# Precision In Every Movement

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**REVOLUTION IN REHABILITATION** 



# No Motors, Just Awesome!







Strap



#### **Precise**

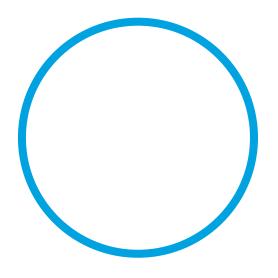
Measurement of every slightest movement.

#### **Portable**

With a weight of only 60 grams (2.12 ounces).

#### Affordable

For patients, therapy centers and insurance companies.



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#### Introduction

Cynteract, the fusion of 'cyber' and 'interaction', takes hand therapy to a new level.

Through our rehabilitation glove, strap and cushion, we have managed to gamify therapy. Games can be controlled with the glove, strap and cushion, making essential therapy exercises more interactive and engaging.

From the very beginning, we have collaborated with medical professionals. This has resulted in great partnerships with renowned professors who, for example, have provided us with their expertise from specialist areas of neurology and hand surgery. We are also particularly grateful for our many strong industry partnerships, which we have been able to rely on since the start of our project. As a result, we have been able to turn the prototype in the nursery into a mass-produced product.

















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We are convinced that the product will make a difference for our rheumatology patients."



**Medac GmbH** 

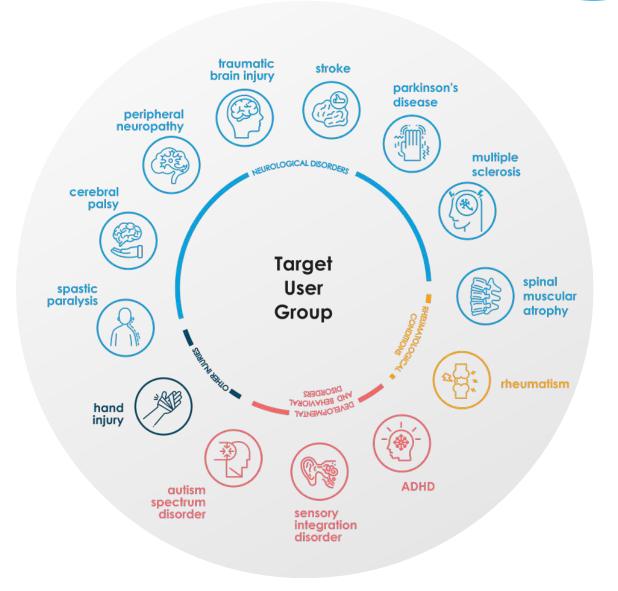
One Of The World's Leading
Pharmaceutical Companies

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The glove heroes - How gloves are shaping up the rehab world."



One Of The Most Important Economic And Social Newspapers





# For Whom?

The rehabilitation devices from Cynteract are suitable for all patients who, for example, are undergoing occupational or physiotherapy as part of rehabilitation after injury as well as diseases of the fingers, arms or other body parts. Causes of injuries can be neurological disorders such as strokes as well as traumatic injuries after accidents - regardless of age and gender.

# **How Does It Work?**

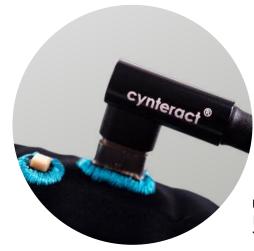
Our products – the Glove, Strap and Cushion – are designed to make a real difference in rehabilitation and exercise for patients. The Glove, Strap and Cushion helps patients with detailed movement calibration, making it a reliable tool for precise recovery exercises. Paired with it is the Strap and The Cushion, a versatile attachment offering targeted support while aiding in calibrated movements on the arms, legs, or feet.





# The Glove.

The nylon Glove has a variety of modern sensors integrated on the back of the Glove. These detect movements of the arms, fingers and hands, such as extension and flexion movements, as well as rotational movements. The Glove is connected to the device via a cable, which runs the 'Cynteract App' . This can be used to start the games that are controlled by the movements.



**USB-C Port** 



For Data Transfer



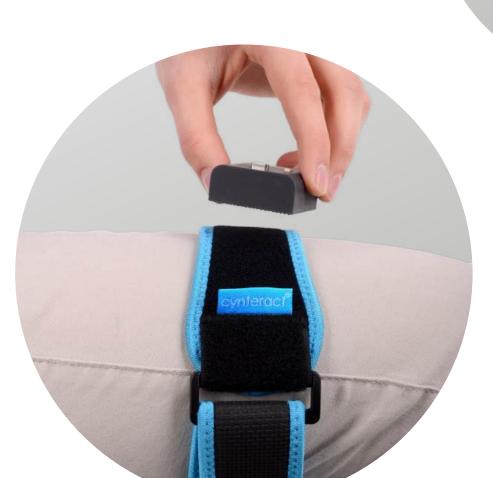


The Strap.

