
It allows more functional independance in the community.
Meaningful life skills:
live the life with acceptance and happily.

Steps to M.O.V.E:
STEP 1 - interview based approach to caregiver
STEP 2 - important activities to the learner
STEP 3 - planning activites in the way of fun and improve gross motor skills.
STEP 4 - Physical support
STEP 5 - Reduce unwanted support in motor plan activities
STEP 6 - Teach the planned activites necessary to that child.

HEALTH BENEFITS
The effect of MOVE program is preventing the contracture, minimize respiratory problems, improves joint range of motion and balanced muscle contraction by engaging in lot of physical activity which is needed.

CONCLUSION
M.O.V.E is highly beneficial to the disabled persons to improve the gross motor skills and to achieve an active participation in outdoor settings.
Some of the research article on M.O.V.E program resulted in increasing amount of independence in sitting, standing and walking.

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SUPER INDUCTIVE SYSTEM

The Super Inductive System is the high intensity electro magnetic field represents which has healing effect and a perfect treatment for the joint-skeletal and neuromuscular system. It is a innovative constructive applicator, delivers therapy with therapist and patient being comfortable and the therapy is harmless without side effects. It deals without any need of direct pores and skin contact.

HOW DOES IT WORK....

The Super Inductive System features high-tech solutions. The coil has ingenious design which allows for smooth therapy applicator procedure even under demanding operational conditions, the frequencies of up to 150 Hz and 2.5T intensity. The coil cooling system plays a major role for the most effective cooling and ensures the possibility of prolonged therapy time, the applicator is well equipped with a convenient device attached with handle through an arm with 6 degrees of freedom. It can be applicable into any parts of the body. The Super Induction System emit the electromagnetic field which targets into localized deep tissue. It can be easily adjusted into the right position by means of the 6-joint arm. The therapy has to start with proper protocol after starting the therapy it is necessary to adjust the intensity according sensitivity and operator-free and audible with running. The treatment duration is 10 -15 minutes and the intensity of the therapy is set at the beginning and adjusted during the therapy to the patient's motor threshold and the total duration of protocol depends on the Condition severity.

HOW DOES IT TREAT.....

For all the painful conditions the super induction system assures wide range of frequency. There are three different pain control theories and it has the frequency spectrum for each. It give immediate pain relief for acute and chronic conditions. The super induction therapy treats various conditions. Joint mobilization is through the repetitive contraction of the muscle surrounding the joint capsule substitute manual joint mobilization, which leads to joint play restoration. In Fracture healing the affected area improves blood circulation By high intensity electromagnetic field and leads to formation of the vascular and cartilage callus and progressive cartilage mineralization leads to remodeling of bone. In Myostimulation the electromagnetic field interaction in the neuromuscular tissue leads to nerve depolarization causing muscle contraction. The muscle facilitation and strengthening is stimulated by certain selected frequency. In spasticity reduction spastic muscle relaxation and weak muscle stimulation with the super induction system result in decrease of spasticity and improves the muscle balance in the affected muscle group.

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CONCLUSION....

The super induction system has various effects that it has immediate pain relief by 62%.It has very less frequency comparing to other high electromagnetic field device. It has 6- joint arm which can be placed on any of the body parts. Various studies concluded that super induction system has got valuable effect in many health conditions. Physiotherapist are highly beneficial and confident by using this device among patient.

NEURO DYNAMIC SLIDING FOR TIGHT HAMSTRING

This technique aims to create a sliding motion of neural structures or shape, relative to their adjoining tissues. Slider implements the movement to the nervous system proximally; at the same time, as freeing movement distally and the sequence is repeated.

Athletic activities with sudden acceleration during running or other activity such as sprinting, football, baseball, soccer, tennis can result in hamstring damage. Hamstring tightness is greater common in athletes. Tight hamstring muscle will increase the patellofemoral compressive force or pressure because of the expanded passive resistance at some stage in the swing phase of ambulation or running. Limited flexibility is the reason for numerous musculoskeletal overuse injuries, and level of fuction is affected in a person.

IMPORTANCE OF HAMSTRING:

Hamstring plays an essential role in many ADL activities all together with walking, running, jumping, stair climbing and controlling some motion within the gluteus. Hamstring strength is not only important in preventing injury, but also improving speed as well.

BENEFITS OF NDST:

- ☒Improves hamstring flexibility
- ☒Improves joint ROM
- ☒Improves muscle power
- ☒Improves athletic performance
- ☒Reduces risk of injury
- ☒Improves coordination
- ☒Reduces posterior pelvic tilt

Slide to Glide

HOW TO DO?

- ☒The subject is positioned in supine lying on treatment plinth with their neck and thoracic spine hold up in a forward flexed position
- ☒It is performed by alternate hip flexion, knee flexion, ankle dorsiflexion with hip extension, knee extension, ankle plantar flexion with cervical and thoracic spine maintained in flexion.
- ☒Movements should be performed for 60 seconds in their dominant leg for 5 repetitions upto 4 weeks, 3 instances per week.

WHAT HAPPENS?

Neurodynamic sliding technique improves the knee extension angle, the natural motion of neural structures is restored and surrounding mechanical interfaces can make contributions to reduce muscle tightness. It provides tension on the focused nerve structure proximally, and then releases tension distally. So that it improves the mechanosensitivity and hamstring flexibility.

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EMBARASSED DUE TO URINARY INCONTINENCE

THE TANZBERGER EXERCISE SOLVES IT

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Now a day's urinary incontinence has turned out to be a main health problem for girls. There may be involuntary leak of urine due to inability of bladder control and due to pelvic floor muscle weakness. During sneezing, coughing, or laughing the patient may have slight leak of urine and feel lack of ability to control urination.

So in our department I have treated the urinary incontinence patient by giving the Tanzberger exercise which is used to reinforce the pelvic ground muscle and improve the quality of lifestyle. The sensory cognizance and characteristic retraining is stepped forward using the Swiss ball. The features of the pelvic ground muscular tissues are integrated which forms the part of chain system. Tanzberger shows typical improvement in the function of the pelvic floor.

Urinary incontinence is the involuntary leak of urine because of pelvic floor muscle weakness.

Tanzberger exercise has the beneficial effect in improving the pelvic floor muscle power and quality of life in urinary incontinence patients by integrating the function of the muscle with the aid of enhancing the sensory attention and useful retraining sporting events.

Benefits: improves muscle strength & quality of life.

