

Frequently Asked Questions

What are Vestibular Disorders?

The vestibular system includes the parts of the brain and the inner ear that help control balance and eye movements. If the system is damaged by disease, aging, injury or neurodevelopmental issues it leads to vestibular disorders. Disruption of its function either leads to adverse effects on consciousness system, leading to decrease in attention, increase in impulsivity and on modulation of feedback loops, or an interaction with cerebellum and proprioceptive inputs leading to decreased postural and balance controls.

Why is Vestibular Rehabilitation required ?

Vestibular stimulation improves posture, balance, gross motor skills, and visual motor control. Furthermore, these stimuli decrease impulsivity and hyperactivity via regulating consciousness and attention levels and improve motor planning and execution. Thus, vestibular habilitation and rehabilitation is the integral part of sensory integration and neuro muscular developmental therapies.

Which kind of patients need Vestibular Rehabilitation?

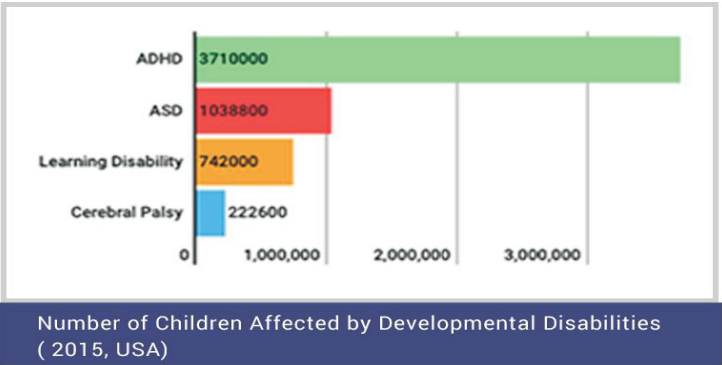
Vestibular rehabilitation is the need for paediatric cases of ADHD, Learning difficulty, Autism, Cerebral Palsy and geriatric population especially the one's suffering from Vertigo, Diabetes, Parkinson's etc.

What is the statistical prevalence of population needing vestibular rehabilitation?

More than 170 million children in the world suffer with developmental disabilities, 14 million in India

- > CP & Autism count for 20% of all disabilities in the world
- > 4/1000 births have CP and 1/69 children suffer from Autism.
- > 40% of adults above 40 years have some sort vestibular dysfunctions

Source of data: AYU-34(1) Jan Mar2013 & CDC-2012



What is Cerebral Palsy (CP) & Autism Spectrum Disorder (ASD)?

Cerebral Palsy and Autism are the world's most common developmental disability and disorder in children which damages brain and affects their sense of balance, posture and co-ordination. Cerebral Palsy is non-curable and some important effects of cerebral palsy are muscle tightness and spasticity, difficulty in moving or involuntary movements such as disturbances in gait, balance, coordination, walking. Whereas Autism Spectrum Disorder is characterized in varying degrees, by difficulties in social behavior & interaction, communication both verbal as well as nonverbal and repetitive behaviors.



What are the existing treatments available for vestibular rehabilitation?

Along with medical management there is Acupuncture, Aquatic physical therapy, Hippotherapy and Conventional Physio & Occupational therapy. Assistive tools used for exercises are physio ball, balance board, scooter, swings etc.

Why is Vestibulator® a desirable product?

As single unit to give all stimulation motions in every posture at variable speed, frequency & time duration with predetermined maximum & minimum attributes to all motions, the Vestibulator not only modernizes the conventional vestibular rehabilitation but also at a certain magnitude is a new therapy method which incrementally provides infinite vestibular challenges against gravity and is measurable & recordable line of treatment.

The Vestibulator® bridges the gap in the current clinical rehabilitation treatment settings and is a useful adjunct to conventional rehabilitation protocols.

How does a therapist get trained to use Vestibulator?

A good knowledge base of physio or occupational therapy, neuro-orthopaedic, sensory integration, and Vestibulator® protocol and usage training is key to obtaining successful treatment outcomes with Vestibulator.



VESTIBULATOR®

“Pacemaker” for the Vestibular System –An Internal GPS of the body
Vestibular Rehabilitation, Neuro-Developmental, Sensory Integration Therapy Device



Specially Designed For The Treatment Of
Cerebral Palsy, Autism Spectrum Disorder (ASD),
Attention Deficit Hyperactivity Disorder (ADHD),
Learning Disabilities And Vertigo.

**Can Deliver More Than One Million Matrices Of
Controlled Vestibular Stimulations.**

About Transpact Enterprises

Transpact Enterprises is a design, development, manufacturing, and distribution firm for therapeutic devices and rehabilitation services with analytics and management software systems. Incubated at SINE (Society for Innovation and Entrepreneurship), IIT Bombay and CIIE (Center for Innovation Incubation and Entrepreneurship) IIM Ahmedabad , the company is ISO 13485:2016 certified for medical devices and ISO 9001:2015 certified for quality management system.

