



# RELIVE WITH RELIEF!

Centre of Excellence:  
**Physiotherapy**





Many people continue to live with physical disabilities across the globe, especially in rural and urban Africa despite expertise of physiotherapists and available evidence of effectiveness of physiotherapy world over. The obstacles to obtaining optimal physiotherapy services are often unavailability of physiotherapy services, poor knowledge of community dwellers of the roles and scope of physiotherapy, and poor health care seeking behavior of community dwellers.

On the other hand, despite have strong roots throughout the world, still facing some challenges. Some of these include lack of training opportunities, limited number of therapists and recognition of physiotherapy as an essential service. At Mediheal Group of Hospitals, we understand that physiotherapy has a key role to play in the public health agenda through its contribution to the prevention of disease, promotion of good health, particularly through physical activity and improvement in the general quality of life.

Therefore, we work towards providing a more health-oriented evidence-based physical therapy practice. We offer optimal treatment choices, work towards increasing awareness about the necessity and efficacy of the role of physiotherapy, and are committed providing quality physiotherapy and rehabilitation services to the needy people of the African continent.

At Mediheal, we understand that illnesses and injuries can strike anyone at any time. Therefore, we are committed to supporting you and ensuring that you are well protected, by providing you with the effective, result-oriented physiotherapy treatment. We take a holistic approach to healthcare that is led by dedicated practitioners who are working with people to help them maximise their ability to move and function.





“Complementing  
the great African dream  
with comprehensive  
healthcare support...”

Africa is the youngest continent in the world today which is developing very fast, hosting about 1 billion people which is 14% of the world population and very compatible with the modern smart electronic age. Complementing the great African dream with comprehensive healthcare support is Mediheal Group of Hospitals.

We have been leading the healthcare segment with high quality medical services and have participated in inspiring improvements with our patients in mind. Thanks to their incessant trust and support, our spectrum of services today is spread across Kenya, Uganda, Tanzania, Rwanda and Burundi.

We are constantly looking to attract highly qualified medical professionals who live up to the high standards we set for ourselves. We always procure state-of-the-art equipment that is being used across the world, and make sure that our diagnostic labs consistently meet international standards for accuracy and reliability.

As I look back on the years of successful development and aspirations beginning with the establishment of Mediheal Group of Hospitals, I feel both proud and excited about the future. As a progressive healthcare provider, we aim to keep expanding with new facilities and continue the momentum as one of the fastest growing healthcare groups in Africa.

**Dr. S. R. Mishra**

MS, Obstetrics & Gynaecology, India  
Dip. Gynae Endoscopy (Germany)  
Chairman, Mediheal Group



“ Unfortunately, there is a shortage of rehabilitation professionals and services to alleviate these disease effects in sub-Saharan Africa. Therefore, close attention should be paid to the development of rehabilitation services and clinical education through a rehabilitation framework. ”

In sub-Saharan Africa, there is evidence of a shift from communicable (eg, diarrhea, lower respiratory infections) to non-communicable diseases (NCDs). Although survival from communicable diseases (e.g., HIV/AIDS) can also result in long-term disability, NCDs are taking precedence, affecting individuals of all ages. Rehabilitation to mitigate the impact of chronic disease and long-term disability is needed for individuals across the lifespan.

Unfortunately, there is a shortage of rehabilitation professionals and services to alleviate these disease effects in sub-Saharan Africa. Therefore, close attention should be paid to the development of rehabilitation services and clinical education through a rehabilitation framework.

I am a registered physiotherapist in Kenyan Physiotherapy Council and Indian Physiotherapy Council. I am certified in sports rehabilitation, cure taping, manual therapy techniques, neuro, spine and oncology rehabilitation. I have worked for more than five years in 1000 bedded hospital. I also have expertise and experience in knee & hip joint replacement as well sports injuries rehabilitation.

At Mediheal Group of Hospitals, we work towards promotion of good health and improvement in the general quality of life. We are committed to increasing awareness about the necessity and efficacy of the role of physiotherapy and improving the quality of rehabilitation services provided in sub-Saharan Africa.

**Dr. Santhosh Kumar Ethiraj**

Musculoskeletal & Sports  
HOD Physiotherapy,  
Mediheal Group of Hospitals



In the continent of Africa, physiotherapy services are lagging behind from those of the developed countries of the world. Some of the problems prevailing in this field include lack of adequate infrastructure and lack of trained manpower to provide satisfactory physiotherapy services. Due to the shortfall in services, people continue to live constrained life, which affects their overall well-being.

