



## SilverFit – Literature and Research Review

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## SilverFit 3D

### Published

1. Van der Kooij, K., van Dijsseldonk, R., van Veen, M., Steenbrink, F., de Weerd, C., & Overvliet, K.E. (2019). **Gamification as a Sustainable Source of Enjoyment During Balance and Gait Exercises.** *Frontiers in Psychology*, 10(294). 
2. Anders, P., Lehmann, T., Müller, H., GrØnvik, K.B., Skjaeret-Maroni, N., Baumeister, J., & Vereijken, B. (2018). **Exergames inherently contain cognitive elements as indicated by cortical processing.** *Frontiers in Behavioral Neuroscience*, 12(102). 
3. Skjaeret-Maroni, N., Vonstad, E.K., Ihlen, E.A., Tan, X.C., Helbostad, T.L., & Vereijken, B. (2016). **Exergaming in older adults: movement characteristics while playing stepping games.** *Frontiers in Psychology*, 7(964). 
4. Griswold, D., Rockwell, K., Killa, C., Maurer, M., Landgraff, N., & Learman, K. (2014). **Establishing the reliability and concurrent validity of physical performance tests using virtual reality equipment for community dwelling healthy elders.** *Disability and Rehabilitation*, 37(12), 1097-101. 
5. Nawaz, A., Skjaeret, N., Ystmark, K., Helbostad, J.L., Vereijken, B., & Svanaes, D. (2014). **Assessing seniors' user experience (UX) of exergames for balance training.** In *Proceedings of the 8th Nordic Conference on Human-Computer Interaction: Fun, Fast, Foundational: NordiCHI'14* (pp. 578-587). New York, USA: ACM. 
6. Skjaeret, N., Nawaz, A., Ystmark, K., Dahl, Y., Helbostad, J.L., Svanaes, D., & Vereijken, B. (2014). **Designing for movement quality in exergames: lessons learned from observing senior citizens playing stepping games.** *Gerontology*, 61(2), 186-194. 
7. Terlouw, G., Matsuguma, H., van Dijk, H.W., & Schikhof, Y. (2014). **Exergaming in gerontechnology: Moving forward.** *Gerontechnology*, 13(2), 144.
8. Koning-van Zuijen, M., & Lindeboom, R. (2014). **Effecten van een beweegprogramma voor demente ouderen in het verpleeghuis op kwaliteit van leven** [The effects of an exercise programme on quality of life for people with dementia living in a care home]. *Fysiotherapie & Ouderenzorg*, 26(1), 11-17.
9. Nap, H. H., & Diaz-Orueta, U. (2013). **Rehabilitation gaming.** In S. Arnab, I. Dunwell, & K. Debattista (Eds.), *Serious games for healthcare: applications and implications* (pp. 50-75). Hershey, PA, USA: IGI Global.
10. Van Gastel, M., & Van der Burgt, R. (2012). **Verminderen van vallen met de SilverFit** [Reducing falls with the SilverFit]. *Fysiotherapie & Ouderenzorg*, 26(1), 11-17.
11. Van der Burgt, R., & Wiersinga, J. (2009). **Moderne ouderenzorg: revalidatie met behulp van computerspellen** [Modern geriatric care: rehabilitation using computer games]. *Fysiotherapie & Ouderenzorg*, 23(3), 43-50.
12. Rademaker, A., Van der Linden, S., & Wiersinga, J. (2009). **SilverFit, a virtual rehabilitation system.** *Gerontechnology*, 8(2), 119.

### Unpublished posters/presentations

1. Anders, P., Lehmann, T., Müller, H., Molde, I., GrØnvik, K., Skjaeret-Maroni, N., Vereijken, B., & Baumeister, J. (2017). **Balance exergames increase cortical activity in frontal areas of the brain.** Poster presented at ESMAC (European Society for Movement analysis in Adults and Children) 26<sup>th</sup> Annual Meeting, Trondheim, Norway.

2. Anders, P., GrØnvik, K., Molde, I., Müller, H., Skjaeret-Maroni, N., & Vereijken, B. (2017). ***Balance exergames improve movement characteristics of body weight transfer.*** Poster presented at ESMAC (European Society for Movement analysis in Adults and Children) 26<sup>th</sup> Annual Meeting, Trondheim, Norway.
3. Korian (2016). ***Taking care of patients suffering from dementia and neurodegenerative diseases, TNM (non-medical techniques) project.*** Presented at Silver Economy Expo, Paris, France.
4. De Deugd, J., Willemse, J., & Rademaker, R. (2010). ***SilverFit virtual reality game as an evaluation tool for hip function.*** Poster presented at congress Kinesitherapie en Ergotherapie in de Geriatrie, Vrije Universiteit Brussel, Brussels, Belgium.

