



ISWP

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**RESEARCH CENTRE
FOR HEALTHY AND
SUSTAINABLE LIVING**

**RESEARCH GROUP
LIFESTYLE & HEALTH**

Introduction

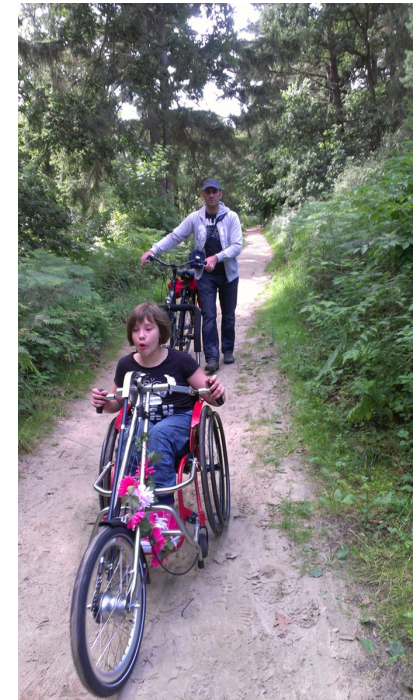


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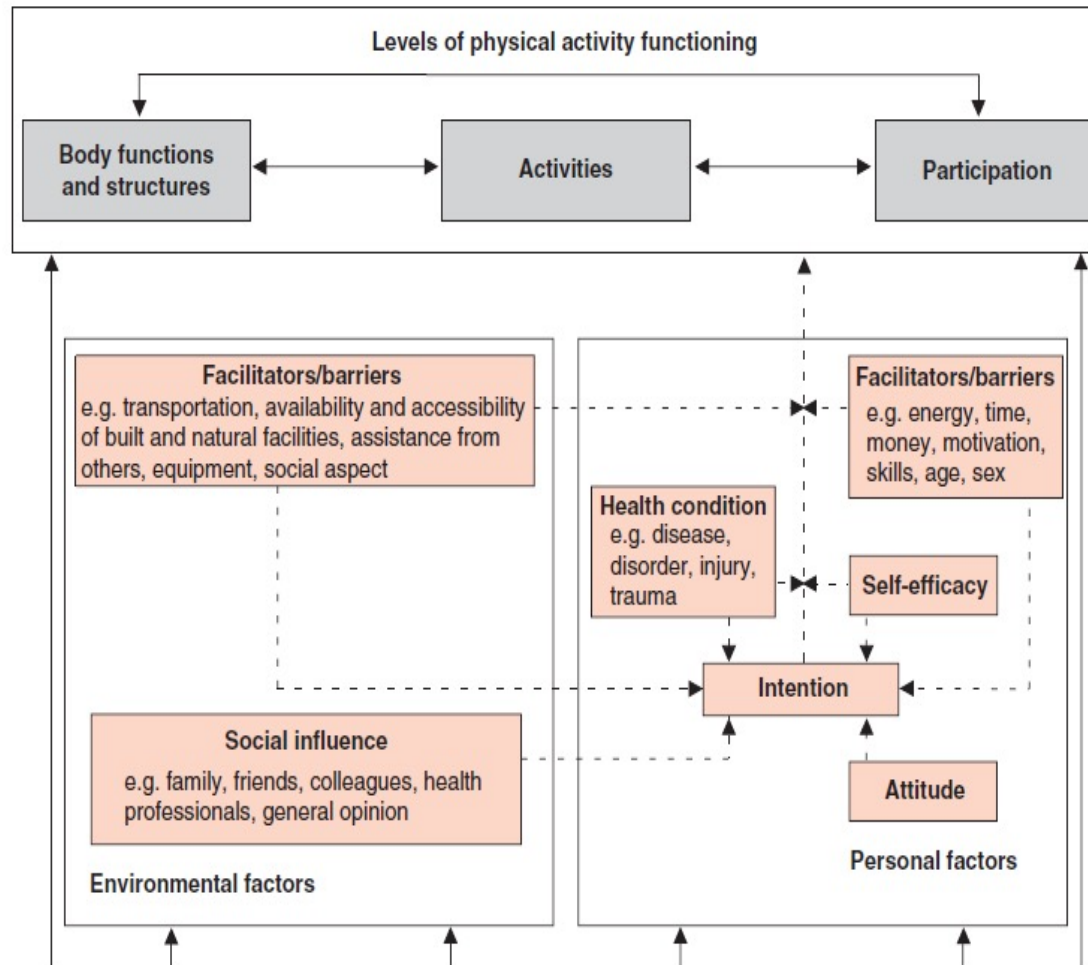
Why Wheelchair Mobility and Physical Therapy?