Its products comply with CE marking, the essential requirements of health, safety & environment protection legislations .

The company partners with the Industrial Research and Consultancy Centre (IRCC) , IIT Bombay for continuous product innovation and Octaware Technologies , a SEI-CMMI Level 3 certified software development company to build its digital healthcare solution.

Vestibulator®



Vestibulator® is a compact , mechanized , innovative therapeutic healthcare device which is ergonomically designed to provide stimulations for vestibular, neuro-developmental and sensory integration therapy.

It is the only dosimetry and automated device of its own kind, co-patented by Transpact Enterprises and Indian Institute of Technology which performs the complete vestibular stimulation required for treatment of Cerebral Palsy, Autism Spectrum Disorder(ASD), Learning Disabilities, Attention Deficit Hyperactivity Disorder (ADHD) ,Sensorineural Hearing Impairment, Traumatic Brain Injuries, Vertigo and various other vestibular dysfunctions.

The integrated software, based on latest blockchain technology, enhances disease monitoring and manages the therapy prescribed by the therapist. The cloud-based data storage of personalized medical records, clinical documentation, and nutrition schedule makes it easy to access and monitor the treatment records across distances. The Vestibulator provides efficient treatment and is a multiple time more effective tool for physio and occupational therapists.

Awards and Affiliation



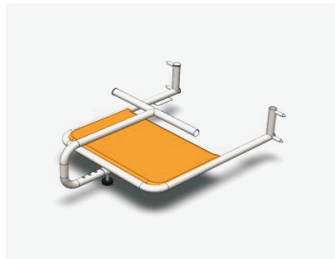
Exploring Deep Tech & Solving Deep Issue
TECH PLANTER.



17-21
OCT 2021
DUBAI WORLD TRADE CENTRE



Vestibulator Accessories



ACTIVITY TRAY

Provides the arm rest and secured holding to the user.



CRAWLING POSTURE

Helps the user to maintain the crawling posture.



CHAIR

Helps the user to maintain the sitting posture.



VERTICAL STAND WITH BACK REST

Serves as the mounting frame for sitting posture accessory and helps the user to maintain standing posture



VERTICAL STAND

Mounting frame for other posture accessories & activity tray.



HARNESS

The five point harness secures the user with the bed.

Ordering Information

For orders please email us at

✉ sales@transpact.in / anischoudhery@gmail.com

You will be sent an Online Purchase Order Form –complete it and send it back to us

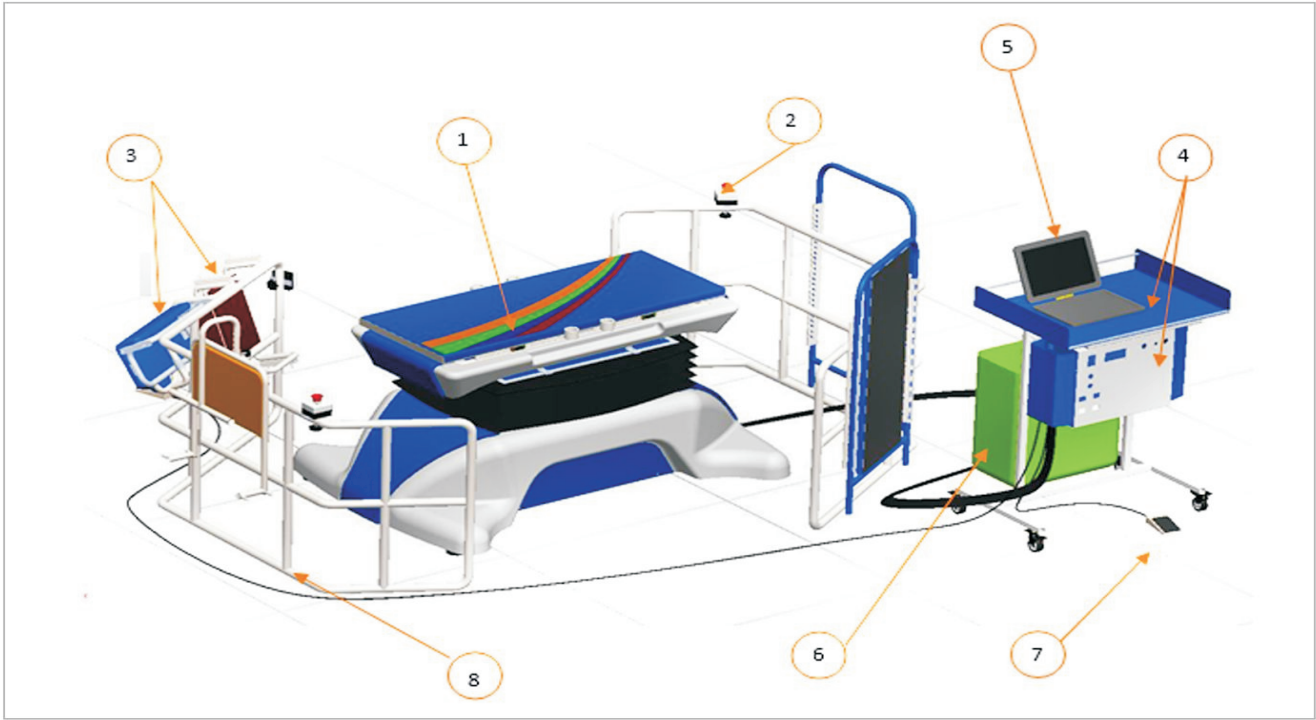
For faster service, please include the following information with orders submitted to sales@transpact.in

