HandbikeBattle

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Training for the HandbikeBattle and handbike training in general, will have a positive effect on physical health, physical fitness and quality of life in wheelchair dependent individuals.

Ethische beoordeling	Positief advies
Status	Werving gestart
Type aandoening	-
Onderzoekstype	Observationeel onderzoek, zonder invasieve metingen

Samenvatting

ID

NL-OMON23899

Bron
Nationaal Trial Register

Verkorte titel
HandbikeBattle

Aandoening

spinal cord injury, amputation, cerebral palsy, spina bifida, neuromuscular disease, multi trauma, rehabilitation patients

Ondersteuning

Primaire sponsor: Rijksuniversiteit Groningen / UMCG, Reade
Overige ondersteuning: HandicapNL
Heliomare
Stichting Mitialto
Stichting Handbike Events
Stichting Beatrixoord Noord-Nederland

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

Physical fitness (VO2peak, POpeak)
Physical health (pulmonary function, body mass, BMI, waist circumference)
Quality of life (life satisfaction, mental health, purpose in life, self efficacy, body satisfaction etc)
Posture in handbike (elbow angle, shoulder width to crank width ratio etc)

Toelichting onderzoek

Achtergrond van het onderzoek

The HandbikeBattle (HBB) is an annual handcycling race in the mountains of Austria (20 km, almost 1000 altitude meters). It was first organized in 2013, and it is a race among teams of twelve Dutch rehabilitation centers. Each center has a team of 4-6 former rehabilitation patients with spinal cord injury, amputation, cerebral palsy or neuromuscular disease.
The purpose of the HBB is giving former rehabilitation patients a goal to train for independently at home and to get active and fit and to bring peers together during training and in the week of the HBB. The participants can learn from each other while being in different situations in daily life (e.g. being in a hotel without a shower that they are used to). The handbikers will receive some advice from the rehabilitation centers but need to take action themselves by applying for the provision of a handbike by their municipality and by starting to train seriously. The HBB is a race, but most important is that the handbiker makes it to the top and that this success will raise the confidence in his/her own capacities and enhance the sense of mastery to pursue other goals in life.

The HBB is an ideal setting to study the effects of training in a handbike. The number of participants is large (N=60-70 per year), and most of them are relatively untrained at the beginning of the training period. Besides, the training period is relatively long (4-5 months) and the exercise intensity during the climb is high. All participants of the event are asked to voluntarily participate in the research project. The research project is not intervening with the participants' preparation for the event. Before and after the training period, physical fitness is measured with a graded exercise test. At the same time points, participants are asked to fill out several questionnaires about mental health. During the training period, the participant is asked to keep a training log and fill out questionnaires about pain and overuse injuries. The training period is free-living. After the training period two follow-up measurements are performed: participants are asked to fill out questionnaires about mental health four months after the event and one year after the event.

When a participant is not longer able to participate in the preparation for the event (e.g. due to medical reasons or motivational issues), the researchers will stop monitoring the participant.

Doel van het onderzoek

Training for the HandbikeBattle and handbike training in general, will have a positive effect

on physical health, physical fitness and quality of life in wheelchair dependent individuals.

Onderzoeksopzet

A graded exercise test before start of the training period (in December/January), at the end of the training period (in May/June), and one year after the event (in June).
Questionnaires about mental health (e.g. quality of life) at four points in time: in December/January, in May/June, in October and one year after the event (June)
Questionnaires about overuse injuries (monthly) between January and June.
Training monitoring between January and June (with training log / app)
Measurements of sitting posture in June.
This is an annual event with new participants every year.

Onderzoeksproduct en/of interventie

None

Contactpersonen

Publiek

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

- Commitment to the HandbikeBattle challenge
- First time of participation in the HandbikeBattle challenge
- > 12 years old

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

- Not enough knowledge of Dutch language to understand the instructions

Onderzoeksopzet

Opzet

Type:	Observationeel onderzoek, zonder invasieve metingen
Onderzoeksmodel:	Anders
Toewijzing:	N.v.t. / één studie arm
Blindering:	Open / niet geblindeerd
Controle:	N.v.t. / onbekend

Deelname

Nederland

Status:	Werving gestart
(Verwachte) startdatum:	01-01-2013
Aantal proefpersonen:	400
Type:	Verwachte startdatum

Voornemen beschikbaar stellen Individuele Patiënten Data (IPD)

Wordt de data na het onderzoek gedeeld: Nee

Ethische beoordeling

Positief advies

Datum:	04-07-2017
Soort:	Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

Geen registraties gevonden.

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL6410
NTR-old	NTR6586
Ander register	Ethics Committee of Human Movement Sciences, UMCG, University of Groningen : ECB/2012_12.04_l_rev/M1

Resultaten

Samenvatting resultaten
Mountain time trial in handcycling: exercise intensity and predictors of race time in people with spinal cord injury. S. de Groot, K. Postma, L. van Vliet, R. Timmermans, L. Valent. Spinal Cord. 2014 Jun;52(6):455-61.

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The influence of protocol design on the identification of ventilatory thresholds and the attainment of peak physiological responses during synchronous arm crank ergometry in able-bodied participants. I. Kouwijzer, M. Valize, L.J.M. Valent, P. Grandjean Perrenod Comtesse, L.H.V. van der Woude, S. de Groot. European Journal of Applied Physiology 2019 In press.