Science **made** smarter

PhysioVR

Balance rehabilitation **made** comprehensive

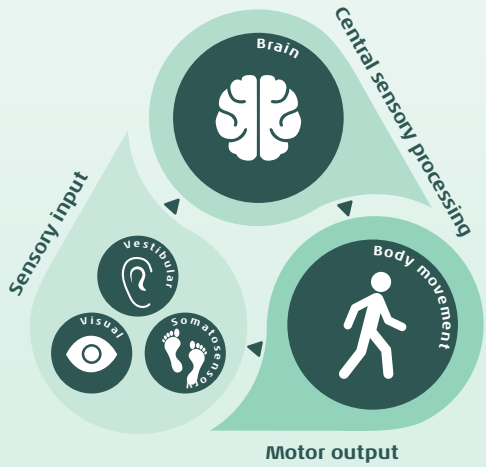
Balance rehabilitation with Virtualis virtual reality supports a wide range of therapeutic goals

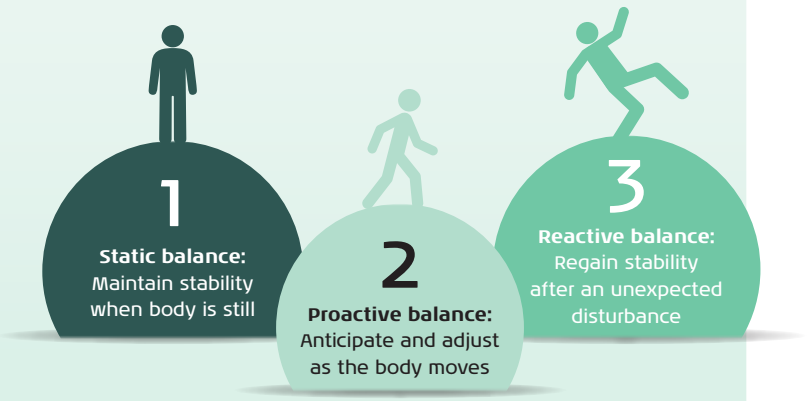
Interacoustics

Audiometry | Tympanometry | ABR | OAE | Hearing Aid Fitting | **Balance**

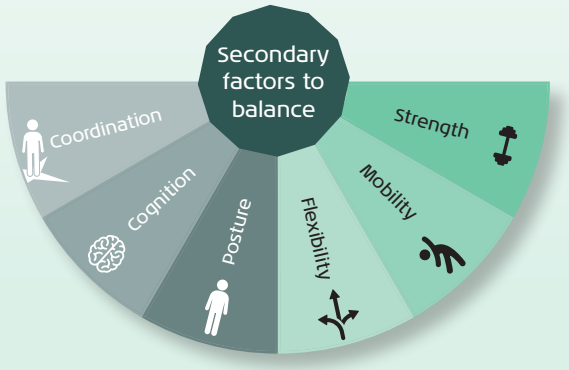
Balance – the cornerstone of effective rehabilitation

The balance system
The goal of the balance system is to keep the body and vision stable.





Secondary factors to balance
The balance system is also influenced by several other factors that can affect the ability to perform activities of daily living.



Balance disorders
Balance disorders can occur when one or more areas of the balance system or secondary factors to balance are impacted.

Poor balance increases the risk of falls and injuries and impacts quality of life, especially in patients recovering from vestibular, neurological, or musculoskeletal disorders.

Evidence supports early identification of fall risk factors and the use of multicomponent interventions to reduce falls in older adults [1].

The solution: Comprehensive balance rehabilitation

With comprehensive balance assessment and training that focuses both on the balance system and the secondary factors to balance, clinicians can help restore stability, improve confidence, and enhance overall mobility, making balance a cornerstone of effective rehabilitation.

Challenges in patient rehabilitation

Clinicians often face multiple challenges when rehabilitating patients. This may impact the progression to improve the patient's daily functioning goal.

21% of patients complete their home exercise program [2].

By 2037, a projected shortage of physiotherapists may further limit access to care [3].