It includes the following exercises mainly pelvic bridging, diaphragmatic breathing exercise, static abdominal exercise, rolling the ball forward and back to back sitting.

Pelvic bridging is done by lying on the back with both knee flexed, and place the foot straight on the couch, lift the pelvis and contract the pelvic floor muscles.

Diaphragmatic breathing exercise is done by lying on the back on the floor, with knees bent and head supported, placing one hand over the upper chest and the opposite hand simply under the rib cage. We can sense both the diaphragm transferring and breathing at the same time. Breathe in slowly through the nostril so that the stomach bulges out in opposition to the hand. The hand at the chest should not be moved .

Static abdominal exercise is done in crook lying with the arms by the side, knees bend, and foot on the floor. Squeeze the gluteus and lift the rear up off the ground, and immediately diagonal to the line from the shoulder to knees.

Rolling the ball forward: The patient is asked to roll the ball forward toward the knee without lifting off the foot and keeping the lumbar spine erect. As rolling is performed, contraction of the pelvic floor muscle is to be executed and at the same time as returning, relaxation occurs.

Back to back sitting: The patient and the therapist should sit on the Swiss ball back to back. The patient is asked to pull the ball towards her with the knees which do not move and this activity is restricted by the therapist who tries to pull the ball in opposite direction. This brings about the isometric contraction of the pelvic floor muscles.

SECRET BIHIND TIBIAL NERVE STIMULATION ON URINARY INCONTINENCE

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"Sometimes you laugh, cough so hard but the tears run down your leg...!"

This article is about my UG project work on urinary incontinence. Urinary Incontinence found to be more common among post natal women, diabetic population and older age groups. It occurs due to the weakness of bladder muscles in women and reduced innervation to bladder in older age group due to many reasons. One of the profound cause is aging with diabetes chronicity. There are some treatments available for the reduction of urinary incontinence but the effect of tibial nerve stimulation is commonly, left unnoticed.

Secret behind TTNS:

The innervation for the bladder comes from sacral, coccygeal, lumbar segmental nerves originating from L2-S4. The sciatic nerve which arises from L4-S3, one of its distal branch is posterior Tibial Nerve. Stimulation of Posterior Tibial Nerve over ankle transcutaneously will stimulate the afferent neuron carrys impulse to the spinal segment (L4-S3), from the same spinal segment (S2-S4) sacral plexus arises to supply bladder and urethral sphincter. Stimulation of this peripheral nerve at the junction on postganglionic neuroeffector can modulate transmission. Therefore stimulating posterior Tibial Nerve, it will inhibit local micturition reflex arc and modulate bladder activity, thereby urinary incontinence get reduced.

POSITION OF ELECTRODE:

- *Negative over medial surface of ankle.*
- *Positive over 10 cm above medial malleolus.*

PARAMETERS:

- *Pulse duration : 200 ms*
- *Pulse amplitude : 10-50 mA*
- *Frequency : 10 Hz.*

CONTRAINDICATIONS:

Diabetic neuropathy,
Cardiac problems,
Metal implants,
Diabetic nephropathy.

CONVICTION TOWARDS TTNS:

People with Urinary incontinence fails to seek treatment because of social stigma. As TTNS is non-invasive and cost effective in reducing urinary incontinence, this treatment can be used in comprehensive way to improve quality of life, dependence and social stigmatisation

In the field of sports, Athletes has to face countless physical and mental challenges. They undertake adapting food habits, slashing sleep and overtrain for their better performance in sports which may upset their health and interrupt their venture.

The most common overuse injury in athletes is Achilles tendon injury. The tendons of the muscles gastrocnemius and soleus is attached to the calcaneum bone. It is all important for walking, running, jumping and more liable to degeneration resulting in overuse injury called Achilles tendinopathy. Athletes express it as pain, swelling, tender to touch over the back of the heel and loss of stability.

As a result of instability balance is impaired. Balance is the vital factor for athletes to perform multiple task during their contribution in the sports. Balance can be achieved with the influence of exercise. Sensorimotor training (SMT) is the form of exercise which can improve musculoskeletal disorder by reducing pain and maximize stability through progressive challanges to sensorimotor system by static, dynamic and functional situation.

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SMT alter afferent pathways to enhance the sensation of joint movement, joint stability, train co-contraction and balance with closed-chain exercises that can stimulate joint, muscles and mechanoreceptors present in the lower limb. The individual has to voluntarily move the position of ankle and maintain balance to coordinate the various exercises during sensorimotor training.

SENSORIMOTOR TRAINING PROTOCOL

WEEK 1,2:

1. Short foot exercise
2. Stand up right on firm surface then on soft surface for 30 secs
3. Stand with closed eyes first on affected limb then on unaffected limb on firm surface and then on soft surface for 10secs

WEEK 3 (In addition):

Forward stepping lunge

WEEK 5,6 (In addition):

1. Walking exercise on firm and then on soft surface
2. Toe skipping and heel skipping for 20 meters.
3. Wobble board exercise

Moreover, it also incorporates the visual and vestibular inputs, with eyes opened and then closed during sitting and standing. SMT is more beneficial to Achilles tendinopathy as it contains agility training, coordination exercise, perturbation training and stretching exercises. Thereby it improves overall ankle performance and balance.

TRAIN TROUBLED TENDON

Anxiety is a common, serious mental health problem and it is affecting student population to a large extent. Interoceptive exposure exercise is a new emerging procedure from cognitive behavioral therapy and it is an effective procedure for reducing anxiety and panic disorder.

R. Ranjani, BPT Intern

PLAN OF ACTION: All 7 exercises took place in a 2.44*3.05m windowless room containing two chairs, a desk and the materials described here. The experimenter stood quietly in the corner of the room.

SPINNING WITH PRESCRIPTION EYEGLASS: Each participant was instructed to spin at a rate of one rotation every two seconds while wearing a pair of prescribed eyeglasses. The strength of eyeglasses was +3.00 for both lenses. The experimenter instructed participants to spin for 30 seconds and rest in place for 30 seconds. Participants repeated spinning and standing in place three times for a total of 3 minutes.

STIMULUS DEPRIVATION: Participants stood in the middle of a dark room while wearing a blindfold and noise-blocking head phones for 3 minutes and eyes should be closed.

HYPERVENTILATION (1MIN): Participants stood in the centre of the experiment room and hyperventilated for 1 minute. The participants were asked to breathe in as deeply as they could and then breathe out completely at a rate of 45 breaths each minute in accordance with an audiotape repeating the words in and out at the correct pace.