*Unpublished*

1. Zijlstra-Pabbruwee, L. (2020). ***Exergaming als aanvulling op de fysiotherapeutische behandeling; een virtueel oefenprogramma om ouderen met dementie meer in beweging te brengen*** [Exergaming in addition to physiotherapy treatment; a virtual exercise program for elderly with dementia to exercise more regularly] (Unpublished Master's thesis). Avans Plus University of Applied Sciences.
2. Wiersum, B. (2019). ***Kwaliteitsonderzoek naar orthopedisch revaliderende ouderen met behulp van de SilverFit*** [Qualitative research examining elderly who undergo orthopedic rehabilitation using the SilverFit] (Unpublished Bachelor's thesis). Thim van der Laan University of Applied Sciences.
3. Spoorenberg, R. (2019). ***Het bepalen van functieverbetering met behulp van de SilverFit 3D. Welke uitkomstmaten zijn geschikt om functieverbetering van de bovenste extremiteit te bepalen met de SilverFit 3D?*** [Determining functional improvement using the SilverFit 3D. Which outcome measures are suitable to determine functional improvement of the upper extremity using the SilverFit 3D?] (Unpublished Bachelor's thesis). De Haagse Hogeschool.
4. Van Cruchten, A. (2019). ***Een kwalitatief onderzoek naar de hanteerbaarheid en de ervaringen van het SilverFit amputatieprogramma binnen de Geriatrische Revalidatiezorg*** [Qualitative research examining the manageability and experiences of the SilverFit amputation program within the geriatric rehabilitation care] (Unpublished Master's thesis). Avans Plus University of Applied Sciences.
5. Bakker, M. (2019). ***Why do physiotherapists not look at what they want?*** (Unpublished Master's thesis). Utrecht University.
6. Gerlofsma, N. (2018). ***Technologie in de arm-/handrevalidatie bij CVA-patiënten*** [Technology in rehabilitation of the arm-/hand function in stroke patients] (Unpublished Bachelor's thesis). Rotterdam University of Applied Sciences.
7. Veringa, M. (2018). ***Het effect van exergame therapie op de loopvaardigheid van chronische CVA-patiënten in vergelijking met conventionele fysiotherapie. Een literatuuronderzoek*** [The effect of exergame therapy on the walking ability of chronic CVA patients compared to conventional physiotherapy. A literature study] (Unpublished Bachelor's thesis). Utrecht University of Applied Sciences.
8. Attema, K.J. (2018). ***Design of a long-range, cost-effective serious gaming system for reliable gait measurement of the elderly to support their physical activity*** (Unpublished Master's thesis). University of Twente.
9. Buningh-Quaedvlieg, F. (2018). ***Het toepassen van een beweegprogramma op de SilverFit bij de geriatrische palliatieve oncologierevalidant met als doel het verbeteren van het fysiek functioneren en verminderen van de kwetsbaarheid.***

**Een haalbaarheids-/pilotstudie** [The application of a SilverFit exercise program in the geriatric palliative oncologic rehabilitation to improve physical functioning and to reduce frailty. A feasibility/ pilot study] (Unpublished Master's thesis). Avans Plus University of Applied Sciences.

10. Donia, V. (2018). **The Effect of Formative Feedback on Exercise Motivation in Elderly** (Unpublished Master's thesis). Vrije Universiteit Amsterdam.
11. Van Wezel, S. (2017). **Exergame balance training and conventional balance training among healthy elderly: Effects on motivation and exercise intensity** (Unpublished Master's thesis). VU University Amsterdam.
12. Belong Macclesfield (2017). **Impact of SilverFit 3D and Mile on health parameters of care center residents** (Unpublished).
13. Flick, J.T., Gräper, C., De Gruyter, L.J.M., & De Snoo, E.K. (2017). **Zonder vallen en opstaan – Een veilige balanstraining door SilverFit en Balance Trainer (SFBT) bij Centraal Neurologische Aandoeningen? Een explorerend onderzoek** [Without falling and standing up – A safe balance training with SilverFit and Balance Trainer (SFBT) for people with Central Neurological Disorders? An exploratory research] (Unpublished Bachelor's thesis). Leiden University of Applied Sciences.
14. Saes, M.A.P.M. (2016). **Efficient virtual rehabilitation** (Unpublished Master's thesis). VU University Amsterdam.
15. Harteveld, N., Van der Ven, L., Vessies, K., & De Vries, E. (2016). **Wat zou virtuele therapie voor Parkinson patiënten kunnen betekenen?** [To what extent is virtual therapy useful for patients with Parkinson's Disease?] (Unpublished Bachelor's thesis). Leiden University of Applied Sciences.
16. Kivihalme, K. (2016). **User centered research for fine motor control rehabilitation after stroke in The Netherlands** (Unpublished Bachelor's thesis). JAMK University of Applied Sciences.
17. De Rooij, C., Sletten, A., Thuraisamy, K., & Van Veen, S. (2016). **Een mixed-method onderzoek ter ondersteuning van het fysiotherapeutisch behandelproces van kwetsbare ouderen** [A mixed-method research of physical parameters for the standing Fox-game supporting the physical therapy treatment of frail elderly] (Unpublished Bachelor's thesis). Leiden University of Applied Sciences.
18. Altink, T., Kloosterman, P., & Van der Knaap, S. (2015). **Balansprotocol voor CVA patiënten** [Balance protocol for stroke patients] (Unpublished Bachelor's thesis). Leiden University of Applied Sciences.
19. Schot, J.J., & Van der Meer, L.S. (2015). **Virtuele therapie na een CVA. Wat kan er toegevoegd worden aan de spellen van de SilverFit die SilverFit heeft ontwikkeld voor de revalidatie na een beroerte voor de arm/hand functie?** [Virtual Therapy after stroke. What can be added to the games SilverFit has developed for post-stroke rehabilitation of the arm- hand function?] (Unpublished Bachelor's thesis). Thim van der Laan University of Applied Sciences.
20. Kenson, W., Van Donge, G., De Kaper, A., & Blom, S. (2015). **Een protocol met gebruik van virtuele therapie bij revaliderende ouderen na een beenamputatie – triangulatie onderzoek** [A rehabilitation protocol using virtual therapy for elderly people with a leg amputation - triangulation] (Unpublished Bachelor's thesis). Leiden University of Applied Sciences
21. Faatz, T., Kerstens, Y., Sipkes, N., & Van Wensveen, R. (2015). **Hoe serieus is serious gaming?** [How serious is serious gaming?] (Unpublished Bachelor's thesis). Avans University of Applied Sciences.