Challenge
Rehabilitation is complex

Results in
Limited access to specialized care for objective and personalized rehabilitation

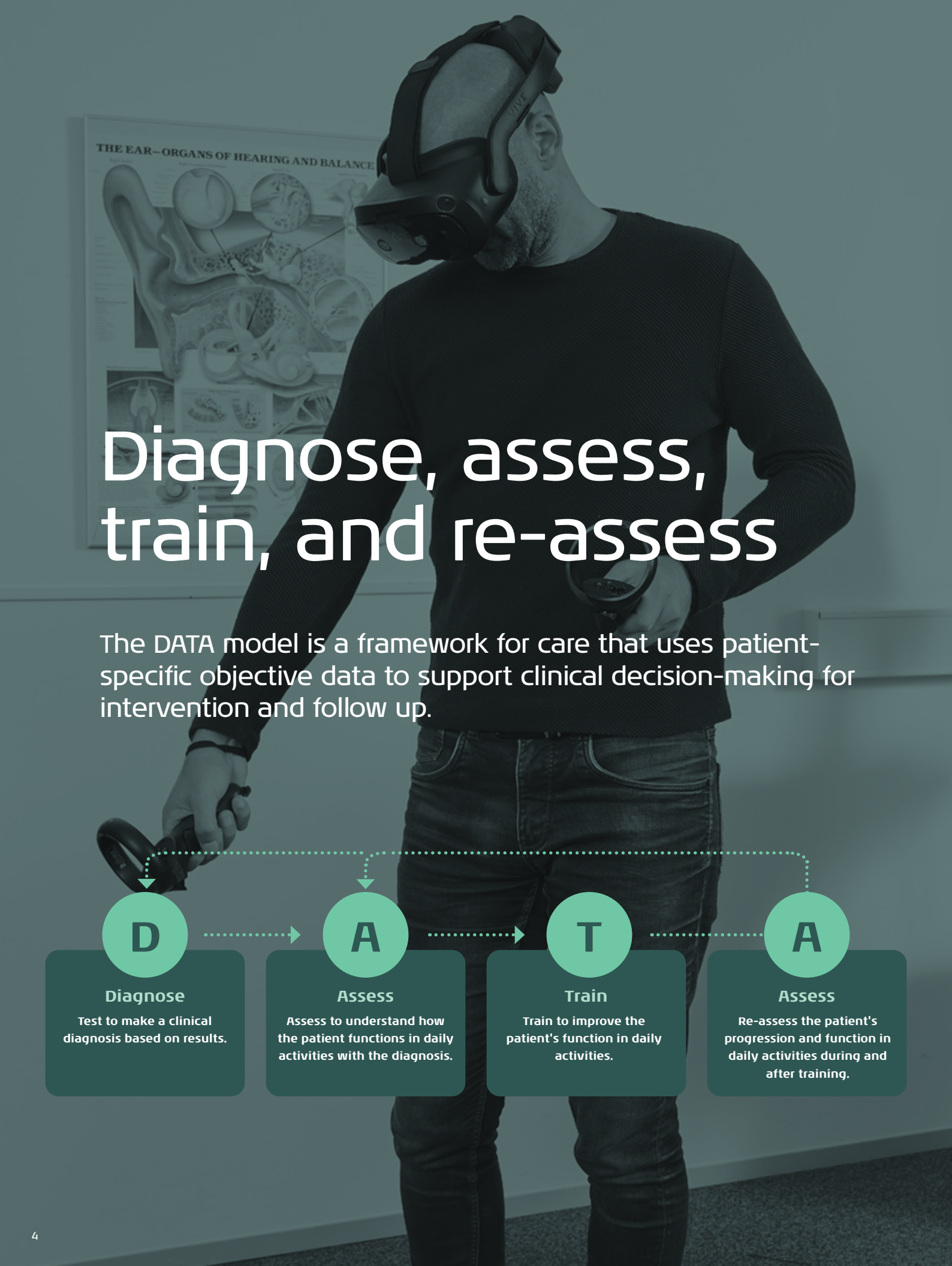
Challenge
Unclear link to activities of daily living

Results in
Lack of patient motivation which can be amplified by fear of falls

Challenge
Safely challenging patients at appropriate intensity level

Results in
Slow rehabilitation with inability to safely push patients beyond their limits