The nylon Strap has a portable modern and agile sensor attached on it. It detects movements of the arms, legs and other body parts.

The Strap has three length sizes. It is connected to the device via cable in the same way as the glove.





**Easy Remove** With The Strap



Train Any **Body Movement** 

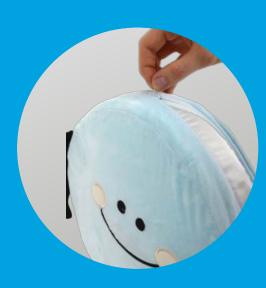


The Cushion.

Balance Training With Fun

To Exchange



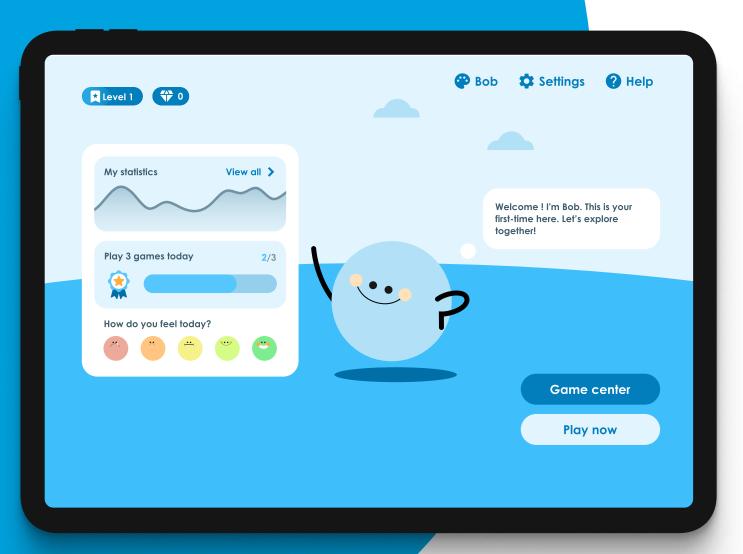


The rehabilitation cushion opens opportunities in many new fields. Including dementia support in elderly care homes or for pediatric application in children hospitals. Wherever it finds it's use the cushion is soft and a perfect companion for the user to train the core body.



# One Software All Devices

The 'Cynteract App' serves as the gateway to initiate individual games or entire workout sessions, showcase your achievements, and customize settings. Explore these four key highlights of the app for an enriched experience.









"I'm happy when you're training and sad if not. If you need help, I will be on your side..."

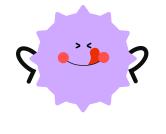
The Tamagotchi effect has proven itself and is introduced by Cynteract to Rehabilitation. Enjoy a perfect blend of health and fun as you achieve your goals with your personal partner.



Therapy With The Device Is Easy And Simple For All Different Age Groups. And, I Nicely See The Progress.

**Feedback Therapist** 

Statistics track user game data, including movements, time, scores, and rankings. Navigate the statistics section to view achievements, compare rankings, and access movement data for insights into your gaming performance.