HYPERVENTILATION PLUS SPIRAL STARING: Participants were seated at a desk and instructed to stare at the centre of a moving spiral, following the same spiral staring procedures detailed previously, for 3 minutes. While staring at the spiral, participants hyperventilated following the same hyperventilation procedure, described previously at a rate of 45 breathe each minute. Participants were given three times fifteen seconds normal breathing breaks, during which they were instructed to continue staring at the centre of the moving spiral.

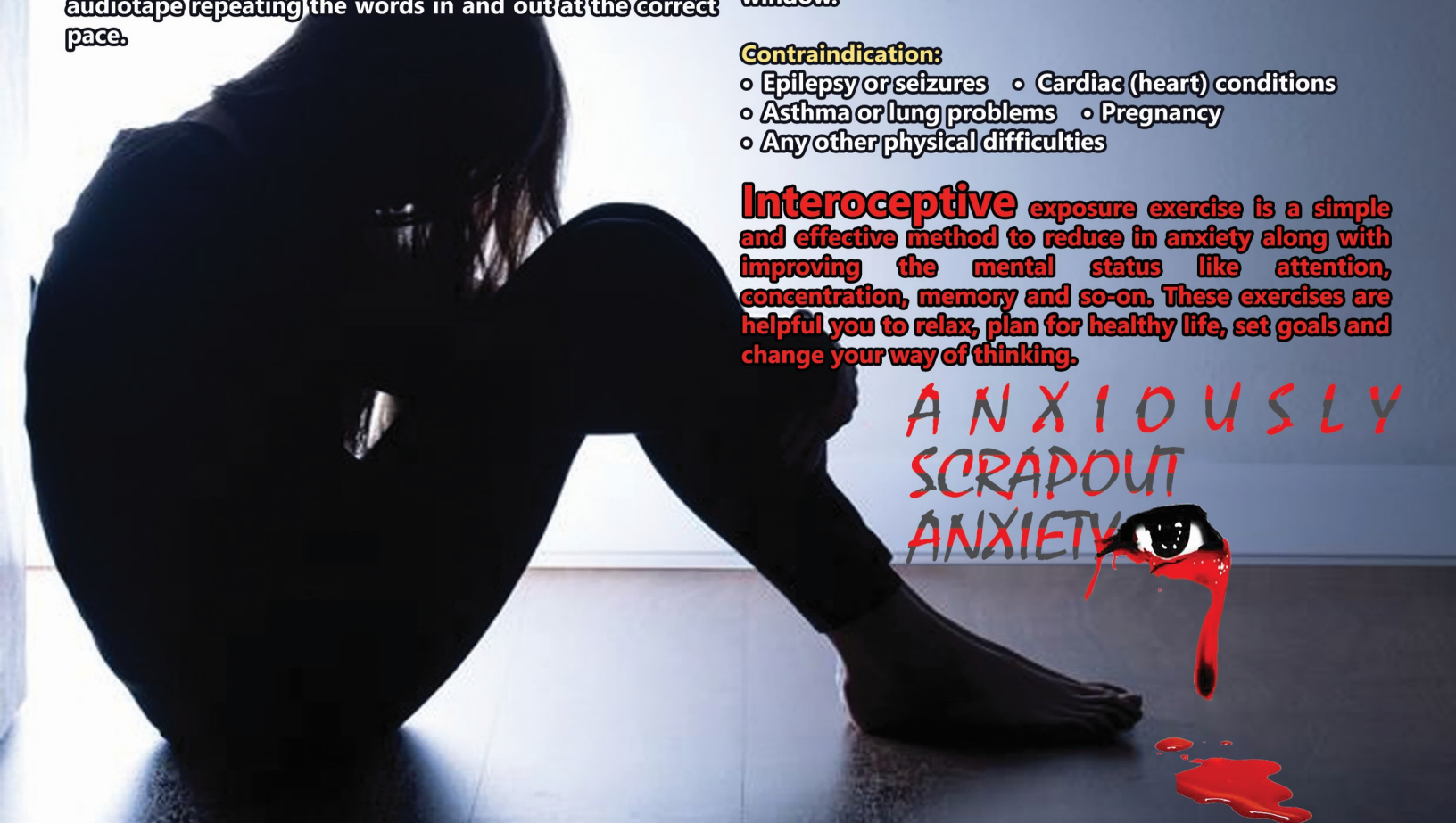
STROBE LIGHT: The Participants were asked to stand in the middle of the dark experiment room with an inexpensive strobe light placed on the seat 1m behind them. During this exercise, subjects were instructed to stand and stare at the centre of their shadow on the wall in front of them for 3 minutes. The strobe light speed was adjusted to 75% of full speed. The experimenter stood outside the participant field of vision

HYPERVENTILATION PLUS STROBE LIGHT: The participant stood in the dark room with a strobe light, following the same procedure as detailed previously while hyperventilating for the period of 3 minutes, following the same hyperventilation procedures previously described. Participants were given three 15 seconds normal breathing breaks, during which they were asked to continue staring at the centre of the window.

Contraindication:

- Epilepsy or seizures
- Cardiac (heart) conditions
- Asthma or lung problems
- Pregnancy
- Any other physical difficulties

Interoceptive exposure exercise is a simple and effective method to reduce in anxiety along with improving the mental status like attention, concentration, memory and so-on. These exercises are helpful you to relax, plan for healthy life, set goals and change your way of thinking.



Let us learn something about

Text Neck

Common treatments for text neck include:

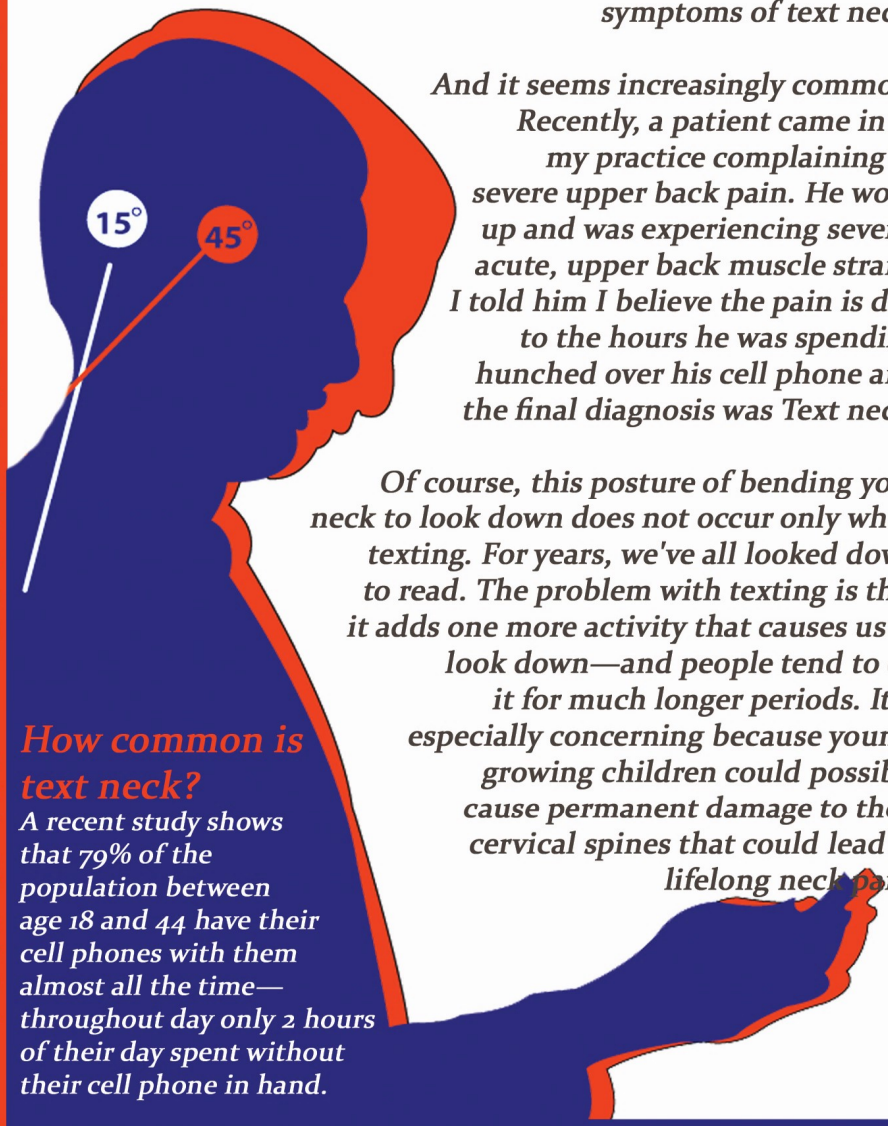
1. Postural correction: Since text neck is caused by maintaining your neck in a forward flexed position, your physical therapist will teach you to attain and maintain proper posture. This can help take stress off your neck and can help minimize your pain. A cervical roll may be used to maintain proper neck posture while lying down and sleeping.

2. Modification of the aggravating factors: Since text neck is caused by flexing your head forward while using a handheld device, your PT will offer strategies to help you understand the cause and effect relationship between your smartphone usage positions and your pain. He or she may instruct you to maintain an upright position while texting and simply look down with your eyes. Your PT may recommend special holders and devices to prop up your tablet while working to help keep your neck in a more neutral position.

3. Exercises: Maintaining your neck in a forward position while texting is likely causing your text neck, so your physical therapist will teach you exercises to counteract the increased stress and pressure that this causes. Exercises for text neck may include: Cervical retraction, Cervical extension and Scapular stabilization exercises for postural control

Your physical therapist may offer therapeutic modalities like ultrasound, heat, or ice for your text neck, but since your problem is caused by increased mechanical forces to your neck, these treatments will offer little or no lasting remedy. You must work to modify your head and body alignment while texting, and you must exercise to alter the forces acting on your neck while texting. Once you start physical therapy and work on managing your pain from text neck, you should notice that your symptoms resolve quite quickly. You should be free of neck pain within 3 to 4 weeks after starting physical therapy.

Text neck is the term used to describe the neck pain and the damage sustained from looking down the cell phone, tablet, or other wireless devices too frequently for a long time. Using a mobile device often can lead to poor posture poping out with the symptoms of text neck.



And it seems increasingly common. Recently, a patient came in to my practice complaining of severe upper back pain. He woke up and was experiencing severe, acute, upper back muscle strain. I told him I believe the pain is due to the hours he was spending hunched over his cell phone and the final diagnosis was Text neck.

Of course, this posture of bending your neck to look down does not occur only when texting. For years, we've all looked down to read. The problem with texting is that it adds one more activity that causes us to look down—and people tend to do it for much longer periods. It is especially concerning because young, growing children could possibly cause permanent damage to their cervical spines that could lead to lifelong neck pain.

How common is text neck?

A recent study shows that 79% of the population between age 18 and 44 have their cell phones with them almost all the time—throughout day only 2 hours of their day spent without their cell phone in hand.

How is text neck prevented?

First, prevention is the key. Here are several pieces of advice for preventing the development or advancement of text neck:

- Hold your cell phone at eye level as much as possible. The same holds true for all screens—laptops and tablets should also be positioned so the screen is at eye level and you don't have to bend your head forward or look down to view it.
- Take frequent breaks from your phone and laptop throughout the day. For example, set a timer or alarm that reminds you to get up and walk around every 20 to 30 minutes.
- If you work in an office, make sure your screen is set up so that when you look at it you are looking forward, with your head positioned squarely in line with your shoulders and spine.

S. Senthil
BPT Intern

Ever have issues falling asleep due to stress?

4-7-8 Breathing Technique

a simple method to induce relaxation

SHARMILA.D (BPT- Intern)

Stress is a feeling of emotional or physical tension which may be not unusual amongst people of all age groups. There are various factors causing stress like environmental factors, excessive exposure to social media and many others., which in turn leads to various psychosomatic disorders and insomnia is one of them which is very common in the current times. Relaxation techniques are very important in such cases and the 4-7-8 breathing technique is a respiratory pattern developed by means of Dr. Andrew Weil. It's based on a relaxation technique which has been discovered to reduce anxiety and set off rest, in fact it has been defined as a "natural tranquiliser for the nervous system".

The overall concept of 4-7-8 breathing can be compared to practices like:

* Trade breathing of the nostril involves breathing in and out of 1 nostril at the same time preserving the opposite nostril closed.
* Meditation of mindfulness encourages breathing at the same time as directing your attention to the prevailing moment.
* Visualization focuses your thoughts in the direction of the respiratory pattern.
* Guided imagery encourages you to pay attention on a glad reminiscence or story in order to put off your worries as you breathe.

How to do it?

Undertake a comfy sitting position, earlier than beginning the respiratory pattern, and place the tip of the tongue at the tissue at the back of the top front teeth.