I hold of a Masters Degree in physiotherapy from KIMS College of Physiotherapy, Hyderabad, India. My areas of interest and expertise include orthopedic rehabilitation and manual therapy. I also hold expertise in post TKR & THR rehabilitation, ergonomics training, geriatric rehabilitation, and cardiovascular and pulmonary rehabilitation.

At Mediheal Group of Hospitals, we understand the importance of physiotherapy for people to live a sound and healthy life. Therefore, we provide advanced physiotherapy services at all of our facilities which are equipped with state-of-the-art technology and necessary tools. We take a holistic approach to healthcare and we are committed to supporting people with disabilities, by providing effective physiotherapy treatment.

**Dr Sudhakar reddy**  
MPT

“ In the continent of Africa, physiotherapy services are lagging behind from those of the developed countries of the world. ”



“Our patients remain the centre of all our endeavours as we evolve with changing times. Thousands of smiling Africans bear testimony to our dedication...”

We, at Mediheal Group of Hospitals, have always strived to raise the bar for healthcare in Africa to meet the highest international medical standards. A warm and friendly ambience, high-quality medical services and personalized nursing care have always been the hallmarks of hospitals since inception.

Our patients remain the centre of all our endeavours as we evolve with changing times. Thousands of smiling Africans bear testimony to our dedication, to the quality of care and sensitivity to everyone who walk through our doors. The continuum of care is an added edge that we offer as we aim to elevate the overall health of the society.

With eminent doctors leading each practice, we are committed to delivering world-class healthcare to an increasing number of people who have come to consider Mediheal as their preferred choice of hospital. We recruited doctors with training and experience at top international hospitals and implemented evidence-based protocols that are followed by leading global institutions. They provide treatment, supportive care and preventive measures spanning over 15 specialties and super-specialties of medicine. We receive a large number of international patients every year trusting our expertise and services.

We believe technology plays a vital role in delivering superior healthcare and hence have made effective outlays in procuring the best of equipment to serve our patients. We have introduced several cutting-edge technologies and procedures to the people of Africa that have improved the clinical outcomes significantly.

As we evolve, we try to sustain the highest level of competence through various academic programs and initiatives for our staff. Together, we aim to bring our vision for Africa to life by embarking in a journey to redefine healthcare in Africa.

**Gokul Prem Kumar**

Vice President - International Patient Services

## ABOUT PHYSIOTHERAPY

Physiotherapy can be defined as a treatment method that focuses on the science of movement and helps people to restore, maintain and maximize their physical strength, function, motion and overall well-being by addressing the underlying physical issues. Physiotherapy encompasses rehabilitation, injury prevention and health promotion/fitness. It employs a holistic approach to treatment, looking at the patient's lifestyle and engaging them in their own treatment.

The focal point of the Physiotherapy Department at Mediheal is to provide highly specialized physical rehabilitation programs for patients with disabilities arising due to various reasons.

The physiotherapy treatment has application in all disciplines of modern medicine:

- Orthopedics
- Neurology
- Cardio-thoracic
- Oncology
- Obstetrics
- Gynecology
- Paediatrics & Neonatology
- General Surgery
- Plastic Surgery
- Cosmetic Surgery
- Diabetology
- Rheumatology
- Sports Medicine

The team at Mediheal is responsible for providing pre-operative and post-operative physiotherapeutic intervention to both the out and in-patients. The department also has a comprehensively equipped fitness center available for exercise and rehabilitation.





## PHYSICAL THERAPISTS

Physical therapists at Mediheal manage movement dysfunction and enhance physical and functional abilities. They also help restore function, improve mobility, relieve pain and prevent or limit permanent physical disabilities of patients suffering from injuries or diseases. Physiotherapists examine the patient to establish his sensed needs focusing on strength, flexibility, sitting, balance, and coordination and build a treatment plan using an exercise regime, techniques, and modalities.



### Services Rendered

- Electrotherapy Modalities
- Electrical Stimulation
- Shortwave Diathermy (SWD)
- Ultrasound Therapy (UST)
- Infra-Red Therapy
- Laser Therapy
- Lympha press
- Pain relief modalities
- Interferential therapy (IFT)
- Transcutaneous Electrical Nerve Stimulator (TENS)
- Inter X, Cervical and Lumbar
- Traction
- Joint and Soft-tissue Mobilization
- Balance and Coordination Training
- Neuromuscular Re-education
- Pulmonary and Cardiac Therapy
- Myofascial Release



## ELECTRICAL STIMULATION

Electrical Stimulation (EMS), also known as neuromuscular electrical stimulation (NMES) or electromyostimulation is a technique used to elicit a muscle contraction using an electrical impulse. Electrodes, controlled by a unit, are placed on the skin over a predetermined area. Electrical current is then sent from the unit to the electrodes and delivered into the muscle causing a contraction.

