

Patient Testimonial



Human beings are known for their bipedal locomotion, one of the highly specific functions of the species. Loss of this function can lead to serious hopelessness, despair, and depression. Imagine being bound to a wheelchair for life, unable to control your urine and stool, muscles getting tighter along with bed sores all over. Massive

effect on self-esteem, body image, a social recluse. A 21-year-old young dynamic boy from a very poor family in Bangladesh on the night of 5th January 2022 suffered a massive road traffic accident while riding a bike with his friend. Immediately following the fall, he developed weakness of both lower limbs and loss of control of the bowel and bladder. Sadly, the severe accident broke his backbone and completely damaged the spinal cord. Even the surgery failed to regain any power in the legs but prevented further complications.



He visited Rehabana 4 months later on 25th May 2022 from Bangladesh for his further treatment in a non-customized wheelchair being pushed by his brother. He was evaluated at our OPD by our Psychiatrist/Rehab Physician for ongoing problems, and short-term goals were set. He was diagnosed as a complete spinal cord

injury with the neurological level at D12 which meant he would never walk and will be bound to a wheelchair for life.

The main issue was his physique which was lean and malnourished. He needed a very high diet of



protein and extreme strengthening of his upper limb musculature which was the key to achieving some important goals like bed mobility, and transfer. Slowly and steadily, he regained his strength and to our surprise attained the goals in few days. He was able to move about in his bedroll, turn and get up with minimal assist. Our

dedicated young dynamic team of therapists worked day and night to achieve this. The patient's determination was sky-high.

He was having some problems with orthostatic hypotension which was taken care of by making him stand in a tilt table and later in a standing frame. Regular chest physiotherapy, range of motion exercises, stretching of tight muscles, strengthening of weaker muscles made him more independent in day-to-day activities. Smile returned to his face as before.



He was started on self-catheterization or Clean Intermittent Catheterization (CIC) every 4 hourly but was having leakage in between. Medicine tolterodine was started by our rehab physicians which achieved CIC 4 hourly with no leakage in between. Regular calcium and Vit D3, high protein,

with necessary antispastic medications were given. He was put on ADL training, toilet training. Once all the activities were learnt he was prescribed a customized wheelchair by our rehab physician according to his need to make him independent.

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Dedicated Neuro Rehab Centre
For STROKE, SPINE INJURY, PARALYSIS, NEURO DISEASES

Doctor's Desk



Dr Ambar Konar

There is a massive gap between saving a life and returning to active life. Often this journey is prolonged and full of hurdles due to complications, poor path direction, or ignorance only. Thus the enormous achievement of saving a life ends up in a compromised vestigial or dependent life, full of depression and despair. A beautiful effort goes in vain.

Here comes the role of Rehabilitation Medicine, a specialty of evidence-based modern medicine that focuses on bridging the gap. Rehabilitation medicine, also known as Physical Medicine and Rehabilitation or Physiatry, although encompasses multiple unmet dimensions, has less amount of community exposure in this part of the world. Post neurological injuries or insult and in chronic neurodegenerative conditions, Neurorehabilitation has a remarkable role in enhancing the speed of recovery when done under medical supervision. The customized goal-directed comprehensive rehabilitation protocol targets disability limitation, prevention, early detection, and management of complications, thus finally returning to active life. All these management requires medications, new-edge interventions, and non-pharmacologic methods like that of multidimensional conventional therapies including occupational and physical therapy, speech-language training, psychological counseling, rehabilitation nursing as well as ultra-edged technologies like that of biofeedback, and virtual reality.

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The latest addition of new therapy methods

Use of FES with Mirror Therapy

Every year 15 million people worldwide suffer a stroke. Nearly 6 million die and another 5 million are left permanently disabled to a varying degree. Stroke is the second leading cause of disability.

Mirror therapy in Stroke Rehabilitation:

In Mirror therapy, a mirror is placed beside the unaffected limb, blocking the view of the affected limb. The arrangement creates the illusion to the brain that both limbs are functioning properly.

Mirror therapy is based on scientific evidence that action observation of the affected limb activates the motor areas responsible for the action execution.

Here comes the Functional Electrical Stimulation (FES). We combine mirror therapy with FES for a more effective and quick recovery.

Let's understand what is FES?

It is a low-level electrical stimulation, which activates several muscles in a coordinated sequence, by which we can achieve a functional goal such as 'walking', or 'gripping'. So, while using mirror therapy at Rehabana we use FES to the affected side, to create the illusion that it is active.

As an example, when a patient gripping something with the unaffected hand with FES of the affected hand we contracted the agonist muscle of the affected hand to hold the object, and when the unaffected hand releases the object, we use EFS to the antagonist muscle of the affected hand to release the object. With multiple repetitions, the affected hand learns to move and hold an object.