Cognizance on the following respiration sample for the usage of the four-7-8 method:

* Void the lungs by means of exhaling completely
* Relaxedly breathe for four seconds through the nose.
* Preserve the breath for 7 seconds
* Exhale vigorously through the mouth, purse the lips and make a "whoosh" sound, repeat the cycle up to four instances for 8 seconds

The benefits include:

- reduce fatigue
- reduce anxiety
- decrease signs and symptoms of bronchial asthma in youngsters and children
- control stress
- decrease high blood pressure
- reduce competitive behaviour in adolescent males
- decrease migraine symptoms

My Final View:

The breathing technique of four-7-8 facilitates practitioners benefit control in their respiration. It helps people doze off in a shorter period of time when practiced regularly. As a consequence the four-7-8 respiratory approach may be without problems followed by folks who are affected by sleeplessness because of stress..

Soundariya R
BPT Intern

Making the senses better

The "Terrible-Twos": Separation of anxiety and Night terrors are less possible. These conditions are closely associated with childhood. They can cause misery to child, caregiver and family alike. They bring distress, angst, loss of sleep, and unfortunately, sometimes the need for professional intervention. What these childhood conditions generally share as a group is the tendency for people to "outgrow" them as they age. In general, we view "childhood conditions" as just that – issues we need only to worry about the children. Sensory Processing Disorder (SPD) is also a condition most commonly associated with children. Sensory processing disorder is a condition where the brain has trouble receiving and responding to information that comes through the senses.

Physiotherapists are often involved in the treatment of individuals with Sensory Processing Disorder. Some individuals with this condition will have difficulty executing fine and gross motor skills effectively.

Physiotherapy can help to support, improve and develop any fine or gross motor difficulties experienced as a result of Sensory Processing disorder. The physiotherapist will offer individualised treatment programmes which will be tailored to the specific needs and abilities of the individual.

Sensory Motor Skills

Sensory motor skills involve the process of receiving sensory input from our bodies and our environment (vision, hearing, taste, touch, vestibular, proprioception) to produce a motor response. Sensory motor integration is the capability of the central nervous system to integrate different sources of stimuli and transform it into a motor action. It is how the neurological process of integrating sensory information from the body and the environment contribute to emotional regulation, learning, behavior and participation in daily life.

SENSORY PROCESSING DISORDER

During the first initial Physiotherapy session, individuals will have their fine and gross motor skills assessed. Any problems or difficulties highlighted here will then be used as the basis of any treatment plans. The severity of motor problems is normally dependant on the type of Sensory Processing Disorder the individual has. Some children will have disordered balance and core stability, with others experiencing difficulty executing motor planning, organisation, and sequencing. These problems can lead to an awkward gait and clumsy appearance.

As well as helping to improve gross motor coordination, Physiotherapy will help to strengthen muscle control and keeping the child active. Physiotherapy can also incorporate vestibular input and stimulate somatosensory pathways of proprioception throughout treatment sessions. This can be done by using a variety of equipment with varying surface textures.

Motor skill training normally consists of physical education and movement education. Individuals who have not experienced height, touch or movement with comfort will be able to be gradually introduced to these so that they can become happier and more confident during these activities.

If the individual with Sensory Processing Disorder has difficulty with fine motor skills, the Physiotherapist can incorporate fine motor tasks in to treatment sessions, including handwriting. It is important that whatever the goal of the treatment is, interventions should be fun and often play therapy is a good way to ensure the child is motivated to participate.

All treatments performed will be dependent on the individual and the problems/difficulties they are experiencing. Physiotherapy can be highly beneficial for individuals with Sensory Processing Disorder. Over time, this improves the child's ability to process sensations more normally and engage in a happy, productive lifestyle.

Anti-aging facial exercises are also called as facial yoga. Our body contains more than 50 muscles in the face. The muscles in and around the neck and face are contracted and stretched by these exercises. The attachment of facial muscle and the skin are same, so that if the skin moves facial muscles also move this makes our face so expressive. The power of these facial exercises keeps the face much toned & younger.

NOMORE MAKE UP GO FOR ANTI AGING EXERCISES

-S.SUJITHA
BPT Intern

THE SIMPLE MECHANISM BEHIND THE FACIAL EXERCISE:

- These exercises allow us to express our emotions. The key role of the facial muscle is also same, like shaping of our face.

- This exercise prevent eye drooping and sagging neckline. It can help to maintain more youthful look of your age.

- Regular exercising will reinforce your skin and prevent drooping.

- It also increases the blood circulation all over the facial muscles thereby it counteracts the wrinkles on the face.

ANTI-AGING FACIAL EXERCISES

FACE YOGA:

METHOD: *It usually begins with sitting or standing position with straight back .Take a deep breath through mouth and need to hold air, then puff out your cheeks. Hold it for a second and exhale through nose. Repeat it atleast 6-8times/day.*

USES: *It helps to untangle wrinkles, laugh lines. Tone the face muscles, cheeks, and neck.*

EYEBROW FLEX:

METHOD: *The force is given through both of your index and middle finger on the inner and outer corners of your eyebrow, then make a "V" with your fingers and look over it. Then apply force to the fingers for effective stretching of the eyebrow. Then look up the roof and raise your eyelids simultaneously. Hold and repeat the exercises for 6-7 times. Once exercise is over, close your eyes firmly for 10 seconds.*

USES: *It helps to keep the skin throughout your eyebrows tight and prevents it from drooping.*

JAW LINE WORKOUT:

METHOD: *Start with sitting or standing position with erect back. Lean your head back and shape your tongue to touch the palate of your mouth. It allows the part of neck muscle to stretch, but don't stop. Once done bring back your neck to its normal position. Repeat it for 10 times a day.*

USES: *Platysma muscles helps to connect the jawbone to the shoulder. This exercise prevent turkey neck situation. By toning it, the jawline becomes smoother.*

FOREHEAD EXERCISES:

METHOD: *Place your index fingers just above your eye and also below your eyebrows, right at the uppermost orbital cavity. The index finger is used to stretch the skin down at the same time lift up your eyebrows. Repeat it for atleast 8 times a day.*

USES: *Makes the wrinkles smoother and prevent wrinkles appearing.*

CHEEK EXERCISE:

METHOD: *Hold the head straight and then smile without opening the lips. Wrinkle the nose. Hold the mouth-smiling, nose wrinkling for 10sec then relax. Repeat it for 20-30 times for effective result.*