- ▶ Company Name
- ▶ Name, Phone Number, and Email Address of Purchasing Agent (if applicable)
- ▶ Name and Phone Number of the End User
- ▶ Valid Purchase Order Number
- ▶ Complete Billing and Shipping Addresses
- ▶ Product Number, Description, Pricing and Quantity

Prior to placing an order, please read the Terms and Conditions of our Sale Policy sent alongwith the Purchase Order Form.

For accuracy and confirmation purposes, we do not accept orders over the phone.

Vestibulator Assembly



List of major units

Sr. No	Name	Function / Description
1	Vestibulator bed main assembly	Main bed surface to put the kid for therapy
2	Safety switches	Passive safety – emergency stop
3	Slides for various postures	Attachments to facilitate postures – standing, chair, crawling, standing, kneeling, long sitting
4	Control unit trolley	Main controller unit
5	HMI / Laptop	Controlling software – user interface
6	Soft cushion bag	Holds soft cushions and jackets
7	Safety switch- foot operated	Passive safety – emergency stop
8	Side rails	Marks the operation zone of the bed

Technical Specification

Product	Vestibulator
Power supply	2 HP
Voltage input	120 V/240 V at 50-60 Hz
Product Dimension	L X H X B: 1.6 m x 2 m x 1 m
Weight	400 Kgs
Display	22 Inch, Windows
Weight carrying Capacity	120 Kgs
Classification	Non-notified Medical Devices(CDSCO,India)

Material Specification

Metal	Stainless Steel, Cold rolled steel
Frame	Anti rust
Platform/Activity Surface	32/40 density foam mattress covered with Rexene closed with zip at one end.
Size	1500 x 600 x 60 mm
Material	Foam Mattress thickness 6 cm Allergen Control, Anti-slip, Water Resistance, Anti-Fungal.
Colour	White and Blue
Certification	CE, ISO-13485-2016, ISO 9001-2015

All About Vestibulator

Vestibulator® is a comprehensive device which provides stimulations to the vestibular system against gravity in all the three planes of motions viz vertical stimulations, sliding stimulations, tilts- lateral, antero-lateral and linear, rotations at intermittent angles as well as 360 degrees in cyclic or only clock wise or anti clock wise direction in the following postures:



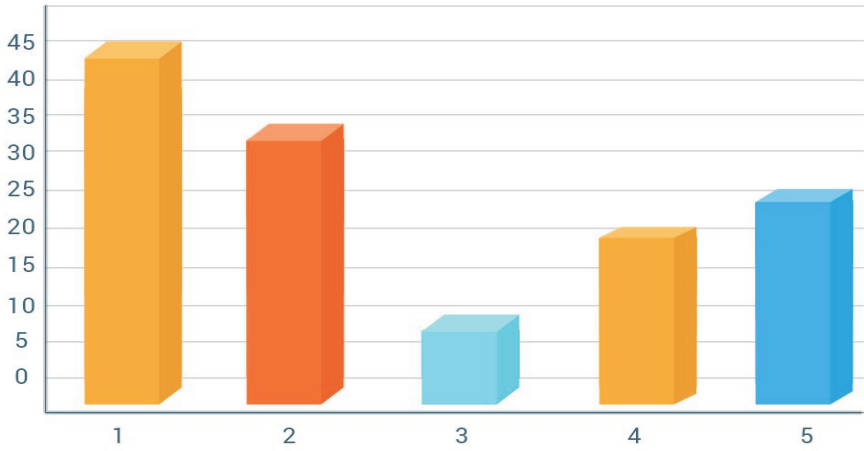
Features

- Automation and Dosimetry:
Vestibulator® is an automated device and it allows to define a physiotherapeutic dose in terms of displacement frequency & duration of the manoeuvre.
- Comprehensive Treatment Module:
The device provides additional matrices of motion and postural movements with variable speed against gravity. In turn creating new challenges for the vestibular system of the patients thus enhancing the course of treatment and recovery.
- Works on prescription.
- Pre-set acceleration and deceleration speed for all the motions.
- Programmable :
The digital platform of the Vestibulator® is programmable in real time to give specific motions in a particular posture to a specific child.
- Patient Data Cards :
The integrated software records the treatments session information on individual patient cards available anytime anywhere to the authorized users.
- Intuitive user Interface easy to use with controls and dialogue window.
- Automated information log generation of the therapy.
- Safe:
Safety of the patient is ensured using the 5 point harnessing system in every manoeuvre. The device is provided with passive safety measures and emergency stops on the railing. Soft cushioning ensures safe and smooth therapy enhancing patient’s comfort and tolerance.
- Compact:
Vestibulator® saves up to 80% of the infrastructure space required for a conventional set up for vestibular rehabilitation.

Insights of the Clinical Study *
(1-5 corresponds to graph)

- 1. % of children showing improved posture maintenance and walking.
- 2. % of children who became less fearful on movable surfaces and demonstrated reduction in number of falls.
- 3. % of children showing noticeable improvement in academics.
- 4. % children who demonstrated general body relaxation.
- 5. % of children for whom transitioning became easier.

Improvement in Cerebral Palsy Children Using Vestibulator (20 Sessions)



Clinical Effectiveness

Balance & Posture

Vestibular stimulation improves balance and posture by using the cognitive function and sensory perception. Vestibulator[®] enables therapist to create more challenges (innumerable matrices of motion & position at variable speed , magnitude and time) for patients to yield better results .The clinical studies of Vestibulator[®] have proven the improvement in static postures – sitting, kneeling and standing attributed to improvement in trunk control in patients suffering from Cerebral Palsy.



Gross Motor and Fine Skills

Controlled rotatory vestibular stimulation programme produces significant improvements in gross motor skills and in reflex integrations,Vestibulator[®] is designed to give rotatory movement at variable speed , direction and duration . The graded vestibular stimulations using Vestibulator[®] modulates the vestibular inputs to widespread brain structures involved in motor control and improves motor activities in patients. The clinical studies of Vestibulator[®] with Cerebral Palsy children of age group 4 to 8 years demonstrated stability in the upper extremities (improved handwriting ,improved grip) as well as lower extremities (lifting legs etc).

Muscle tone and Spasticity

The Vestibulator[®] provides graded and consistent changes in the support surface during the therapy sessions enabling patients to develop the correct responses against gravity and thus, normalizes the tone and reduces spasticity.

Gaze Stabilization

With the help of Vestibulator[®] , therapist provides better gaze stability training to the patients.



The Rehab-Soft

The Rehab-Soft is a digital healthcare solution that streamlines patient billing, electronic medical records (EMR) processing, device administration, and communications. The solution is based on Internet of Things (IoT) technologies that turns Vestibulator therapy data into electronic medical record and sends them to the private cloud, where data analytics can be performed to better evaluate patient’s condition. The Rehab-Soft increases staff efficiency, improves medical care, support EMRs, and enable patient data sharing among therapy centres.

The Rehab-Soft uses emerging technologies like IoT, cloud computing, and big data analytics. The solution connects the device to Vestibulator IT networks, VestiLab, enabling data flow seamlessly to centralized data server from the private cloud. The Rehab-Soft is highly customizable integrated software solution.

Features of Rehab-Soft :

Patient Data Management

Therapy Scheduling

Vestibular Therapy Process Record

Record Doctor's Advice

Sync Medical Treatment Process

Resource and Asset Management

Employee Management

Finance Monitoring

Rehab-soft Architecture :

Data

Devices

People

Process

RehabSoft - Patient Registration

Registration

Individual Details

Other Details

Benefits of Rehab-soft:

Improve Medical Care:

With the Rehab-Soft solution, doctors and therapist can remotely monitor all the patient’s data on a computer display or a wireless tablet, making it easier to track patient status. The solution not only enhances clinical analytics capabilities and decision support, but it is also central to providing a more accurate and complete picture of a patient’s condition.

Support Electronic Medical Records (EMRs):

The Rehab-soft solution makes the process paperless by connecting the Vestibulator to servers that collect and consolidate clinical data. The solution uses blockchain technology in the architecture making electronic medical records more efficient, disintermediated, and secure.

Increase Staff Efficiency:

The solution automates the process from registration and measurement to the end of the therapeutic treatment, giving staff more time for other clinical activities. In addition, solution allows more frequent and faster data updates, which improves workflow efficiency and minimizes human data entry errors.

Enable Patient Data Sharing :

Patient data is stored in the cloud, so any therapy centre in the VestiLab network can access the data anytime and treat patients.