22. Le, J. (2015). **Literature review of evidence for best evidence based exercises and state of the art of virtual reality rehabilitation for the upper extremity post stroke** (Unpublished Bachelor's thesis). Fontys University of Applied Sciences.
23. Sebregts, F., Van den Oudenalder, R., Konings, B., & Van Iersel, K. (2015). **Wat is het effect van 10 minuten matig intensief bewegen op de cognitie?** [What is the effect of exercise (10 minutes at a moderate intensity) on cognition?] (Unpublished Bachelor's thesis). Avans University of Applied Sciences.
24. Van Gestel, L., Slot, C., Remijn, R., & Theunissen, J. (2015). **Het monitoren van beginnend dementerenden d.m.v. een spel element** [Monitoring people with dementia through the use of a game] (Unpublished Bachelor's work). Avans University of Applied Sciences.
25. Braam, M. (2014). **Een nieuwe output voor het mollenspel: Een onderzoek naar fysieke parameters geschikt voor het waarnemen en registreren van vooruitgang van spelers tijdens het mollenspel** [A new output for the mole game: A research to what physical parameters can monitor and register the progress of users playing the mole game] (Unpublished Bachelor's thesis). The Hague University of Applied Sciences.
26. Van Oudheusden, P. (2013). **Virtual Reality in de ouderenrevalidatie** [Virtual reality in geriatric rehabilitation] (Unpublished Master's thesis). University of Applied Sciences Leiden.
27. Jonker, S. (2013). **Virtual reality bij revalidatie na een beroerte** [Virtual reality used for post-stroke rehabilitation] (Unpublished Master's thesis). Avans Plus University of Applied Sciences.
28. Duindam, A., & Fischer, B. (2013). **Ouder en bewegen: wensen en innovatie** [Eldery and exercise: wishes and innovation] (Unpublished Bachelor's thesis). The Hague University of Applied Sciences.
29. Zegeling, A., Dekker, B., & De Wit, K. (2013). **Spelcomputers fun? Of toch functioneel?** [Game computers fun? Or yet functional?] (Unpublished Bachelor's project). Amsterdam University of Applied Sciences.
30. Lexis, M. (2013). **Het stimuleren van lichaamsbeweging bij cliënten met verstandelijke beperkingen door de inzet van (informatie- en communicatie) technologie: een pilotstudie** [Stimulating physical exercise with clients with intellectual disabilities through the use of (information- and communication) technology: a pilot study] (Unpublished Bachelor's thesis). Zuyd University of Applied Sciences.
31. Oude Aarninkhof, L., & Pinxteren, K. (2012). **Virtuele training voor ouderen – Handleiding heuprevalidatie SilverFit als ondersteuning voor reguliere oefentherapie** [Virtual training for elderly people – Manual Hip rehabilitation SilverFit used as part of regular therapy] (Unpublised Master's thesis). Avans Plus University of Applied Sciences.
32. Moonen, J. (2012). **De Wii niet meer op je heupen hebben; het gebruik van serious games voor de revalidatie van ouderen** [Having fun with the Wii; the use of serious games for geriatric rehabilitation] (Unpublished Master's thesis). Avans Plus University of Applied Sciences.
33. De Bakker, P., & Klaveren, W.J. (2010). **Effect van training met de 'SilverFit' op rompstabiliteit en coördinatie van de onderste extremiteit bij adolescenten** [Effect of training with the 'SilverFit' on core stability and coordination of the lower

- extremity in adolescents] (Unpublished Bachelor's thesis). Amsterdam University of Applied Sciences.
34. Van der Linden, S. (2009). **Wat is de meerwaarde van de SilverFit en is het bruikbaar in de fysiotherapie bij mensen met een THP/TKP?** [What is the added value of the SilverFit and is it useful for physiotherapy for people with a THP/ TKP?] (Unpublished Bachelor's thesis). Avans University of Applied Sciences.