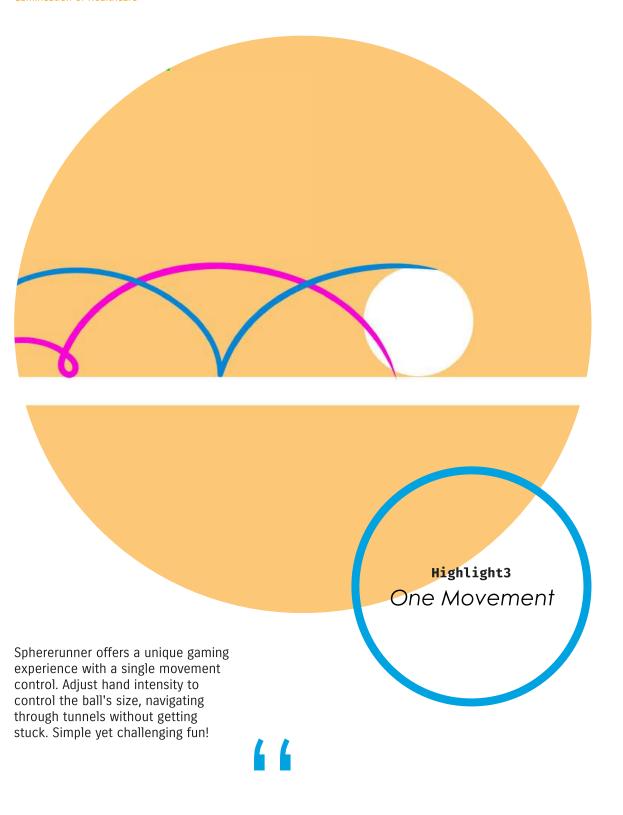






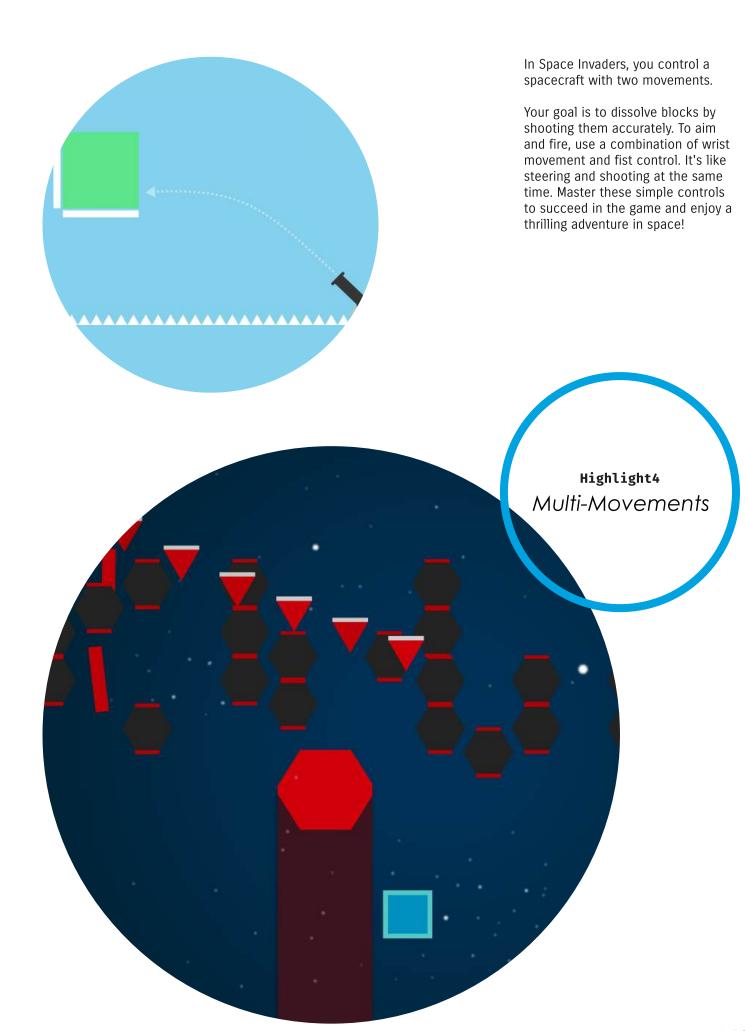






My Wife Is Already Over 70 Years, And The Games Are A Blast! My Wife Is Really Excited About Them."

Feedback User



# Advantages For Therapists And Clinics

# Efficient and modern therapy

Thanks to state-of-the-art technology, customized games and easy monitoring, you can provide your patients with efficient therapy using innovative and contemporary methods.

# Better monitoring of therapy via the software

Through the software, you can monitor and review your patients' progress during therapy; whether they are practicing with you or from somewhere else.

# Plug-and-play

Due to the easy installation of the software, which can run on any operating system, you don't need much for the therapy exercises - put on your Glove, Strap or Cushion, connect it to your end device with the cable and off you go!

# **Higher capacity**

By performing therapy exercises from home, you can accompany more patients during therapy. This way, you can easily increase your capacity without sacrificing quality of accompaniment.

# More satisfied patients

Gamification of rehabilitation increases patient motivation and favors long-term successful therapy, creating happy, motivated and healed patients. Because only satisfied patients give good recommendations and strengthen the good reputation of your facility.

# Exercise everywhere

The Glove, Strap and the Cushion are lightweight and flexible, so it's ideal to take with you. Whether in the clinic, at home or on vacation, training is possible anywhere.

**And Insurances** 

**Advantages For Patients** 

# Fewer therapy terminations

Motivated patients are less likely to discontinue therapy and are more likely to complete it successfully. This also reduces the risk of subsequent injuries.

