



SilverFit 3D

The SilverFit 3D is a therapeutic system which uses interactive games to improve gross motor skills and cognitive function. Adaptable to any physical level, the system helps to accomplish therapy goals by stimulating many different movements. Thanks to a 3D camera, the interactive feedback allows immediate movement correction, resulting in efficient therapy sessions. The playful nature of the games and eye-catching interface engage participants throughout the session and motivate them to train on a regular basis. All activities are designed in collaboration with healthcare professionals, based on scientific research and clinical practice.

SilverFit 3D

Gross motor skills and ADL

Applications

The SilverFit 3D is developed for geriatric rehabilitative purposes. Its aim is to stimulate movement in general and maintain independence in ADL. Different settings that it can be used in include hospitals/clinics, rehabilitation centres, senior day care and nursing homes. The SilverFit 3D can easily integrate into a wide variety of therapy goals for different professionals, including physio- and occupational therapists, psychologists, sport coaches and activity coordinators.

Customizable to all needs

The SilverFit 3D games are adjustable to each client. Settings can be tailored to suit many different therapy goals, including not only range of movement but also the cognitive difficulty of each game. Starting positions for all games vary and can be adjusted to the participant's functional level or sight restriction. Exercises can be performed in a standing position (with or without walking aid), sitting in a chair or wheelchair.

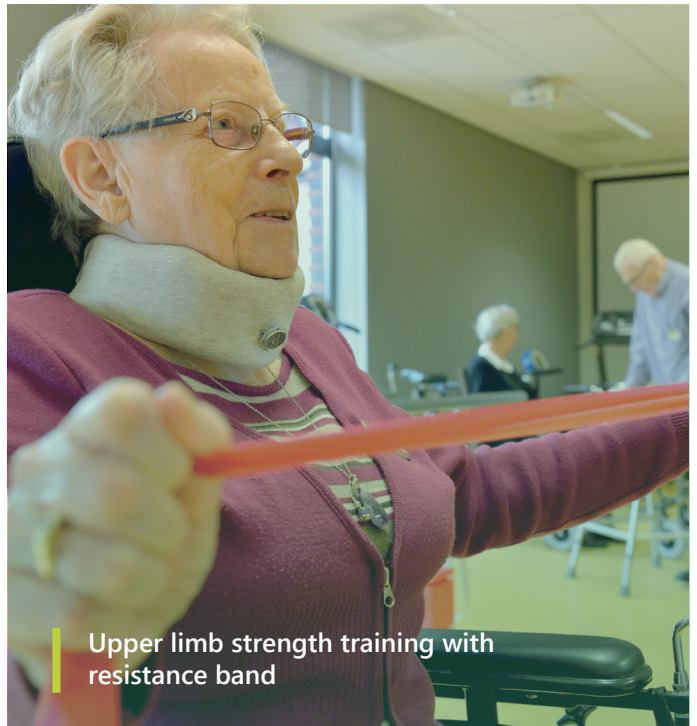
Applicable to many therapy goals

Thanks to 30 different games with a wide range of settings, almost all therapy goals are achievable. Exercises can be selected based on pathology, for example Parkinson's disease, COPD, stroke, osteoarthritis or after a hip or knee arthroplasty. Clients can train overall fitness, balance, sit to stand, walking, and maintain mobility with the SilverFit 3D. To make implementation practical, games can be played in a sequence selected by the therapist. This allows more autonomous clients to train with only minimal guidance from colleagues, volunteers or family members.

Feedback for therapists

Performed exercises and results can be saved in the client's personal folder. The therapist can also add

recordings of the client performing the exercise. This makes it easy to analyze results and track progress. Additionally, exercise data can be exported to Excel.



Upper limb strength training with resistance band





Participant can play from any position: standing, seated or in a wheelchair.



A client performing leg muscle strength exercises.