#### *Virtual therapy - Exergaming*

1. Liao, Y.Y., Chen, I.H., & Wang, R.Y. (2019). **Effects of Kinect-based exergaming on frailty status and physical performance in prefrail and frail elderly: A randomized controlled trial.** *Scientific Reports*, 9(9353).
2. Stanmore, E.K., Mavroeidi, A., De Jong, L.D., Skelton, D.A., Sutton, C.J., Benedetto, V. ... Todd, C. (2019). **The effectiveness and cost-effectiveness of strength and balance Exergames to reduce falls risk for people aged 55 years and older in UK assisted living facilities: a multi-centre, cluster randomised controlled trial.** *BMC Medicine*, 17(49).
3. Valenzuela, T., Okubo, Y., Woodbury, A., Lord, S.R., & Delbaere, K. (2018). **Adherence to Technology-Based Exercise Programs in Older Adults: A Systematic Review.** *Journal of Geriatric Physical Therapy*, 41(1), 49-61.

## SilverFit Mile

### Bike

#### Published

1. Hendriks, C., van Santen, J., Dröes, R.M., Boverhof, M., & Meiland, F. (2021). **Op de fiets door de Italiaanse heuvels.** *Denkbeeld*, 33, 34–37.
2. Van Santen, J., Droës, R.M., Twisk, J.W.R., Blanson Henkemans, O.A.B., van Straten, A., & Meiland, F. (2020). **Effects of Exergaming on Cognitive and Social Functioning of People with Dementia: A Randomized Controlled Trial.** *Journal of the American Medical Directors Association*, 21(12), 1958-1967.e5.
3. Van Santen, J., Dröes, R.M., Bosmans, J.E., Blanson Henkemans, O.A., Van Bommel, S., Hakvoort, E., . . . Meiland, F (2019). **The (cost-) effectiveness of exergaming in people living with dementia and their informal caregivers: protocol for a randomized controlled trial.** *BMC Geriatrics*, 19, 1-19.

#### Unpublished posters/presentations

1. Pisica Donose, G., Razzolini, O., Bardgett, M. Lim, F., & Samarcq, L. (2017). **Impact of using the SilverFit Mile videos on training time.** Presented at congres fragilité, Paris, France.

#### Unpublished

1. J.M. van Santen et al. (2021). PHD thesis **Cost-effectiveness of exergaming compared to regular day-care activities in dementia: Results of a randomised controlled trial in The Netherlands.** Vrije Universiteit Amsterdam. ISBN: 978-94-6332-795-4
2. Belong Macclesfield (2017). **Impact of SilverFit 3D and Mile on health parameters of care center residents** (Unpublished).
3. Feenstra, A. (2014). **Kan fietsen in een virtuele omgeving leiden tot een verhoogde belastbaarheid bij kwetsbare ouderen?** [Will cycling in a virtual environment lead to increased exertion in frail elderly?] (Unpublished Bachelor's thesis). Avans University of Applied Sciences.
4. Lexis, M. (2013). **Het stimuleren van lichaamsbeweging bij cliënten met verstandelijke beperkingen door de inzet van (informatie- en communicatie) technologie: een pilotstudie** [Stimulating physical exercise with clients with intellectual disabilities through the use of (information- and communication) technology: a pilot study] (Unpublished Bachelor's thesis). Zuyd University of Applied Sciences.

#### Virtual therapy - Exergaming

1. Van der Kolk, N.M., de Vries, N.M., Kessels, R.P.C., Joosten, H., Zwinderman, A.H., Post, B., & Bloem, B.R. (2019). **Effectiveness of home-based and remotely supervised**

- aerobic exercise in Parkinson's disease: a double-blind, randomised controlled trial.** *The Lancet. Neurology*, 18(11), 998-1008.
2. Karssemeijer, E. (2019). **Brain in motion: combined cognitive and physical exercise training in people with dementia** (Doctoral dissertation). Radboud UMC, Nijmegen, Netherlands.
  3. Anderson-Hanley, C., Arciero, P.J., Brickman, A.M., Nimon, J.P., Okuma, N., Westen, S.C., & Zimmerman, E.A. (2012). **Exergaming and older adult cognition: A cluster randomized clinical trial.** *American Journal of Preventive Medicine*, 42(2), 109-119.
  4. Rhodes, R.E., Warburton, D.E.R., & Bredin, S.S.D. (2009). **Predicting the effect of interactive video bikes on exercise adherence: an efficacy trial.** *Psychology, Health & Medicine*, 14(6), 631-640.
  5. Warburton, D.E.R., Sarkany, D., Johnson, M., Rhodes, R.E., Whitford, W., Esch, B.T.A., ... Bredin, S.S.D. (2009). **Metabolic Requirements of Interactive Video Game Cycling.** *Medicine & Science in Sports & Exercise*, 41(4), 920-926.
  6. Warburton, D.E.R., Bredin, S.S.D., Horita, L.T.L., Zbogar, D., Scott, J.M., Esch, B.T.A., & Rhodes, R.E. (2007). **The health benefits of interactive video game exercise.** *Applied Physiology Nutrition, and Metabolism*, 32, 655-663.