[1] Giovannini, S., Brau, F., Galluzzo, V., Santagada, D. A., Loreti, C., Biscotti, L., Laudisio, A., Zuccalà, G., & Bernabei, R. (2022). Falls among Older Adults: Screening, Identification, Rehabilitation, and Management. Applied Sciences, 12(15), 7934. https://doi.org/10.3390/app12157934
[2] Simek, E. M., McPhate, L., & Haines, T. P. (2012). Adherence to and efficacy of home exercise programs to prevent falls: a systematic review and meta-analysis of the impact of exercise program characteristics. Preventive medicine, 55(4), 262–275. https://doi.org/10.1016/j.ypmed.2012.07.007
[3] Zarek, P., Ruttinger, C., Armstrong, D., Chakrabarti, R., Hess, D. R., Manal, T. J., & Dall, T. M. (2025). Current and Projected Future Supply and Demand for Physical Therapists From 2022 to 2037: A New Approach Using Microsimulation. Physical therapy, 105(3), pzaf014. https://doi.org/10.1093/ptj/pzaf014



Diagnose, assess, train, and re-assess

The DATA model is a framework for care that uses patient-specific objective data to support clinical decision-making for intervention and follow up.

D

Diagnose

Test to make a clinical diagnosis based on results.

A

Assess

Assess to understand how the patient functions in daily activities with the diagnosis.

T

Train

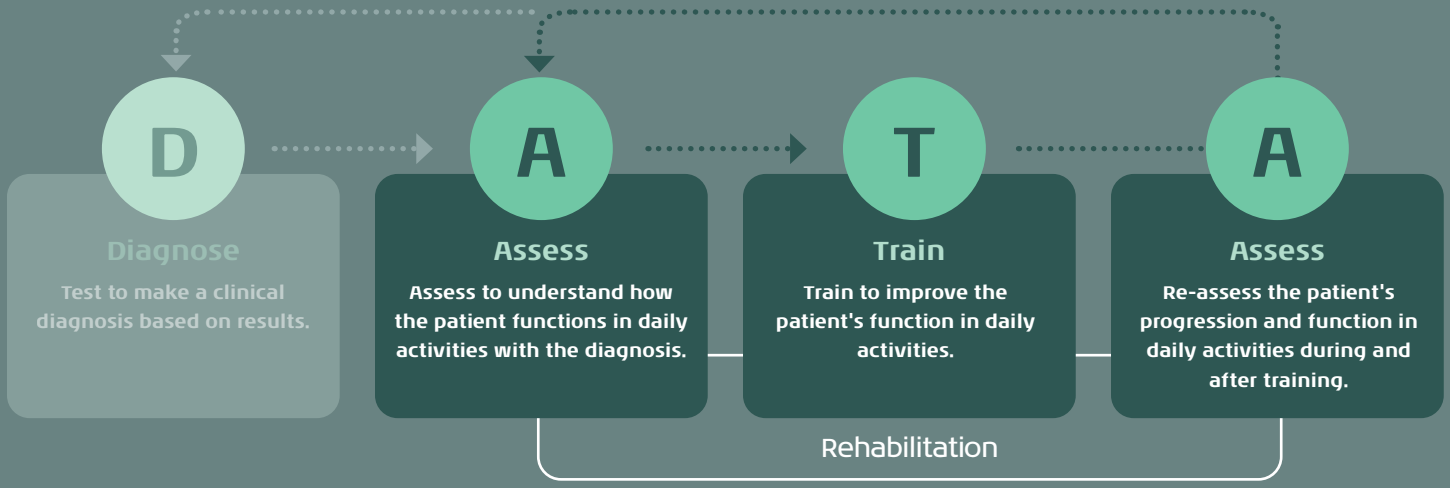
Train to improve the patient's function in daily activities.