USES: *Decline the appearance of wrinkles and maintain the muscle height and fullness.*

The facial exercises will be much more effective when incorporated with proper diet, sleep, stress-free lifestyle for the maintenance of youthful appearance. In addition to that, different facial exercises for maximum of 30 min a day makes your skin glowing, young, strong, healthier, tighter and good complexion

Know this "20% of aging is genetic another 80% is how you heed..... Make a change from now"

Muscle strength is the most important part of physical fitness related to age, health and clinical condition. Grip strength is a normal physiological variable that can be affected by gender, age and body size among others. Grip Strength is the most important component among school children. Commonly the adolescent school children are affected by the low hand grip strength due to overuse. Due to low Hand Grip Strength the children have slow writing ability, poor hand writing and feel hand pain in prolonged continuous writing. These are the major problems among the school children. The study conducted among adolescent school children in the age of 13-17yrs at Canada under the classification of Hand Grip Strength using the cut off scores based on beneficial health areas. It was reported that a prevalence of poor HGS was at levels at 59% for boys and 47% for girls. In our country hand grip strength is not much focused and not properly assessed.

HAND GRIP EXERCISER

As a physiotherapist we need to assess the hand grip strength and our major role is to improve the hand grip strength in adolescent school children. Strength training is considered as progressive resistance exercise but any intervention that involves the repetition of movement result in the increase in motor unit activity, increase in the strength. Hand Grip Strength is the maximum power of forceful voluntary flexion of all fingers under normal bio-kinetic conditions. It is well known that muscle strength can be increased with strength training program. Hand gripper is used to increase the grip strength of the hand. This gripper spring is available is various materials of springs, and the handle are made from wood, plastics and aluminium. Resistance exercise increased loading and repetitive action there will be transient increase in the protein synthesis within the muscles.

we can improve the HGS and increase the hand writing speed by giving resistance exercise program for the adolescent school children. Improving the hand grip strength will help in neglecting pain in prolonged continuous writing.

The hand gripper can be a valuable tool to increase the Hand grip strength. So I had conducted resistance exercise program for adolescent school children with low Hand Grip strength using Hand grip exerciser for 3 weeks. 15 samples were taken for the program. The measurement of HGS was done by using the Hand held Dynamometer. The pre-test mean value of dominant hand was 17.86. The resisted exercise program was given for 15 mins daily for 3 weeks. The resistance was increased every week. The re-assessment of outcome measure was done and the post-test mean value of dominant hand was 21.46. The hand gripper showed greater improvement in hand grip strength among the adolescent school children.

ALL
YOU NEED TO
KNOW ABOUT

M.VIMAL
BPT Intern

PRADER WILLI SYNDROME

is the genetic situation that influences body systems and also consequences in mild to moderate developmental disability. Babies born with Prader willi syndrome (PWS) have Hypotonia, growth abnormalities, cognitive disability and difficulties in feeding and sucking, experience developmental disability. Among the age of 1 to 4 years children with the developing syndrome, speedy weight gain which may result in obesity. It takes place randomly and influences men and women equally. In India PWS occurs with a prevalence of 1:10,000 to 30,000 births and the disease affects between 350000 and 400000 people worldwide.

Prader-Willi syndrome (PWS) is a genetic disorder that can lead to a wide array of symptoms, including obesity and developmental delays. It results when there is a problem with a portion of chromosome 15. Babies born with PWS have poor muscle tone and a weak cry. They initially are slow feeders and appear undernourished. The feeding problems improve after infancy. Typically, between two and four years of age, the child becomes obsessed with food and has difficulty in controlling his or her appetite. PWS also can create problems during puberty.

What is Prader willi syndrome?

LITTLE KNOWN WAYS OF PHYSICAL THERAPY

Vismaya Vinod
BPT Intern

First, therapist will carry out an evaluation, which includes: Birth and Developmental records, Medical records/ Health Concerns, Parental Concerns, and Physical Examination. They help children's and younger adults affected with Prader-Willi syndrome to increase their ability to perform movements and muscle strength. They may be providing the services at house, school and at different steps of your child's life and also works with occupational therapists and speech therapist.

MAKE EXERCISE A DAILY ROUTINE!

Children with PWS need daily physical activity/exercise throughout their lifetime. The earlier they can get used to exercising daily or better if they start regular vigorous exercise before weight gain, it will be much easier to maintain or even lose weight as they age.

Physiotherapy in the Early Years: delivery to 4 years

Therapist work with parents to teach them about their child's condition, and provide training in activities. They can perform with their baby to promote movement and muscle power. They recommend changes to make in your house to motivate play skills, and increase chances for your baby's movement. At this age, the kids learn through play. They will develop an unique plan of fun, recreational activities, play centered therapy based on kids strength and weakness, and on your aims.

Physiotherapy in the School Years: 5 to 17 years

Therapist works in clinics and schools should help kids with Prader-Willi syndrome to become as independent as feasible. They provide training to you and to caregivers at home and in school to ensure the high quality of life for your child. The child with Prader-Willi syndrome will develop obesity and inactivity. They may suggest a fitness program or unique activities designed to increase aerobic fitness, and promote mobility and activity. Some kids may get growth hormone (rhGH) treatment. Many studies shows that rhGH treatment combined with physical education results in the highest benefits.

Physiotherapy in the later life: Ages above 18- years

For adults surviving with Prader-Willi syndrome and obesity related health troubles can result in decreased mobility and independence. Osteoarthritis is also common and result in limited joint movement. Therapist may recommend adaptive apparatus and home modifications to increase mobility and individuality in the house. They can also design a fitness program to increase aerobic fitness, and increase muscle strength and bone density.

SQUAT TO FIT

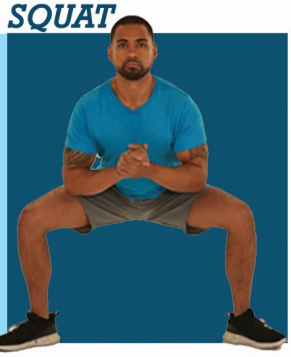
SINGLE LEG SQUAT

Procedure:
- Stand on one leg with foot pointing straight, Slightly bend the knees of the other leg with arms extended for balance, keep your back straight, upper body erect and your head facing forward.
- Raise the non supporting foot from the floor slightly and start with shallow squats.

