

Enhancing Wheelchair Propulsion with the SmartWheel

The SmartWheel is an assessment tool used to analyze wheelchair propulsion.

Who may benefit from the SmartWheel?

- Any individual struggling with wheelchair propulsion
- Individuals who most likely will be permanent manual-wheelchair users
- Individuals who complain of upper-extremity pain due to chronic wheelchair use
- Any individual who is currently in a wheelchair and considering modifications or improvements to their current system

How does the SmartWheel work?

The SmartWheel is placed on a client's existing or trial wheelchair. Data generated by the SmartWheel is collected into a national database allowing clinicians to compare an individual's data with collected normative values. The SmartWheel has sensors which detect the following data variables:

- Speed
- Push Frequency
- Push Length
- Force
- Push Smoothness

What are the advantages of using the SmartWheel?

The SmartWheel can be used to guide the individual in:

- Wheelchair selection
- Wheelchair setup and fitting
- Training on effective propulsion technique and assessment of progress with training
- Justifying specific equipment usage to third-party payers



The **Marianjoy Assistive Rehabilitation Technology Institute** offers solutions to everyday problems of daily living encountered by individuals with disabilities. The Institute consists of seven distinct centers that apply advancements in technology to benefit individuals with disabilities through maximizing functional independence, as well as expanding educational, vocational, recreational, and communicative opportunities.

- **Assistive Communication and Daily Living Center**
- **Balance and Vestibular Center**
- **Driver Rehabilitation Center**
- **Gait Analysis and Mobility Center**
- **Prosthetic and Orthotic Center**
- **Swallowing and Voice Center**
- **Wheelchair and Positioning Center**



To make an appointment or for more information, call

630-909-7150

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