A

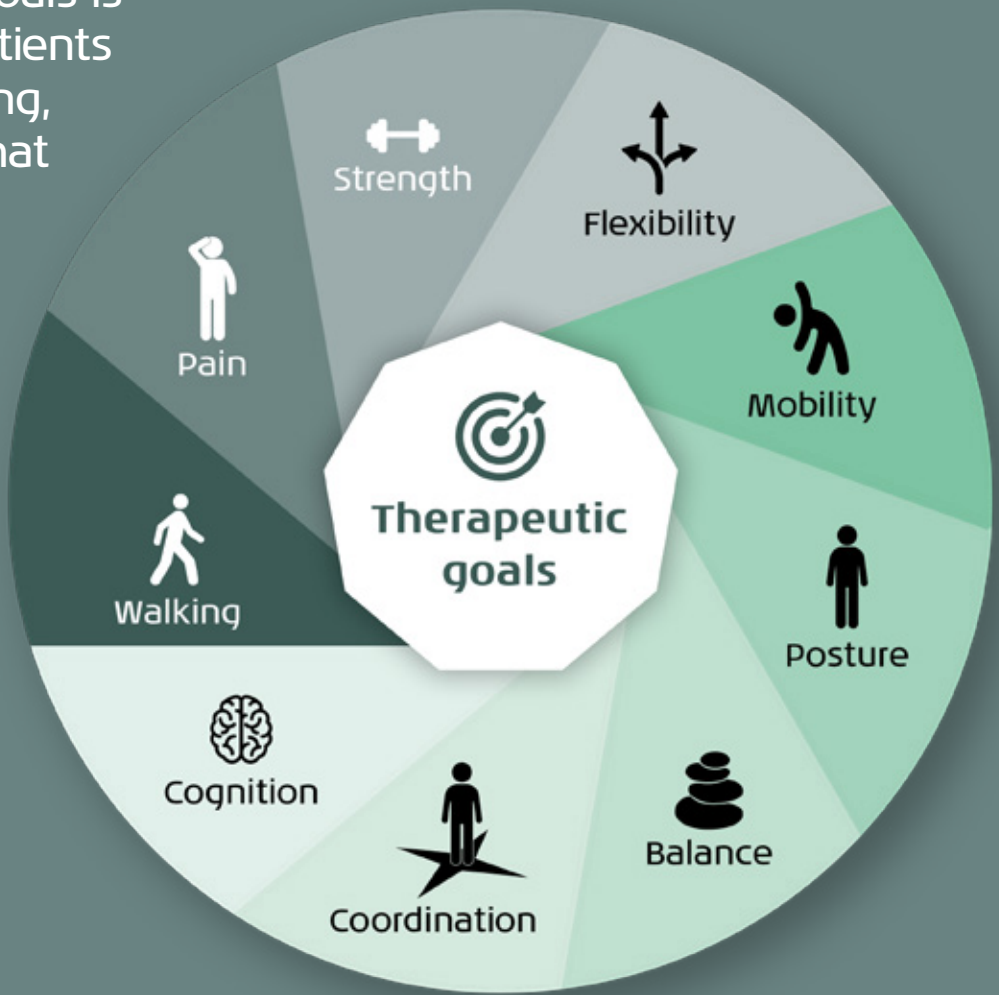
Assess

Re-assess the patient's progression and function in daily activities during and after training.

Setting therapeutic goals for training



Setting therapeutic goals is important to keep patients involved, guide training, and focus care on what matters most. The goals should be specific, measurable objectives that focus on improving your patient's function in their activities of daily living.



A patient-centered approach to balance rehabilitation increases the effectiveness of recovery for patients with chronic vestibular disorders [4].

[4] Karter, J. (2023). Optimizing Balance and Mobility: Innovative Approaches in Vestibular Rehabilitation. International Journal of Emerging Research in Engineering and Technology, 4(1), 21-28. https://doi.org/10.63282/3050-922X.IJERET-V4I1P103

Introducing virtual reality-based rehabilitation

Virtualis virtual reality (VR) allows you to objectively personalize patient training for efficient and motivating progression.

Virtualis
by Interacoustics

A study on virtual reality showed 73% increase in patient motivation and 98.4% completion of 4-6 weeks training program [5].

Research shows that virtual reality-based rehabilitation for older adults can improve balance and lower fall rates more than standard care [6].

Personalized
Based on the data from objective assessments, the clinician can deliver tailored training programs that address the patient's specific difficulties in daily living.

Motivating
Patients are fully immersed and engaged in their training plan with the simulated, real-life environments they recognize from activities of daily living.

Efficient
The clinician can use real time feedback to tailor the training intensity mid-session and safely push patients to their limits. Performance data is transferred across modules and sessions to further enhance clinician efficiency.