SilverFit 3D

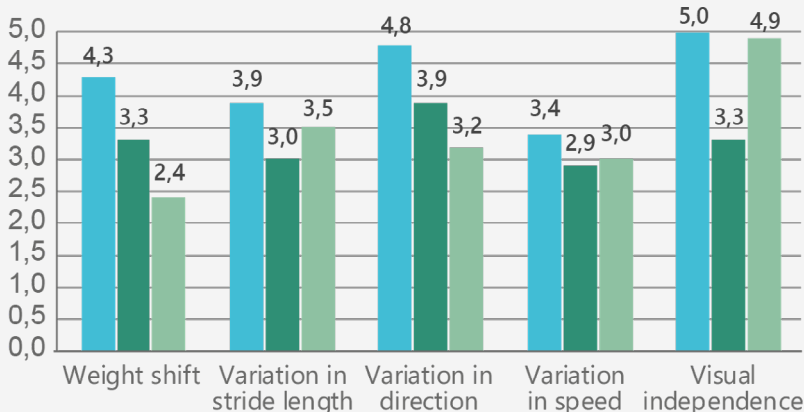
Overview of the exercises

STARTING POSTION		MOVEMENT	NO. OF GAMES
SEATING	Head	Lean sideways and forward	2
	Arms/Shoulders	Shrug shoulders	1
		Reach sideways	8
		Reach down	6
		Reach up	6
		Reach up and sideways	9
		Reach forward and sideways	1
		(in combination with torso rotation)	
		Lateral movement with elastic band	7
		Throwing movement	3
		Torso	Lean sideways
	Lean forward		9
	Lean sideways and forward		7
	Rotate		1
	Legs	Straighten knee	8
		Tap foot on the floor	7
STANDING	Head	Lean sideways and forward	2
	Arms/Shoulders	Shrug shoulders	1
		Reach sideways	7
		Reach down	6
		Reach up	6
		Reach up and sideways	9
		Reach forward and sideways	1
		(in combination with torso rotation)	
		Lateral movement with elastic bandTap	7
		Throwing movement	3
		Torso	Lean sideways
	Sit-to-Stand transfer		9
	Rotate		1
	Legs	Move	3
		Walk in place	2
		Walk sideways	2
		Walk forward and backward	2
		Walk in all directions	2
		Walk and squat	1
		Climb one step	1
		WHEELCHAIR AGILITY	
		Move forward and backward	11
	Move in all directions	8	
THERAPIST			
	With the remote control	8	

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Scientific background

SilverFit 3D balance game The Mole scores best for all measures of balance



3 human movement scientists/physiotherapists completed a Likert scale to rate the efficacy in achieving therapy goals when 14 older adults (mean 73 years old) were training with a SilverFit balance game (The Mole) versus other balance games. The scale was from 1 (bad) to 5 (very good). Intraclass correlation was ≥ 0.840 .

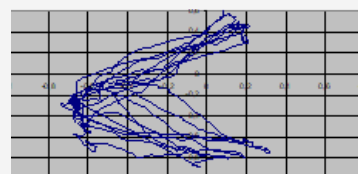
Source: Skjaeret et al. (2014)

SilverFit 3D prepares better for elements of daily life

Less predictable challenges

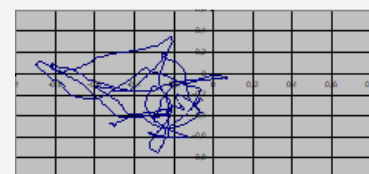
It is important for older adults to learn to cope with unexpected challenges. SilverFit exercises prepare them for this element of daily life.

Traditional



SilverFit

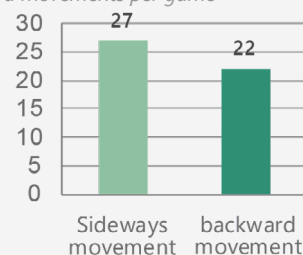
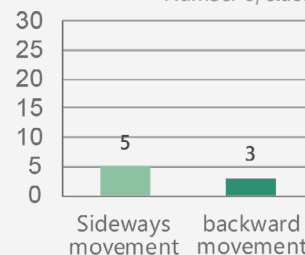
Position over time of participant



Higher intensity

Because of increased sideways and backwards movements, SilverFit games are of higher intensity when compared to conventional rehabilitation.

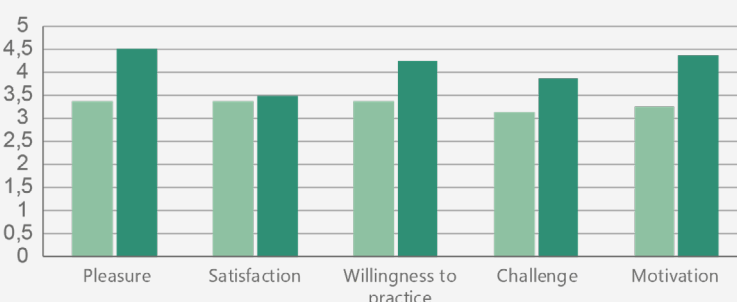
Number of sideways and backward movements per game



Target group: 5 women and 1 man that had undergone total hip or knee replacement from a nursing home in Roosendaal (Netherlands). Participants played two SilverFit balance games and compared with two traditional balance exercises.

Source: Van der Linden (2009)

Higher motivation training with SilverFit 3D



Using the SilverFit 3D for training of arm/hand function results in higher motivation (+33.3%) compared to regular arm/hand function training.

- Results based on regular exercises
- Results based on practice with the SilverFit

Source: Gerlofsma (2018)

8 participants answered the questionnaire using the "faces scale".



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Literature

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For an overview of all scientific research about SilverFit, [click here](#)

