



PROMOTING PHYSICAL ACTIVITY **IN VR**

Innovative. Effective. Motivating.

What is teora[®] body?

teora[®] body is an innovative virtual reality (VR) based system designed to help users improve their motor skills in a fun and motivating way. The combination of interactive training, real-time feedback, and customizable difficulty levels enables long-term success. The program focuses on motor skills in the upper extremities and trunk.

Consisting of a VR headset with pre-installed software and a tablet, teora[®] body is ready to use right out of the box.

While users immerse themselves in virtual reality, you can monitor their training using the included tablet. Have your users repeat specific exercises and movement sequences while you watch and provide assistance as needed.





Areas of application

- ✔ **After periods of limited activity**
Facilitates a smooth return to regular exercise routines
- ✔ **To promote mobility in everyday life**
Offers opportunities for physical activity in everyday life with targeted challenges for the upper body
- ✔ **Visualization of physical exercises**
Instant feedback and digital support help ensure consistent execution
- ✔ **Physical activity for older adults**
Serves as a motivating factor to help maintain mobility and independence
- ✔ **Integrates into modern activity programs**
Can be easily integrated into the routines of various organizations to promote physical activity, motivation, and participation

Why teora® body?

More motivation, better results

- So-called enriched environments and multisensory stimulations have been proven to have a positive impact on training
- Playful learning increases willingness to train
- Individual adjustment of difficulty levels enables personalized training
- A sense of achievement boosts motivation

Innovative technology, easy to use

- Hand tracking and VR enable natural movement patterns
- User guidance via streaming on the included tablet
- With teora® body, multiple users can be supervised simultaneously (group training)
- Versatile thanks to mobile VR devices

✔ Modern training that is fun and combines cutting-edge technology with proven training methods



✔ Help your users relearn specific movement patterns and learn from their mistakes



✔ Choose from a variety of virtual scenarios to create a varied and challenging training experience



Targeted exercises for the shoulders, elbows, and wrists

With teora® body, users train specific movement patterns and muscle groups:

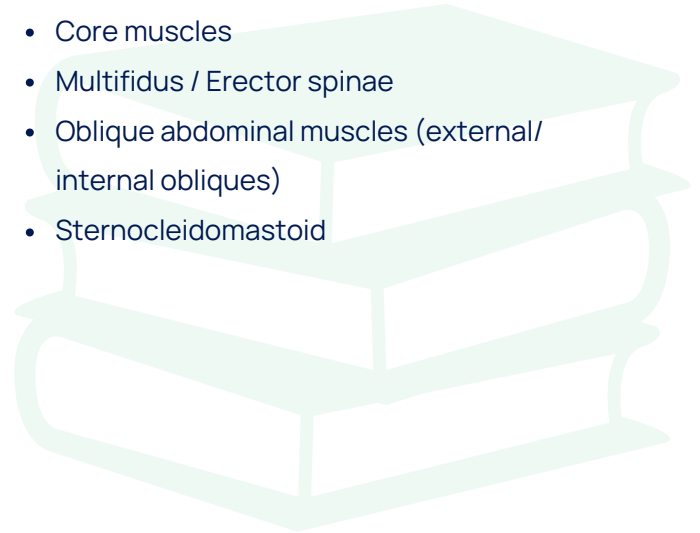
- ✓ Shoulder Mobilization & Strengthening (e.g., rotator cuff, deltoid)
- ✓ Elbow mobility & stabilization (e.g., flexion, extension, supination, pronation)
- ✓ Fine motor skills & coordination through precise movement control

teora® body can be used for both introductory, basic training as well as advanced training. For targeted strengthening, external aids such as TheraBands can also be incorporated into the exercises.



Muscle groups targeted by teora[®] body

- Pectoralis major
- Anterior and posterior deltoid
- Rotator cuff
- Serratus anterior
- Rhomboid
- Upper and middle trapezius
- Biceps brachii
- Triceps brachii
- Latissimus dorsi
- Wrist flexors
- Wrist extensors
- Pronators
- Supinators
- Finger flexors
- Finger extensors
- Core muscles
- Multifidus / Erector spinae
- Oblique abdominal muscles (external/ internal obliques)
- Sternocleidomastoid