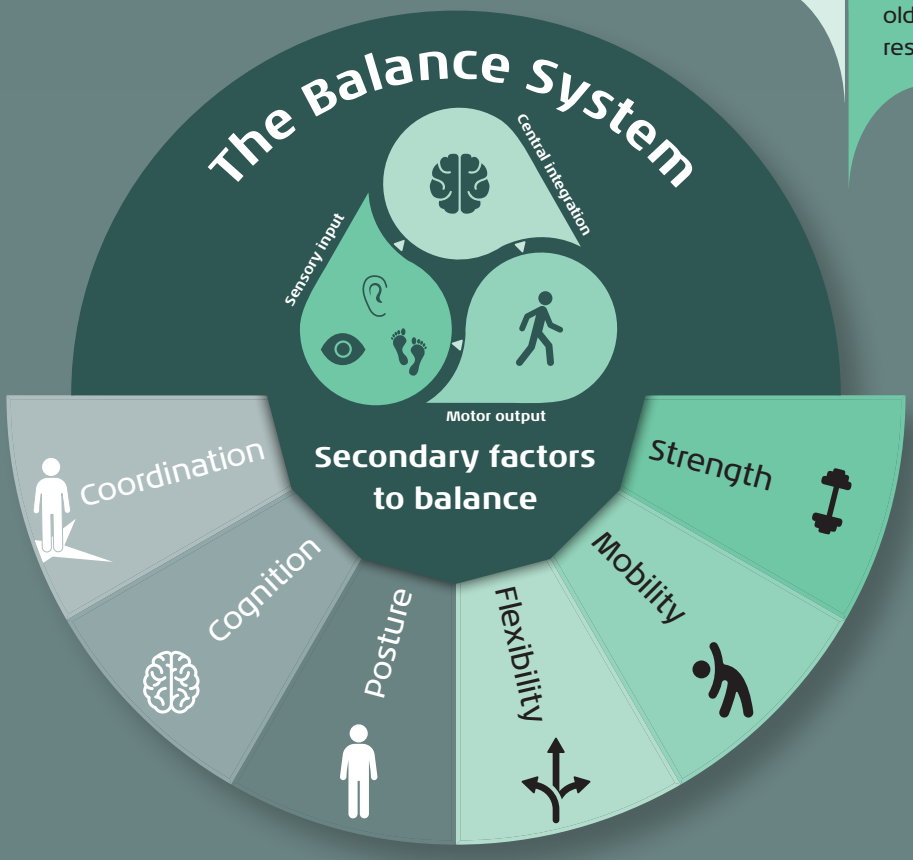
[5] Heffernan, A., Abdelmalek, M., & Nunez, D. A. (2021). Virtual and augmented reality in the vestibular rehabilitation of peripheral vestibular disorders: systematic review and meta-analysis. Scientific reports, 11(1), 17843. https://doi.org/10.1038/s41598-021-97370-9
[6] Martínez Montilla, L. A., López Cruces, K., Calderón Erazo, H. S., Calderón Ortiz, E. ., Arango Hoyos, G. P., Gómez, L., & García-Perdomo, H. A. (2023). Effectiveness of Virtual Reality in Balance Training for Fall Prevention in Older Adults: Systematic Review. Sports medicine and arthroscopy review, 31(2), 41-48. https://doi.org/10.1097/JSA.0000000000000367

Comprehensive balance rehabilitation with VR

The Virtualis system allows you to rehabilitate both primary and secondary factors to balance, enabling your patient to work comprehensively towards their therapeutic goals.

Patients completing 12 sessions of balance rehabilitation with Virtualis VR achieved significantly better functional and quality-of-life outcomes than those receiving standard care [7].

Research supports the use of virtual reality to improve mobility, strength, and cognition among older nursing home residents [8].



[7] Özgür, U. E., & İler, İ. (2025). The Effectiveness of Vestibular Rehabilitation Including Virtual Reality Therapy in Balance Loss Due to Ménière Disease. The Journal of craniofacial surgery, 10.1097/SCS.0000000000011634. Advance online publication. https://doi.org/10.1097/SCS.0000000000011634
[8] Peng, Y., Wang, Y., Zhang, L., Zhang, Y., Sha, L., Dong, J., & He, Y. (2024). Virtual reality exergames for improving physical function, cognition and depression among older nursing home residents: A systematic review and meta-analysis. Geriatric nursing (New York, N.Y.), 57, 31–44. https://doi.org/10.1016/j.gerinurse.2024.02.032

The power of comprehensive balance rehabilitation with PhysioVR

Through comprehensive, VR-based balance rehabilitation focused on the primary and secondary factors to balance, the PhysioVR solution helps patients return to their best quality of life.

An interactive adventure
PhysioVR's engaging software motivates and monitors patient progression, transforming balance training into an interactive and motivating adventure.

Comprehensive rehabilitation
PhysioVR offers assessment and training modules for a wide array of rehabilitation needs, including vestibular, balance, neurology, and musculoskeletal.