Muscles Activated:
- Hamstring, Quadriceps, Gluteus maximums and Calves

Benefits:
- It is an ideal exercise for athletes
- Increases the tone of gluteus & leg muscles
- Increases the flexibility
- Strengthen the core muscle

SUMO SQUAT

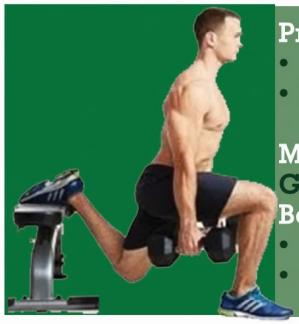


Procedure:
- *Stand with your feet wider than your shoulder and bring your hands together in front of your chest and turn you feet slightly outward.*
- *Keeping your chest up and push your hips back then bend your knees & Squat down.*

Muscle Activated:
- *Gluteus, Quadriceps, Hamstring, Hip Flexors and Calves, Adductors.*

Benefits:
- *It is a compound exercise*
- *Burns more calories*
- *It improves both mobility and flexibility*
- *Increases both balance and stability*

BULGARIAN SPLIT SQUAT



Procedure:
- Stand in front of bench with arms at your sides and using dumbbells hold in each hand
- Right leg behind you and rest the top of the foot on the bench
  bend the knee and slowly squat down, until the right knee is just about the ground.

Muscle Activated:
Glutei muscles, Quadriceps, Gluteus maximums, Soleus, Adductor magnus, Gastrocnemius

Benefits:
- Increases flexibility of the hip flexors and improves overall lower body mobility
- Improves core strength, balance and as well as agility.

NARROW SQUAT

Procedure:
- *Stand with your feet touching and extend your hand comfortably in front of your chest to maintain balance.*
- *Bend knees, lowering your hip deeply bringing your thighs parallel with the floor*

Muscle Activated:
- *Inner Thigh, Inner Quadriceps and Inner Hamstring*

Benefits:
- *Maintains balance and mobility*
- *Strengthens your core, joints and ligaments*
- *Shapens your thighs*

GOBLET SQUAT

Procedure:
- *Hold a weight at your chest level using both the hand and stand with your feet and hip kept at a width apart*
- *If you are using a dumbbell you can hold it with the handle facing upward, brace your core, then drop your butt back and down to lower into squat while keeping your chest up. As you squat, sit back into your heels without shifting weight forward in to the balls of your feet*

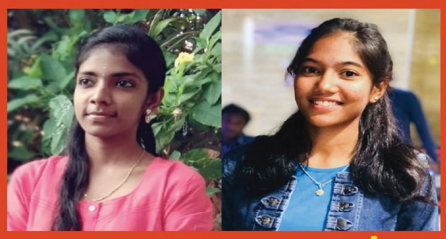
Muscle Activated:
- *Quadriceps, Gluteus, Entire Core, Hamstring*

Benifits:
- *Increases strength of trunk muscles*
- *Increase hip and ankle mobility.*

***Prescription of SQUAT and its Duratiotion / Repetition depends upon the individual's necessity.*

-K.SURIYA NARAYANAN, BPT Final Year

S.Swetha
BPT Third Year



M.Vasanthra
BPT Third Year

As a child, I grew up seeing people with various disabilities among my neighbourhood. I had seen people with tremors, poor balance and an abnormal gait pattern. I couldn't take my eyes away from such people struggling with anxiety, apathy, difficulty in speech, freezing of gait. Parkinson's disease was the core of all these miserable symptoms. In this disease there is a decrease in the dopamine level, a neurotransmitter in the brain. My wide research over these years on the field of physiotherapy have put up a question on my mind, "what could be done to restore these poor individuals?" One of such treatment seized my attention had a greater possibility of restoring these people is Transcranial Direct Current Stimulation.

TRANSCRANIAL DIRECT CURRENT STIMULATION (TDCS):

Trans cranial Direct Current Stimulation is a non-invasive neurostimulation technique that consists of delivering a weak current via the use of saline-soaked electrodes applied over the scalp. This has been shown to induce bidirectional polarity-dependent changes in cortical excitability of the underlying cortex. In general terms, Anodal TDCS increases cortical excitability, and Cathodal TDCS decreases it. Reseraches have shown that the physiological and behavioural effects of TDCS can last upto one hour. This evidence reveals that TDCS can also modulate synaptic microenvironment and the synaptic strength of NMDA receptors. TDCS can also alter GABA-ergic activity and modulate intracortical and corticospinal neurons.

THE NON-INVASIVE ELECTRICAL BRAIN STIMULATION

BIHEMISPHERIC TDCS FOR GAIT:

TDCS in the field of locomotor control have focused on stimulation over the lower limb primary motor cortex of a single hemisphere. The Bihemispheric TDCS dispenses cathodal stimulation to one motor cortex and Anodal stimulation to the opposite hemisphere. This technique restores the interhemispheric imbalance caused by cortical lesions and helps improve walking by restoring the function of the hemiparetic limb. Based on many research findings, TDCS was able to increase excitability in lower limb motor cortex and increase locomotor adaptation.

USES OF TDCS IN INDIVIDUALS WITH PARKINSON'S GAIT:

The Anodal TDCS using the same bihemispheric TDCS was then applied to patients with Parkison's disease. The Gait and postural instability in PD are largely Levodopa resistant. Temporal parameters such as stride swing duration and stride duration variability are levodopa resistant, whereas stride length is levodopa sensitive. Levodopa improves the proximal more than the distal lower limb kinematics. In PD, there is a reduced activity in premotor and primary motor cortical regions which are the important therapeutic non-invasive neurostimulatory targets within them. Physical therapy along with TDCS has been shown to induce physiological changes in the primary motor cortex of patients and improved motor learning & rehabilitation in patients with Parkinson's disease.

Another interesting discovery from the recent study was that patients with severe motor symptoms showed a greater improvement in walking duration with TDCS compared to patients with milder disease. Although the number of patients tested is insufficient to draw firm conclusions from a correlation analysis, our data suggest that patients with more advanced disease are more likely to benefit from combined DC stimulation and physical therapy than the patients with mild disease. In contrast, individual gait outcomes did not correlate with age, the degree of Leukoaraiosis (small vessel disease), or cognitive impairment, suggesting that individual patients at the extremes of the disease process may be less likely to respond to neurostimulation.