Participation in physical activity



PAD Model



Bloemen – Facilitators and Barriers PA in children with spina bifida



“(P) Wheelchair training, that is very important I think,that they really learn to go up and down stairs..... a lot of places are not adjusted for wheelchairs... she can do much more now... and you can just go.... your life becomes a lot more fun....”

- Skills
- Self-efficacy



Fitness tests in wheelchair-using children



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Master Pediatric Physical therapy
2.5 hours theory
2.5 hours practise

Sol - Wheelchair Mobility Skills training in Dutch Youth



Experience with Wheelchair mobility skills training



Practise outdoors

Fun

**Feel of control over your wheelchair
limitating → liberating**

Wheelchair user as trainer

Strength to include parents and HCP

Importance of wheelchair settings

Wheelchair acquisition in the Netherlands



'Wheelchair' in curriculum

Bachelor physical therapy (4 years)



- 1st year: Basic principles of fitness testing including adults in a wheelchair.
Mobility lesson of 2 hours
- 2nd year: Included in course 'central nervous system disorders' transfers in/out of wheelchair in adults with SCI or stroke.
- 3rd year: Transfers in/out of wheelchair in adults with MS
- Possibilities: New course 'physical self-reliance'

'Wheelchair' in curriculum

Master Pediatric Physical Therapy (3 years, part time)



2nd year

- Fitness testing
- Wheelchair mobility skills assessment and training
- Spina Bifida, Cerebral Palsy, Neuromusculair disorders.

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Web lectures

Inspanningsfysiologie bij chronische aandoeningen

Inspanningsproblemen en hulpvragen betreffende inspanningsgerelateerde problematiek komen veelvuldig voor bij kinderen met een chronische aandoening. Het testen van deze kinderen en het interpreteren van deze testen, is voorwaardelijk om tot een goed onderbouwde interventie te komen

Tijdens deze bijeenkomst worden je vragen naar aanleiding van de voorbereiding beantwoord en wordt aan de hand van verschillende casuïstieken de inspanningstesten die passen bij verschillende hulpvragen doorgenomen.



Mocht jij je nog verder willen verdiepen in dit onderwerp dan raden wij de volgende aanbevolen literatuur aan:

- In het boek: 'Pediatric Exercise Medicine, from physiological principles to health care application. Oded Bar-Or, Thomas W. Rowland' staan veel interessante hoofdstukken over inspanningsfysiologie bij kinderen.
- Als je wilt weten of 220-leeftijd wel een goede formule is om de maximale hartslag te berekenen bij kinderen zou je het volgende

Voorbereiding:

- Bekijk de kennisclip opgenomen door dr. Manon Bloemen en dr. Eline Bolster.
- Bereidt de [casuïstieken](#) met je leerteam voor. Welke inspanningstesten neem je af bij de verschillende hulpvragen en waarom?
- Lees het [artikel](#) van: Balemans AC, Fragala-Pinkham MA, Lennon N, et al. Systematic review of the clinimetric properties of laboratory- and field-based aerobic and anaerobic fitness measures in children with cerebral palsy. Arch Phys Med Rehabil. 2013; 94: 287-301.
- Lees het [artikel](#) van: Verschuren O, Balemans AC. Update of the core set of exercise tests for children and adolescents with cerebral palsy. Pediatr Phys Ther. 2015 Summer, 27(2): 187-9.
- Lees het [artikel](#) van: Treadmill testing of

Gaps en steps in the future



- Challenges in Rehabilitation and Education:
 - Interprofessional working with OT, additional value of PT in wheelchair acquisition
 - Shift of focus:
 - » sitting position vs active lifestyle
 - » walking ability AND wheelchair ability
 - Better implementation of knowledge about wheelchair use and settings in both Bachelor and Master program