#### More motivation

Always the same boring rehab exercises with therapy balls are history. Thanks to the large number of varied games and the tracking of your own therapy progress, you will be motivated to do the necessary therapy sessions and will have a lot of fun with the movement exercises.

## Low cost of treatment

The Glove, Strap and Cushion are low cost and wide range of applications make them widely and affordably used in rehabilitation for your health insurance.

# Better integration into treatment

Interactive movement control and gamification make exercises much more engaging and frequent.

# More independence

It is often a long way to travel to the therapists or rehabilitation centers. With the Rehab Glove, Strap and Cushion, exercise can be done comfortably from home or on the go. This allows for more frequent and uncomplicated training and saves a few trips to the therapists and clinics. Nevertheless, they can always be by the patient's side and follow the therapy progress via the software.

# **Medical Product**

Our demands on our own product are high. The Rehab Glove, Strap and Cushion are 'Engineered in Germany', which is reflected in the material used, the high-quality electronics and the careful processing. Thus, we enable a smooth application and a high durability of our products.

During use, wearing a protective glove under the Rehab Glove ensures the required hygiene. For the Rehab Strap, wear it on top of clothes and the Cushion you can sit or stand on it. This is especially necessary in clinics or therapy centers when the devices are used by several patients.

The protection of the electronics is achieved by a special encapsulation. Nevertheless, the devices should not be exposed to liquids or high temperatures. As a hygiene measure, disinfection can be carried out using suitable disinfectants. Another alternative for gentle cleaning is the RefresherBoxx, which works without water and without chemicals.







# Manufacturer

Cynteract GmbH Ottostr. 51A 52070 Aachen info@cynteract.com

#### Product name

EN: Rehabilitation Glove, Strap and Cushion DE: Reha-Handschuh, -Band und -Kissen

# Classification

Class I according to MDR

# **Description**

The medical devices consist of two parts, the wearable device and the associated software. The device in combination with the software supports the rehabilitation of hand, arm and other body diseases/injuries in rehabilitation centers and especially at home. Furthermore, the medical devices are intended to provide the therapist and the treating physician with a summary of training data. The product is intended for use with an electronic device, such as a smartphone, tablet or laptop. Games controlled by movements or forces are displayed on such a device. In this way, the devices can be used to control any character in a virtual world.

#### **Intended Use**

The medical device enables glove, strap or cushion guided and software-assisted training with gamification and can thus increase the training frequency in the therapy of rehabilitation measures for hand, arm and other body parts diseases/injuries.

#### **Medical Claims**

- 1. Enables hand, arm and other body exercises through gamification in the clinic or home
- 2. Enables data collection of exercises.
- 3. Increases motivation of exercise with gamification to support hand, arm and other body rehabilitation.

## Indication of use

The medical device is intended for people with hand, arm and other body part diseases/injuries who should perform rehabilitation exercises.

# **Target group**

The medical device is suitable for all genders and age groups, limited by device size.

## Contraindication

Patients with epilepsy require consultation with the doctor.

## Side effect

Signs of demotivation, fatigue, irritation or overuse may lead to premature discontinuation of therapy, pain or muscle soreness. In this case, consultation with the treating physician/referred therapist is required.



# **Clinical Trials**

We've performed multiple trials and have further studies planned. Here an excert:



The study results reflect that the fourweek utilization of an interactive, rehab glove improves hand function."

Dr. Heithem Ben Abdallah, Janina-Sophie Tennler, Dr. Tobias Ohmann, Prof. Dr. H.H. Homann



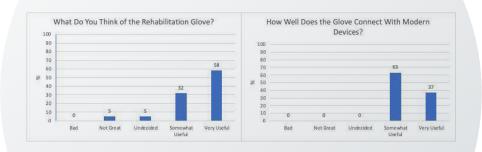


Abb. 3: Results of the therapist survey (%) on their assessment of the connection between rehab and modern media, as well as the rehab glove

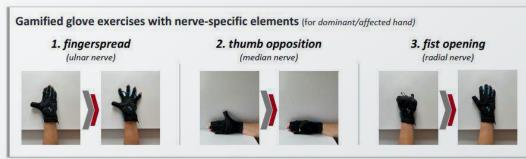


Fig. 1: These images show three distinct glove exercises which were designed for this study and which can be allocated to one of the three upper limb nerves.





This Sensor-Equipped Glove Is A Suitable Additive Tool With Relevance To Daily-Life For Assessing Hand Impairment In Chronic Immune-Mediated Neuropathies!"