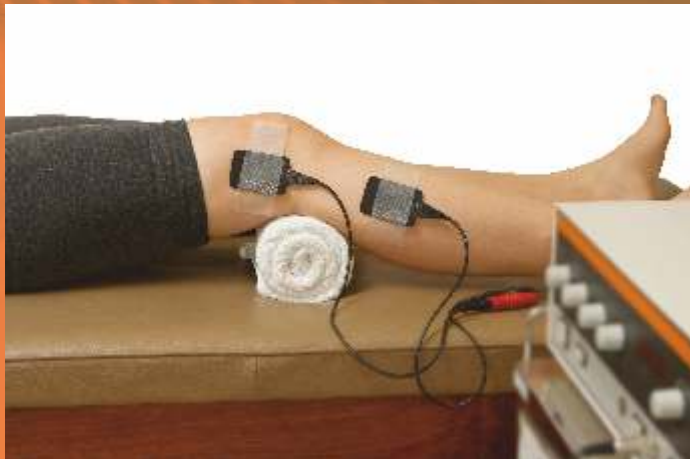
### Types of electrical stimulation

- Muscular electrical stimulation
- General electrical stimulation
- Transcutaneous electrical nerve stimulation

### INDICATIONS

#### Muscle spasms

- Muscle pain -Arthritis, Back pain scoliosis, Sciata
- Prevent the atrophy of muscles
- Spinal cord injury



## SHORTWAVE DIATHERMY (SWD)

Shortwave Diathermy uses high-frequency electromagnetic energy either in pulsed or continuous energy waves to generate heat. It is typically used as an alternative to ultrasound when a wider area of heat application is required. The electric pulse of short-wave diathermy creates heat deep inside a targeted tissue, reaching areas as deep as two inches from the skin's surface.

### Indications

- Pain from kidney stones & pelvic inflammatory disease.
- Sprains
- Strains
- Bursitis
- Tenosynovitis
- Cervical spondylosis
- Osteoarthritis
- Sinusitis

## ULTRASOUND THERAPY (UST)

Ultrasound has been a part of clinical practice since sometime back in the 1950s, and still remains a popular and evidenced intervention for a range of clinical problems. Ultrasound therapy uses sound waves to treat medical problems, especially musculoskeletal problems like inflammation from injuries (sprains, tendinitis, bursitis). It is a method of stimulating the tissue beneath the skin's surface using very high-frequency sound waves, between 800,000 Hz and 2,000,000 Hz. Ultrasound therapy is applied using a transducer that comes in direct contact with the patient's skin. The potential benefits of this therapy include an increase in the blood flow to the treated area, decrease in pain and gentle massage of muscles in the treated area

### Indications

- Ligament Sprains
- Muscle strains
- Tendinitis
- Plantar fasciitis
- Metatarsalgia
- Bursitis
- Rheumatoid arthritis
- Osteoarthritis





## INFRARED THERAPY

Infrared therapy uses infrared heaters to emit infrared light experienced as radiant heat which is absorbed by the surface of the skin. Treatment with this light therapy is simple and painless.

### Indications

- Back (lumbar and thoracic) pain
- Bell's palsy
- Cancer
- Cardiovascular diseases
- Central nervous system injuries
- Chronic kidney diseases
- Ischemic stroke
- Lymphedema
- Osteoarthritis
- Parkinson's disease
- Stroke



## LYMPHA PRESS

Lympha Press is a device that applies pressure in sequence from the distal part of the limb towards the body. The pressure wave is created by up to 24 overlapping inflatable chambers inside a special garment, or 'sleeve', which is fastened around the area to be treated. It has been a pioneer in the field of compression therapy systems due to its 24 independent working chambers and the ability to control chambers at the same time.

It produces the most-well regarded dynamic compression and has helped patients deal with venous insufficiency improving their quality of life.

### Indications

- Primary Lymphedema
- Secondary Lymphedema
- Venous Insufficiency
- Venous stasis ulcers
- Dysfunction of the muscle pump
- Post-mastectomy edema
- Edema following trauma or sports injuries
- Post immobilization edema

## LASER THERAPY

Laser therapy, also known as cold laser therapy, uses low-level lasers to perform minor surgeries and promote regeneration in tissue. It is therefore also known as Low-Level Light Therapy or Photobiomodulation (PBM).