## Treadmill

*Unpublished*

1. Van Uden, S. (2019). **De ervaringen van parkinsonpatiënten met loopbandtraining door middel van de SilverFit Mile** [Experience of patients with Parkinson's Disease performing treadmill training using the SilverFit Mile] (Unpublished Bachelor's thesis). Avans Plus University of Applied Sciences.

*Virtual therapy - Exergaming*

1. Mirelman, A., Rochester, L., Maidan, I., Del Din, S., Alcock, L., Nieuwhof, F., ... Hausdorff, J.M. (2016). **Addition of a non-immersive virtual reality component to treadmill training to reduce fall risk in older adults (V-TIME): a randomized controlled trial.** *Lancet*, 388(10050), 1170-1182.
2. Cho, K.H., & Lee, W.H. (2014). **Effect of treadmill training based real-world video recording on balance and gait in chronic stroke patients: a randomized controlled trial.** *Gait & Posture*, 39(1), 523-528.
3. Chuang, T.Y., Sung, W.H., Chang, H.A., & Wang, R.Y. (2006). **Effect of a virtual reality-enhanced exercise protocol after coronary artery bypass grafting.** *Physical Therapy*, 86(10), 1369-1377.

# SilverFit Newton

*Unpublished*

1. Van de Ven, S., & Versteegen, C. (2020). **Trainen met de SilverFit Newton: is er een verschil in plezier en motivatie? Een mixed-methods onderzoek onder geriatrische orthopedische revalidanten** [Exercising with the SilverFit Newton: is there a difference in pleasure and motivation? A mixed-methods study on geriatric orthopedic rehabilitants] (Unpublished Bachelor's thesis)]. Avans University of Applied Sciences.

*Virtual therapy - Exergaming*

1. Hsu, W.H., Hsu, W.B., Shen, W.J., Lin, Z.R., Chang, S.H., & Hsu, R.W.W. (2019). **Twenty-four-week hospital-based progressive resistance training on functional recovery in female patients post total knee arthroplasty.** *The Knee*, 26(3), 729-736.
2. Lopez, P., Pinto, R.S., Radaelli, R., Rech, A., Grazioloi, R., Izquierdo, M., & Cadore, E.L. (2018). **Benefits of Resistance Training in physically frail elderly: a systematic review.** *Aging Clinical and Experimental Research*, 30, 889-899.
3. Sahin, U.K., Kirdi, N., Bozoglu, E., Meric, A., Buyukturan, G., Ozturk, A., & Doruk, H. (2018). **Effect of low intensity versus high-intensity resistance training on the functioning of the institutionalized frail elderly.** *International Journal of Rehabilitation Research*, 41, 211-217
4. Izquierdo, M., Casas-Herrero, A., Martinez-Velilla, N., Alonso-Bouzon, C., & Rodriguez-Manas, L. (2017). **An example of cooperation for implementing programs associated with the promotion of exercise in the frail elderly.** European Erasmus + «Vivifrail» program. *Revista Española de Geriatría y Gerontología*, 52, 110-111.
5. Papa, E.V., Dong X., & Hassan, M. (2017). **Resistance training for activity limitations in older adults with skeletal muscle function deficits: a systematic review.** *Clinical Interventions in Aging*, 12, 955-961.
6. Kahle, N., & Tevald, M.A. (2014). **Core muscle strengthening's improvement of balance performance in community dwelling older adults: a pilot study.** *Journal of Aging and Physical Activity*, 22(1), 65-73.
7. Schmidt, M/E., Wiskemann, J., Armbrust, P., Schneeweiss, A., Ulrich, C.M., & Steindorf, K. (2014). **Effects of resistance exercise on fatigue and quality of life in breast cancer patients undergoing adjuvant chemotherapy: a randomized controlled trial.** *International Journal of Cancer*, 137(2), 471-480.
8. Gonzalez, A.M., Mangine, G.T., Fragala, M.S., Stout, J.R., Beyer, K.S., Bohner, J.D., ... Hoffman, J.R. (2014). **Resistance training improves single leg stance performance in older adults.** *Aging Clinical Experimental Research*, 26(1), 89-92.
9. Granacher, U., Gruber, M., & Gollhofer, A. (2009). **Resistance training and neuromuscular performance in seniors.** *International Journal of Sports Medicine*, 30(9), 652-657.
10. Beckers, P.J., Denollet, J., Possemiers, N.M., Wuyts, F.L., Vrints, C.J., & Conraads, M. (2008). **Combined endurance-resistance vs. endurance training in patients with chronic heart failure: a prospective randomized study.** *European Heart Journal*, 29(15), 1858-1866.