Virtual Reality in promoting physical activity

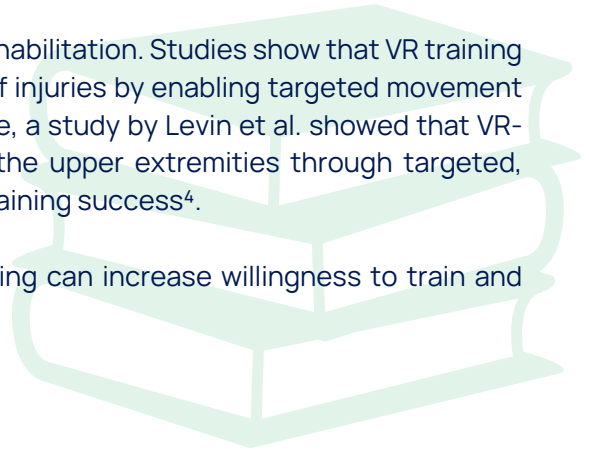
The use of virtual reality (VR) in motor training has gained increasing scientific significance in recent years. Numerous studies show that VR-based training can lead to significant improvements in motor function across a wide range of settings.

For example, a meta-analysis published in the Journal of Neural Engineering demonstrates that VR-based training following a stroke generally achieves comparable or better results than conventional training methods and physical therapy¹. In Parkinson's rehabilitation, VR has been shown to promote mobility and increase patient motivation².

VR therapy also demonstrates a positive effect in orthopedic rehabilitation. Studies show that VR training contributes to improved shoulder mobility following rotator cuff injuries by enabling targeted movement sequences in a pain-free, controlled environment³. Furthermore, a study by Levin et al. showed that VR-based training approaches promote sensorimotor control of the upper extremities through targeted, repetitive movement patterns, thereby supporting functional training success⁴.

The available studies also demonstrate that VR-assisted training can increase willingness to train and support long-term functional improvements.

¹⁻⁴ The explanations for the footnotes can be found on the last few pages



Frequently Asked Questions

What is Virtual Reality?

Virtual Reality (VR) is a computer-generated environment that can be experienced through visuals and, often, sound.

What are the minimum physical requirements that users must meet?

Starting from an upright sitting or standing position: to perform the exercises, at least one arm must be able to move to the left and right (horizontally) at a 60° angle and up and down (vertically) at a 100° angle, either bent or extended. However, the exercises can also be performed in a non-upright sitting or standing position; performing the exercises while lying completely flat is not possible. The ability to consciously bend and extend the index finger and thumb is also required for the current exercises. The head must be able to turn approximately 30° to the right and left. Use of visual aids is possible without any issues; however, vision and perception in both eyes are essential. In addition, intact language comprehension and reading ability are required.

What are the spatial requirements?

All exercises can be performed while seated. Therefore, you need at least a seat and about 1.50 meters of clear space in every direction so that you can extend your arms. You can also move around by walking while using the app, if you wish. In this case, you need a clear area of 2×2 meters.

What are the technical requirements?

You do not need any additional technical equipment. All you need is a stable, password-protected Wi-Fi network.

Disclaimer

teora® body is not a certified medical device under the Medical Device Regulation. Use with patients in a clinical setting is therefore at your own risk. living brain assumes no liability for any damages.

References

- ¹ Feitosa JA, et al. 2022. Effects of virtual reality-based motor rehabilitation: a systematic review of fMRI studies. *J. Neural. Eng.* 19, 1. PMID: 34933281. DOI: [10.1088/1741-2552/ac456e](https://doi.org/10.1088/1741-2552/ac456e)
- ² Dockx K, et al. 2016. Virtuelle Realität in der Rehabilitation des Parkinson-Syndroms. *Cochrane Library*. DOI: [10.1002/14651858.CD010760](https://doi.org/10.1002/14651858.CD010760)
- ³ Levin M F, et al. 2014. Emergence of Virtual Reality as a Tool for Upper Limb Rehabilitation: Incorporation of Motor Control and Motor Learning Principles. *Physical Therapy*. 95(3):415–425. doi: [10.2522/ptj.20130579](https://doi.org/10.2522/ptj.20130579)
- ⁴ Knodt M. 2022. Einsatz immersiver virtueller Realitäten präsentiert über ein Head-mounted Display in der neurologischen Rehabilitation. [Online einsehbar](#).



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 hello@livingbrain.de

 www.teora-xr.de

 linkedin.com/company/teora-xr

 instagram.com/teoraxr

 facebook.com/teora.xr

 living brain GmbH
Friedrich-Ebert-Anlage 27
69117 Heidelberg