TRANSCRANIAL DIRECT CURRENT STIMULATION

K. Vaanmathi
BPT Third Year

We all know that when panicked, some people "hyperventilate" or breath at an abnormally rapid or deep rate. Hyperventilation is extreme and can be dangerous as it results in decreased carbon dioxide levels and increased oxygen levels that produce dizziness, tingling of the fingers and toes, and, if continued, loss of consciousness. What you may not be aware of, is that many of us are prone to do "over-breathing".

While less extreme and less obvious than hyperventilation, over-breathing also means that you have altered your breathing mechanics enough to alter your breathing chemistry. It means that you have created an imbalance in your body by releasing too much carbon dioxide or taking in too much oxygen by breathing in too quickly or too deeply. While over-breathing takes longer to do so, like hyperventilation, it can trigger a variety of symptoms, to name a few "headaches, difficulty concentrating, memory loss, performance anxiety, panic attacks, strong emotional reactions and even asthma attacks".

I've done it myself. Several years ago I took up yoga looking to feel more energized, and less stressed. To my surprise, as my first yoga class progressed and we started to do more deep, regular "yoga breathing", I started feeling panicked, stiff, and stressed. By the time we were done, I was exhausted! Only later did I come to understand that in an effort to breath deeply and relax, I'd been a little too enthusiastic – and had been "over-breathing".

BREATHE EASY!

THERE ARE TWO TYPES OF "OVER-BREATHING".

- Situational over breathing – when a specific event triggers a change in breathing mechanics and chemistry for a certain period of time before returning to normal.
- Chronic over breathing refers to a more constant state of imbalance, usually found in people with chronic pain.

If you are prone to either, don't panic. You can learn to breathe properly to prevent or control your symptoms. Just remember the following:

- breathe in through your nose, out through your mouth
- allow the breath to go into the lower part of your lungs (abdominal breathing)
- after you exhale, pause briefly then breathe in again
- breathe at a relaxed, regular pace – no slower, faster, or deeper than what is normal for you

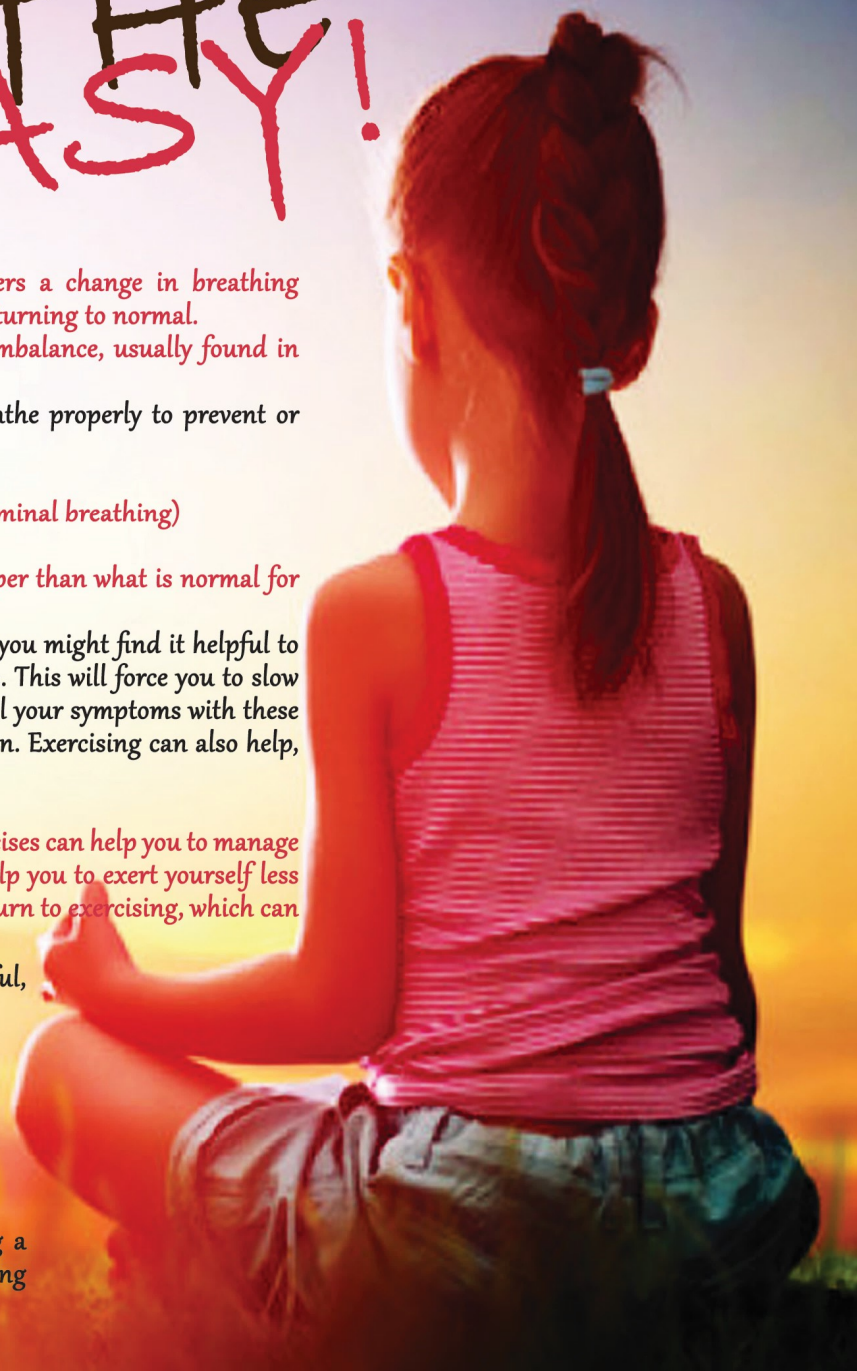
If you are trying to control strong emotions or a panic attack, you might find it helpful to hold your tongue on the roof of your mouth for a few minutes. This will force you to slow down your breathing and help you to relax. If you can't control your symptoms with these easy steps, you might need to breath in a paper bag or lie down. Exercising can also help, mostly if you are a chronic "over-breather".

Symptoms can worsen with time, but practicing breathing exercises can help you to manage them. When you practice regularly, breathing exercises can help you to exert yourself less during daily activities. They can also potentially aid in your return to exercising, which can lead to you feeling more energetic overall.

Read on to learn about these five exercises that can be useful, especially for people with this problem

Pursed lip breathing
Coordinated breathing
Deep breathing
Glossopharyngeal breathing
Diaphragmatic breathing

If none of the above helps, you may want to consider seeing a Physiotherapist who can help by teaching you proper breathing techniques and exercises. Then...breathe easy!



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