



Tyromotion: DIEGO®

GraceLyn Garniss, MOTR/L



Background Information

- Developed in Styria/Austria in 2014
- “Modern, mechatronic shoulder-arm rehabilitation device for patient with limited arm function; it can measure the arm’s movement range and also perform functional arm therapy”
- Intended purpose is therapy for neurological damage to the CNS caused by CVA or TBI
- Offers uni- and bilateral training with intelligent gravity compensation



Indications and Contraindications

- CVA
- TBI
- Brain Tumor
- Parkinson's Disease
- Multiple Sclerosis
- Cerebral Palsy
- ALS
- Muscular Dystrophies
- Some orthopedic injuries
- Acute pain in the upper extremity
- Children under the age of 5
- Contractures or severe spasticity in the upper extremity
- Insufficient compliance
- High grade ataxia
- Severe osteoporosis
- Fractures
- Pacemakers: needs to be 15cm from DIEGO after device has been cleared
- Lymphatic system problems



Impairments Addressed

- Range of motion
- Strength
- Fine and gross motor coordination
- Proprioception
- Activity tolerance
- Visual perception and attention
- Problem solving
- Neuromuscular re-education



Therapy Functions

- Assessment
- Passive
- Assistive
- Active



Therapy Programs

- 1D Accuracy
- 1D Reaction
- 2D Motor Function
- 2D Cognition
- Virtual Reality



Adjustments

- Averted and facing position
- Height
- Range of motion
- Weight relief in wrist and elbow



Safety Features

- Two independent electronic motors controlled by software system
- Integrated magnet coupling to ropes to disengage connection if force movement is too strong
- Emergency stop button



Documentation

- Task completed
- Total time
- Range of motion parameters and improvements
- Weight relief parameters
- Additional notes



Modifications

- Averted position to complete functional task
- Added weight
- Standing position
- Cognitive challenges
- Off labeled uses





Thank you for your time

Questions?