### Indications

- Rheumatoid arthritis
- Osteoarthritis
- Tendinopathy
- Wound healing
- Back pain



## FIBROMYALGIA

Fibromyalgia is a disorder characterized by widespread musculoskeletal pain accompanied by fatigue, sleep, memory and mood issues. Researchers believe that fibromyalgia amplifies painful sensations by affecting the way your brain processes pain signals.

### INDICATIONS

- Joint injuries
- Overuse injuries and surgical procedures
- Edema, Inflammation
- Carpal Tunnel Syndrome
- Tennis Elbow
- Sports Injuries

## INTERFERENTIAL THERAPY (IFT)

Interferential therapy (IFT) is one of the various types of physical therapy that delivers continuous stimulation deep into the affected tissue. This stimulation both blocks pain and reduce swelling and inflammation which can cause pain. IFT achieves the deep penetration by using a 4000Hz carrier wave to overcome the skin impedance.



## TRANSCUTANEOUS ELECTRICAL NERVE STIMULATOR (TENS)

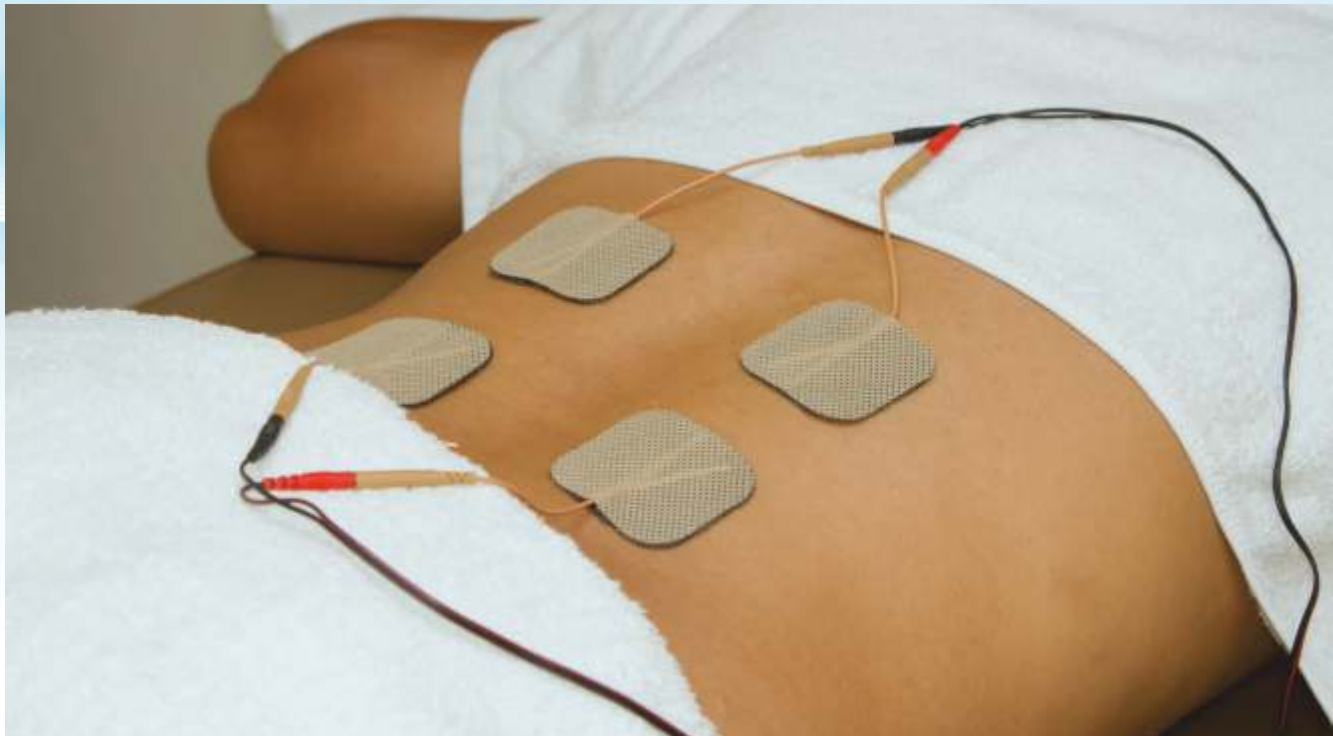
One of the most common forms of electrical stimulation used for pain management is the use of electric current produced by a device which stimulates nerves for therapeutic purposes. The electric currents block pain receptors traveling from the nerves to the brain. It is currently one of the most commonly used forms of electroanalgesia.

