

## Loopwheels™ WHY & WHEN

Consider Loopwheels™ for manual wheelchair users when they:



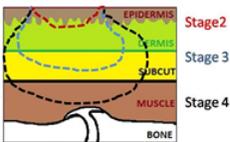
For clients who typically travel longer distances.



Travel over uneven surfaces (e.g. cobbled or paved streets, forest tracks, gravel paths).



Back pain (and in particular low back pain)



Pressure sores.



Bladder control.



Excessive tone



Vibration is much worse when travelling at speed, so may be of particular benefit for those using a hand bike or power attachment



Reducing pain, discomfort and fatigue can be important in helping someone to return to work and to participate in more social and family occasions.

# Some Case Studies & Examples - Loopwheels™

Indications	Before Loopwheels™	After Loopwheels™
Fatigue Bladder Control. Pain	Mr. A has an SCI which occurred 22 years ago. He has rotor cuff damage. He has recently started using a power bike attachment to reduce the amount of pushing he has to do. But he is experiencing increased lower back pain and difficulties with bladder control, which are limiting his ability to use the power bike for anything but very short periods of time. He is not using the power bike very often.	Mr. A is loving getting out on his power bike. Not only is he using it to access essential daily tasks such as shopping, but also he has started joining his brother's family on weekend dog walks in the local forest, where he finds he is able to travel over the woodland tracks in comfort and with ease.
Inclusion in family life Travel over uneven surfaces.	Mrs. B lives just outside a town in NL. The streets and squares of the medieval town centre and shops are cobbled. Mrs. B has not visited her local town centre for 11 years since she started to feel too much pain and discomfort from jolting over the cobbles in her wheelchair. She is feeling increasingly isolated as she is unable to take part in normal social activities with her husband and friends. She is suffering from depression. She has gained weight.	With Loopwheels™, Mrs. B is now happy to go into town as she finds it quite possible to travel over the cobbled streets without extreme pain from jolting. Her husband finds it much easier to push her than he did without Loopwheels™. She has now re-connected with a group who meet weekly in a café on the cobbled market square. She and her husband are going out to cafes and restaurants that they had not visited for years.
Severe Tone (after Lyme Disease)	After contracting Lyme disease, this client went into severe extensor tone every time he went over a bump. He would have to pause for a minute or two until the contractures subsided. Just to get into the wheelchair clinic he had to roll over our doormat and it would take him 5 minutes just to get through the door.	With Loopwheels™, in combination with TiLite's new front suspension, the client was able to zip across the entrance with no extensor tone problems. Best of all he was able to get outside and enjoy himself. Prior to this he was for the most part a shut in due to the unremitting tone issues.

## References

Vorrink SNW, Van Der Woude LH V, Messenberg A, Crompton PA, Hughes B, Sawatzky BJ. Comparison of wheelchair wheels in terms of vibration and spasticity in people with spinal cord injury. Assist Technol Res Ser. 2010

Garcia-Mendez Y, Pearlman JL, Boninger ML, Cooper RA. Health risks of vibration exposure to wheelchair users in the community. J Spinal Cord Med. 2013

Pope MH, Wilder DG, Magnusson ML. A review of studies on seated whole body vibration and low back pain. Proc Inst Mech Eng H 1999;213(6):435-46.

Katu US, Desavale RG, Kanai RA. Effect Of Vehicle Vibration On Human Body – RIT Experience.

Turner JA, Cardenas DD, Warms CA, McClellan CB. Chronic pain associated with spinal cord injuries: a community survey. Arch Phys Med Rehabil. 2001 Apr;82(4):501-9



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**Falcon Rehabilitation**

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