11. Pyka, G., Lindenberger, E., Charette, S., & Marcus, R. (1994). **Muscle strength and fiber adaptations to a year-long resistance training program in elderly men and women.** *Journals of Gerontology*, 49(1), m22-m27.
12. Sparling, P.B., Cantwell, J.D., Dolan, C.M., & Niederman, R.K. (1990). **Strength training in a cardiac rehabilitation program: a six-month follow-up.** *Archives of Physical Medicine and Rehabilitation*, 71(2), 148-152.
13. Fiatarone, M., Marks, E., Ryan, N., Meredith, C., Lipsitz, L., & Evans, W. (1990). **High-intensity strength training in nonagenarians.** *Journal of the American Medical Association*, 263(22), 3029-3034.

# SilverFit Alois

## *Unpublished posters/presentations*

1. Pisica Donose, G., Marinescu, M., Razzolini, O., Bardgett, M., & Wiersinga, J. (2018). **Benefits and stress reduction for nursing home residents living with dementia through engaging in physical activities: participation and outcomes of "SilverFit" exergames.** Poster presented at congress "Fragilité du Sujet Âgé; Le Vieillissement Santé; Prévention de la Perte d'Autonomie 2018, Paris, France.

## *Unpublished*

1. De Winter, A. (2019). **Improving physical activity (PA) of elderly with dementia through exergaming. Factors affecting the facilitating role of the social environment** (Unpublished Master's thesis). Wageningen University.
2. Bongaards, B., & Groen, C. (2018). **Dementie in beweging** [Dementia in motion] (Unpublished Bachelor's thesis). Avans University of Applied Sciences.
3. Chan, M. (2017). **Muziektherapie en de SilverFit Alois. Een adviesrapport** [Music therapy and the SilverFit Alois. An advisory report] (Unpublished Bachelor's thesis). Avans University of Applied Sciences.
4. Westdijk, P. (2016). **Implementatie van de SilverFit Alois op de Berkenhof; wat ging goed, wat kan beter?** [Implementation of the SilverFit Alois at the Berkenhof; what went well and what improvements could be made?] (Unpublished Bachelor's thesis). Arnhem and Nijmegen University of Applied Sciences.
5. DAZ (2014). **Evaluatierapport 'Bewoners met dementie in beweging'** [Evaluation report 'Exercise for people living with dementia'] (Published online).
6. De Bruin, L., Knuisting Neven, L., & Van Zanten, M. (2013). **SilverFit en mensen met dementie in beweging** [SilverFit exercises for people living with dementia] (Unpublished Bachelor's thesis). Rotterdam University of Applied Sciences
7. Van Vliet, L. (2012). **Proposals for the SilverFit Alois, active entertainment for memory care** (Unpublished Master's thesis). University of Twente.

## *Virtual therapy - Exergaming*

1. Testad, I., Corbett, A., Aarsland, D., Lexow, K.O., Fossey, J., Woods, B., & Ballard, C. (2014). **The value of personalized psychosocial interventions to address behavioral and psychological symptoms in people with dementia living in care home settings: a systematic review.** *International Psychogeriatric*, 26(7), 1083-1098.
2. Scherder, E.J.A. (2014). **Laat je hersenen niet zitten. Hoe lichaamsbeweging de hersenen jong houdt.** Amsterdam, the Netherlands: Athenaeum-Polak & Van Gennep.
3. Edwards, N.E., & Beck, A.M. (2013) **The influence of aquariums on weight in individuals with dementia.** *Alzheimer Disease and Associated Disorders*, 27(4), 379-383.
4. Schreiner, A.S., Yamamoto, E., & Shiotani, H. (2005). **Positive effect among nursing home residents with Alzheimer's dementia: the effect of recreational activity.** *Aging and Mental Health*, 9(2), 129-134.
5. Heyn, P., Abreu, B.C., & Ottenbacher, K.J. (2004). **The effects of exercise training on elderly persons with cognitive impairment and dementia: a meta-analysis.** *Archives of Physical Medicine and Rehabilitation*, 85(10), 1694-1704.

# SilverFit Rephagia

## Published

1. Kerkdijk, E., van der Laak, M., Nieuwkamp, M., Zwaagstra, Y., & van Dusseldorp, L. (2018). **H36 Applicability of and experience with SilverFit Rephagia by patients with Huntington's disease in day care.** *Journal of Neurology, Neurosurgery & Psychiatry*, 89, A79-A80.
2. Helmout, S. (2018). **Fitness voor het Slikken. Logopedische behandeling van slikstoornissen bij volwassenen met een verstandelijke beperking door biofeedback: werkt het?** [Fitness for swallowing. Speech therapy treatment for swallowing disorders in elderly with intellectual disabilities through biofeedback: what works?]. *De Trans*.