### Types of Transcutaneous

- Electrical Nerve Stimulation (TENS)
- Traditional TENS
- Acupuncture TENS
- Brief Intense TENS
- Burst Mode TENS
- Modulation mode TENS

### Indications

- Musculoskeletal pain
- Chronic low back pain
- Painful diabetic neuropathy
- Neuropathic pain
- Visceral pain





## INTER X, CERVICAL AND LUMBAR TRACTION

Cervical spinal traction is used for the short-term treatment of neck pain. It relieves muscle spasms and nerve root compression using a manual or mechanical technique, a steady or an intermittent force which is applied to the neck to stretch the muscles and soft tissue and open up the spaces between the upper vertebrae. The physical therapist determines the amount of force and length of time a person remains in traction. Slowly, over a period of time, the amount of pressure is increased.

Similarly, lumbar traction is the continuous or intermittent application of force to the spine either manually or mechanically. The goal of lumbar traction is to reduce the pain associated with nerve root impingement and muscle spasms. It is also used to treat degenerative disc disease, herniated or protruding discs and osteoarthritis. As with cervical spinal traction, the process separates the space between vertebrae, which decompresses discs, alleviates pain and supports healing.

## JOINT AND SOFT-TISSUE MOBILIZATION

Joint mobilization is a manual therapy intervention, a type of passive movement of a skeletal joint. It is usually aimed at a 'target' synovial joint with the aim of achieving a therapeutic effect. Joint mobilization techniques are utilized when the articular structures limit the motion of joints; producing arthrokinematic (sliding distraction, pivoting) movements that need to occur with normal motion.

### Joint mobilization techniques

- Heat Therapy
- Electrical Stimulation
- Soft Tissue Massage
- Stretching & Flexibility Training
- Resistance Training
- Kinesio Taping

## SOFT TISSUE MOBILIZATION

Soft tissue mobilization, or massage, focuses on muscles, ligaments, and tendons. Often if a patient hasn't had a chance to use a set of muscles due to illness, or has been injured in that area, the tissues can become scarred, and robbed of the precious fluids that promote flexibility. Soft tissue massage focuses on limbering up these damaged areas while promoting overall wellness.



## BALANCE AND COORDINATION TRAINING

Balance is the ability to stay upright or stay in control of body movement, and coordination is the ability to move two or more body parts under control, smoothly and efficiently.

Balance training involves doing exercises that strengthen the muscles that help keep you upright, including your legs and core. These kinds of exercises can improve stability and help prevent falls.

Coordination training involves the use of multiple body systems and movement patterns to form individual movements and skills necessary for specific tasks.



## NEUROMUSCULAR RE-EDUCATION

Neuromuscular re-education is a technique by rehabilitation therapists to restore normal movement. The nerves and muscles work together to produce movements. Muscle movement patterns are affected when nerves or muscles experience damage or injury.

### **This can result from:**

- Trauma
- Medical conditions
- Neurological conditions, such as stroke and traumatic brain injury.

Neuromuscular re-education is one method used by rehabilitation therapists to facilitate the return of normal movement in persons with neuromuscular impairments.

The program will consist of repetitive movements, posturing, and stimulation designed to reinforce nerve signals for functional movements. Neuromuscular re-education is usually done along with other types of treatment to promote functional muscle movement.

## PULMONARY AND CARDIAC THERAPY

Cardiac rehabilitation (CR) is a branch of rehabilitation medicine/physical therapy dealing with optimizing physical function in patients with cardiac disease or recent cardiac surgeries.

### **It includes:**

- Nutritional therapies
- Weight loss programs
- Management of lipid abnormalities with diet and medication
- Blood pressure control
- Diabetes management
- Stress management

## MYOFASCIAL RELEASE

Myofascial Release (MFR) is a safe and very effective hands-on technique that involves applying gentle sustained pressure into the Myofascial connective tissue restrictions to eliminate pain and restore motion. Myofascial release therapy focuses on releasing muscular shortness and tightness.

This alternative medicine therapy treats skeletal muscle immobility and pain by relaxing contracted muscles, improving blood and lymphatic circulation, and stimulating the stretch reflex in muscles.

### Indications

- Whiplash
- Sports Injuries
- Disc Problems
- Migraines
- Pelvic Floor Dysfunction
- Neurological Dysfunction
- Fibromyalgia
- Carpal Tunnel
- Scoliosis
- Sciatica
- Myofascial Pain Syndrome



## CUTTING-EDGE TECHNOLOGY



Siemens 1.5 Tesla MRI



Siemens 64 Slice CT

**MEDIHEAL HOSPITAL  
DOCTORS PLAZA - ELDORET**



**MEDIHEAL HOSPITALS - EASTLEIGH**



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