Elisa Gilliam, Dr. Pascal Achenbach, Prof. Dr. Peter Rossmanith, Dr. Maike Dohrn, Prof. Dr. Joerg Schulz, PD Dr. Anne Waschbisch, PD Dr. Robert Brunkhorst

# **Global Impact**

We are also active internationally with Cynteract to bring the rehabilitation products into use, especially in developing countries. In Rwanda, GIZ is supporting us with the goal of achieving decentralized rehabilitation. There is a lack of a developed care network, which is why patients have to travel long distances to their rehabilitation facilities.













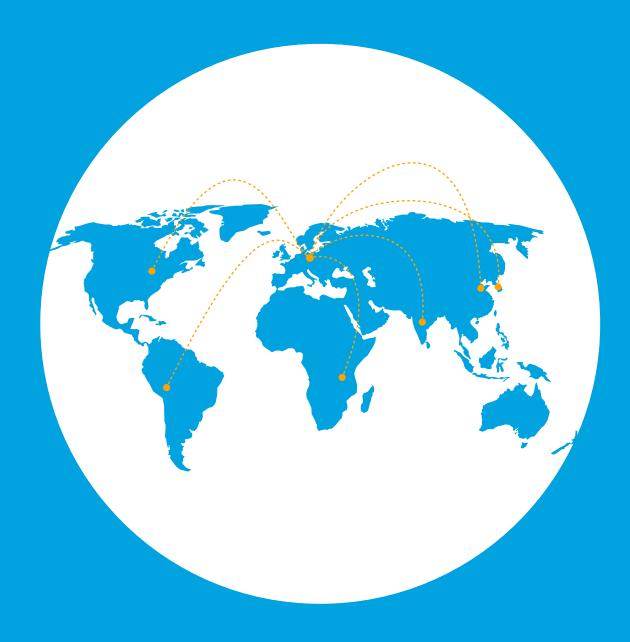








Support us on our mission to bring motivational rehabilitation to everyone.



With the rehabilitation glove, strap and cushion, we can create widespread availability of training opportunities in countries across the globe and relieve the burden on clinics through home training.

This impressed even the German president & federal health minister personally.

# **Awards**

Since the development of Cynteract, we have been present at numerous international trade fairs and innovation competitions to inspire many people about our project. In the process, we were not only able to convince countless specialists and experts of Cynteract, but were also awarded numerous prizes, such as the Spin-off Award of the RWTH, the official award for outstanding spin-offs from the university.













































# **Testimonies**

44

A Revolution In Rehabilitation: The Smart Glove."



#### **Bosch Sensortec GmbH**

A German
Multinational
Engineering And
Technology Company



A Very Strong Product."



#### **Jens Spahn**

German Federal Minister Of Health

#### Frank Thelen

European Serial Founder And Tech Investor



Getting Healthy Again In A Playful Way,
Going Beyond Your Own Limits Because
It's Fun To Move Together Instead Of
Wrestling With Yourself In Rehab.
Gamification And Digital Health Open Up
New Possibilities Here."



#### Dr. Regina Vetters

Head Of Innovation At Barmer



Your Idea, With The Gamification
Approach, To Permanently Increase The
Adherence Of Training For Patients Is
Exactly What We Want."



#### Raphael Koßmann

TK State Representation
TK Is The Largest
German Health Insurance
Company



With One Hand In The Parallel World."



Kölner Stadt-Anzeiger



We Are Entering A Whole New Level Of Rehabilitation Here After Hand Injuries And After Other Diseases."

Methods

Feedback User

Luca Müller



Prof.Dr.Heinz-Herbert Homann

For Me, Training With The

Much More Fun Than Just

Sitting In The Room And

Glove Is Very Motivating. It's

Training My Fingers With Any

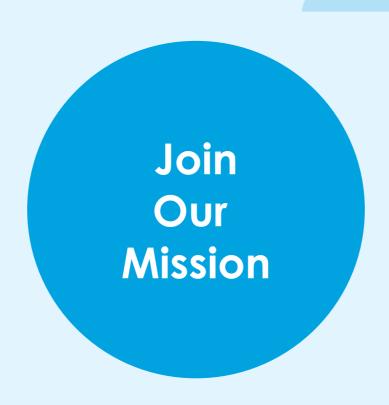
Chief Physician And Hand Surgery

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One Glove, Two Heads And Lots Of Ideas."



**Aachener Zeitung** 

















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