## Unpublished posters/presentations

1. Knoll, M. (2019). **SilverFit Rephagia: Te gebruiken bij mensen met de ziekte van Huntington?** [SilverFit Rephagia: Is it a useful intervention for people with Huntington's Disease?]. Presented at SilverFit Congress 2019, Harmelen, The Netherlands.
2. Chiu, A.T.S., & Yip, C.C.K. (2018). **Effectiveness of game based biofeedback swallowing training in elderly: a quasi experimental study.** Presented at the 2018 International Occupational Therapy Conference, Kunming, Yunnan, China.
3. Van Snippenburg, W., Lut, J., Hofhuis, J.G.M., Flim, M., Hemler, R.B., Kröner, A., & Spronk, P.E. (2017). **Awareness and Management of Dysphagia in Dutch intensive care units: a nationwide survey.** Abstract presented at Topics in IC Multidisciplinair Congress 2017, Lunteren, The Netherlands.
4. Lut, J., Spronk, L.E.J., Jansen, M., Hemler, R.B., Dekker-Holverda, E., Kröner, A., & Spronk, P.E. (2017). **Interactive gaming for evaluating dysphagia in ICU patients?** Abstract presented at Topics in IC Multidisciplinair Congress 2017, Lunteren, The Netherlands.
5. Spronk, L.E.J., Lut, J., Dekker, E., Jansen, M., Van Munster, B., Lemmens, J., . . . Spronk, P.E. (2017). **Dysphagia is severely under recognized in hospitalized patients.** Abstract presented at Topics in IC Multidisciplinair Congress 2017, Lunteren, The Netherlands.
6. Van Snippenburg, W., Kröner, A., Flim, M., Dekker, E., Hemler, R., Buise, M., & Spronk, P. **Improving swallowing function in critically ill patients using an interactive gaming rehabilitation program.** Poster.

## Unpublished

1. Snoek, D. (2019). **Ervaringen van logopedisten met het gebruik van SilverFit Rephagia bij patiënten met de ziekte van Parkinson** [Experiences of speech language therapists using the SilverFit Rephagia for patients with Parkinson's disease] (Unpublished Bachelor's thesis). Hanzehogeschool Groningen University of Applied Sciences.
2. Gnacke, E., & Mijnes, D. (2018). **sEMG-normaalwaarden van slikkracht en sliktiming in de ziekenhuispopulatie** [sEMG normal data for swallow force and swallow timing]

in the hospitalized population] (Unpublished Bachelor's thesis). Zuyd University of Applied Sciences.

3. Galek, K.E., Bice, E., Smith-Gagen, J., & Allen, K. (2018). **Training and visual feedback increase the intensity of effortful swallows in healthy normal.**
4. Te Rietstap, M. (2016). **Oral intake problems of patients suffering from dysphagia** (Unpublished Master's thesis). University of Twente.

#### *Virtual therapy - Exergaming*

1. Benfield, J.K., Everton, L.F., Bath, P.M., & England, T.J. (2018). **Does Therapy With Biofeedback Improve Swallowing in Adults With Dysphagia? A Systematic review and Meta-Analysis.** *Archives of Physical Medicine and Rehabilitation*.
2. Langmore, S.E., & Pisegna, J.M. (2015). **Efficacy of exercises to rehabilitate dysphagia: A critique of the literature.** *International Journal of Speech-Language Pathology*, 17(3), 222-229.
3. Athukorala, R.P., Jones, R.D., Sella, O., & Huckabee, M. (2014). **Skill Training for Swallowing Rehabilitation in Patients With Parkinson's Disease.** *Archives of Physical Medicine and Rehabilitation*, 95(7), 1374-1382.
4. McCullough, G.H., Kamarunas, E., Mann, G.C., Schmidley, J.W., Robbins, J.A., & Crary, M.A. (2012). **Effects of Mendelsohn Maneuver on Measures of Swallowing Duration Post Stroke.** *Top Stroke Rehabilitation*, 19(3), 234-243.
5. Daniels, S.K., & Huckabee, M. (2008). **Dysphagia following stroke.** San Diego, CA: Plural Publishing.
6. Carnaby, G., Graeme, J.H., & Pizzi, J. (2006). **Behavioural intervention for dysphagia in acute stroke: a randomized controlled trial.** *Lancet Neural*, 5(1), 31-37.
7. Crary, M.A., Carnaby-Mann, G.D., Groher, M.E., & Helseth, E. (2004). **MA: Functional Benefits of Dysphagia Therapy Using Adjunctive sEMG Biofeedback.** *Dysphagia*, 19(3), 160-164.

# SilverFit Flow

*Unpublished*

1. Verburg, A. (2016). **Blow your mind. Digitale ademhalingstraining voor ouderen** [Blow your mind. Digital flow exercises for elderly people] (Unpublished Bachelor's thesis). Amsterdam University of Applied Sciences.
2. Kaelen, M. (2016). **Medische Business Case 'SilverFit Flow'** [Medical Business Case 'SilverFit Flow'] (Unpublished Bachelor's thesis). Avans University of Applied Sciences.