Doctor's Desk

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This is an era of innovations. With every newer medically standardized innovation, Rehab Medicine is getting a booster to deliver faster

recovery. The days are not very far to adding Robotics in the treatment option in Neuro-Rehab in this part of the country.

Patient Testimonial

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Wheelchair training was started where he was taught to overcome obstacles, do a wheelie and pass over any terrain in his personalized wheelchair. Rehabana had given him wings to fly. The real struggle is to make him stand and ambulate if possible. He has been prescribed a Knee ankle foot orthosis for his physiological standing inside a parallel bar which is still to be

procured. His goals are almost achieved and we are planning to end his intense rehab initial month. Home modifications have to be made so that his environment is barrier-free and accessible to a wheelchair. The last step will be vocational rehab to provide a suitable job for him so that he can earn and provide for his family.

Employee Talk



Nabonita Pal
Physiotherapist



Hi, I am Nabonita Pal, a qualified physiotherapist. I passed out from Burdwan Medical College, under WBUHS. I have been practicing since 2021.

I spent most of my childhood in Chittaranjan, then college at Burdwan and now at Kolkata working at - Rehabana. At

Rehabana (it's my first job) I am glad to meet these fabulous people, amazing directors, and so kind and helpful doctors. They never let me feel alone or far from home. I got a family here at Rehabana.

I am at Rehabana from the day it was founded. So it's not just my workplace, it's like my own second home now.

I am from a nuclear family which includes my mother, my father, and my sister.

I like to sing and draw and learn new things.

My best and the first experience was with a patient of TBI, who was wheelchair-bound and totally dependent. As a fresher, at first, I got a bit nervous but then the support of my colleagues and doctors

helped me treat that patient and now he can walk independently and do his own work. This success really helped me build my confidence.

Then I got to help various patients with GB syndrome, central cord syndrome, and some musculoskeletal patients as well.

Rehabana not only gives me my work experience but also the closest friends of my life, and lots of good experiences as well. We get to do lots of fun like picnic, parties, birthday celebrations, new year celebration and so many things like that.

I dream to see Rehabana as the largest and best neuro rehab center in India. And I want to be a part of Rehabana for life.



Global trends in neurorehabilitation

Use of Robotics for Gait Training

Every individual has a manner, natural pattern, or style of walking. The natural gait is easy and healthy for the individual. But illness, injury, and muscle weakness can cause functional mobility loss or cause pain. Neuro rehab diseases like Stroke, Parkinson's disease, Multiple sclerosis, Spinal Cord Injuries, Traumatic Brain Injury (TBI), and Cerebral Palsy (CP) affect the natural way of walking or even standing.

Gait training is a type of physical therapy to improve the ability to stand and walk. Gait training commonly involves muscle-strengthening activities. Subsequently, body weight supported walking on a treadmill, neuro-walker, walking with assistive devices, and finally independent walking. As part of gait training the therapist may also ask you to practice stepping over objects, lifting your legs, sitting down, standing up, or other activities.

Neuro rehab patients are prone to falls. Stroke patients have cognition challenges as well. Hence gait as a precautionary measure of body weight supporting harness is used while walking on the treadmill. However traditional treadmill-based gait training has a few challenges.

- For some of the patients 3-4 therapist is required to ensure correct movement of different parts of the lower limb
- Gait pattern is neither reproducible nor physiological
- Difficulty in maneuverability imposes limits on training duration and intensity
- Limited feedback on performance, the trend, and the improvements for the patient
- The therapists support the gait therapy session are exposed to physical strain

Robots have found a unique proposition to solve these problems. A robot is an automatically operated machine controlled by electromechanical and digital technologies that replace human effort. Robotic-assisted gait training (RAGT) employs electromechanical devices that assist stepping cycles, support body weight, and provide trunk stability while automatizing the gait process through support and facilitation of movement in one or several lower limb joints.

Robotic-assisted gait therapy is an effective method in the rehabilitation of neurological and orthopedic patients. Robot-assisted therapy is known to produce 50% greater results than conventional therapy. Scientific study indicates few advantages of RAGT:

- Bodyweight supported standing helps the patient slowly adjust to standing after several significant weeks/months in the wheelchair.
- Energy-efficient: It simplifies the process of walking independently. Patients can practice a higher step count in the same amount of time as compared to body weight support therapy on a treadmill.
- Posture correction, body alignment: Intelligent robotic technology allows for correct alignment of the lower back, hips, and ankle alignment in all three directions.
- Quantification of progress: Seamlessly tracks gait length, step count, speed, and stride length over the course of rehabilitation. This helps plan and reset the goals of therapy and note the progress of the patient.

Employee of the month



Hari Narayan Mitra

Happiness Manager, he takes care of the entire establishment, looks after all staff members, keeps an eye on all patients. He is dedicated to keep everyone HAPPY.