*Virtual therapy - Exergaming*

1. Bissell, B.M., Leditschke, I.A., Neeman, T., Boots, R., & Paratz, J. (2016). **Inspiratory muscle training to enhance recovery from mechanical ventilation: a randomized trial.** *Thorax*, 71, 812-819
2. Long Alliantie Nederland (2016). **Zorgstandaard COPD**.
3. Snoeck-Stroband, J.B., Schermer, T.R.J., Van Schayck, C.P., Muris, J.W., Van der Molen, T., In 't Veen, J.C.C.M., ... Tuut M.K. (2015). **NHG-Standaard COPD** (Derde herziening). *Huisarts en Wetenschap*, 58(4), 198-211.
4. Vieira, D.S.R., Mendes, L.P.S., Elmiro, N.S., Velloso, M., Britto, R.R., & Parreira, V.F. (2014). **Breathing exercises: influence on breathing patterns and thoracoabdominal motion in healthy subjects.** *Brazilian Journal of Physical Therapy*, 18(6), 544-552.
5. Borge, C.R., Hagen, K.B., Mengshoel, A.M., Omenaas, E., Moum, T., & Wahl, A.K. (2014). **Effects of controlled breathing exercises and respiratory muscle training in people with chronic obstructive pulmonary disease: results from evaluating the quality of evidence in systematic reviews.** *BMC Pulmonary Medicine*, 14, 184.
6. Gosselink, R., Clerckx, B., Robbeets, C., Vanhullebusch, T., Vanpee, G., & Segers, J. (2011). **Physiotherapy in the intensive care unit.** *Netherlands Journal of Critical Care*, 15(2), 66-75.
7. Gosselink, R., De, V.J., Van den Heuvel, S.P., Segers, J., Decramer, M., & Kwakkel, G. (2011). **Impact of inspiratory muscle training in patients with copd: what is the evidence?** *European Respiratory Journal*, 37, 416-425.
8. Thomas, M.J., Simpson, J., Riley, R., & Grant, E. (2010). **The impact of home-based physiotherapy interventions on breathlessness during activities of daily living in severe copd: a systematic review.** *Physiotherapy*, 96, 108-119.
9. Shoemaker, M.J., Donker, S., & Lapoe, A. (2009). **Inspiratory muscle training in patients with chronic obstructive pulmonary disease: the state of the evidence.** *Cardiopulmonary Physical Therapy Journal*, 20, 5-15.
10. Geddes, E.L., O'Brien, K., Reid, W.D., Brooks, D., & Crowe, J. (2008). **Inspiratory muscle training in adults with chronic obstructive pulmonary disease: an update of a systematic review.** *Respiratory Medicine*, 102, 1715-1729.
11. O'Brien, K., Geddes, E.L., Reid, W.D., Brooks, D., & Crowe, J. (2008). **Inspiratory muscle training compared with other rehabilitation interventions in chronic obstructive pulmonary disease: a systematic review update.** *Journal of Cardiopulmonary Rehabilitation and Prevention*, 28, 128-141.

## Intensive-Care (Future: SilverFit-ICU)

*Unpublished*

1. Oomkens, P. (2020). **Interactive Video Gaming on the Intensive Care Unit. Design and feasibility study of an interactive video gaming device used for patients on the intensive care unit for rehabilitation purposes** (Unpublished Master's thesis). Delft University of Technology.
2. Waaning, L. (2017). **Gamen op de intensive care. Het toepassen van technologie om mobilisatie op de intensive care te ondersteunen** [Gaming at the intensive care. The application of technology to support mobilization at the intensive care unit] (Unpublished Bachelor's thesis). The Hague University of Applied Sciences.
3. Van Veluwen, E. (2014). **Exergames op de Intensive-Careafdeling** [Exergames at the Intensive Care] (Unpublished Bachelor's thesis). The Hague University of Applied Sciences.

*Unpublished poster/presentation*

1. Fiks, T., Ruijter, A., Te Raa, M., & Spronk, P.E. (2016). **Interactive gaming is feasible and potentially increases ICU patients' motivation to be engaged in rehabilitation programs.** Poster presented at 36<sup>th</sup> International Symposium on Intensive Care and Emergency Medicine, Brussel, Belgium.

## All systems

Published

1. Hendriks, C., & Boverhof, M. (2020). Serious gaming met de SilverFit beweegsystemen. *Nederlands Tijdschrift voor Geriatriefysiotherapie*, 34(3), 14-20.
2. Heuvelink, A., Groot, J., Hofstede-Kleyweg, C. (2014). **Let's play: Ouderen stimuleren tot bewegen met applied games.** TNO en VitaValley.
3. Scholten, C. (2013). **Inzet beweeggames bij ouderen** [Implementation of exercise games for the elderly]. *FysioPraxis*, 22(12), 17-19.