Functional assessment modules such as Cervical Range of Motion, Memorization, and Rod and Frame Test to objectively monitor patient progress.

Progressive training modules, such as ReflexVR, Catch the Ball, and BowVR provide efficient and motivating training.

"Virtualis lets me apply my clinical knowledge in a structured, scientific way. It's not just a tool; it's a platform for real therapeutic strategy." Jean Soupart, KINÉ Clinic

Combine with a static or dynamic force plate to elevate your assessment and training

MotionVR for Computerized Dynamic Posturography and dynamic rehabilitation

The MotionVR+ provides a complete balance assessment package, featuring Weight Distribution alongside the Computerized Dynamic Posturography (CDP) assessments: Sensory Organization Test (SOT), Adaptation Test (ADT), and Motor Control Test (MCT). You can use the objective data from these assessments to develop personalized training programs for your patients.

The MotionVR has a 360-degree dynamic force plate that allows you to customize training sessions with simulated real-life surfaces and instant force plate adjustments to optimize intensity progression. By using real-time objective feedback, you can challenge your patients and maximize the efficiency of each session in clinic.

StaticVR for postural control rehabilitation

The StaticVR offers a variety of postural control assessments such as the Clinical Test of Sensory Interaction on Balance (CTSIB), Limits of Stability (LOS), and Dynamic Analysis. This provides a solid foundation with crucial objective data delivered by the force plates.

With the two independent force plates of the StaticVR and training modules such as LOS Rehab, Weight Bearing, and MatchingVR, you have the opportunity to deliver personalized training while collecting real-time objective performance data.

Tailor your rehabilitation solutions to your patients' needs

BalanceVR Premium

BalanceVR

The power of vestibular rehabilitation with virtual reality

- Immersive virtual reality experiences that simulate real-life environments, and include head movements to stimulate the vestibular system
- Assess and train vestibular disorders
- Training modules promote adaptation, substitution, and habituation strategies

Module examples: Cervical ROM, Optokinetics, DVA Rehab, Target Tracking

Module examples: SOT, ADT, MCT, Motion Program, BirdVR

Combined with MotionVR for dynamic rehabilitation

- Dynamic 360-degree force plate that simulates real-life surfaces
- Instant force plate adjustments to optimize training intensity and progression
- Computerized Dynamic Posturography (CDP) for full functional balance assessment
- Training of functional rehabilitation including static, proactive and reactive balance

BalanceVR Smart

PhysioVR Premium

...Or with StaticVR for postural control rehabilitation

- Two independent force plates for personalized foot placement
- Static posturography force plates that measure Center of Pressure for functional balance assessment and training
- Training of functional rehabilitation including static and proactive balance

Module examples: LOS, Dynamic Analysis, LOS Rehab, Weight Bearing

PhysioVR

The power of comprehensive rehabilitation with virtual reality

- Progressive training to support therapeutic goals
- Assess and train balance, neurological, and musculoskeletal disorders
- Training to enhance dual-task performance, muscle strength, reflexes, and limb mobility
- Training diverts attention to increase patient compliance
- All BalanceVR modules included

Module examples: Rod and Frame Test, BowVR and Catch the Ball

PhysioVR Smart

SOT: Sensory Organization Test, ADT: Adaptation Test, MCT: Motor Control Test, LOS: Limits of Stability, CTSIB: Clinical Test for Sensory Interaction on Balance, SVV: Subjective Visual Vertical, Cervical ROM: Cervical Range of Motion.

A complete DATA-driven balance clinic for improved quality of life

D **Diagnose**
Test to make a clinical diagnosis based on results.

A **Assess**
Assess to understand how the patient functions in daily activities with the diagnosis.

T **Train**
Train to improve the patient's function in daily activities.

A **Assess**
Re-assess the patient's progression and function in daily activities during and after training.

VisualEyes™
Videonystagmography test to diagnose peripheral versus central vestibular disorder.

EyeSeeCam vHIT
To determine function of vestibulo-ocular reflex (VOR).

TRV Chair
Repositioning chair to diagnose BPPV.

Orion Chair
To diagnose bilateral vestibular losses and assess central compensation.

Aqua Stim, Air Fx
To diagnose the side and extent of peripheral vestibular loss.

BalanceVR, PhysioVR
Immersive VR for vestibular and comprehensive assessments.

MotionVR+
Computerized Dynamic Posturography (CDP) system for full functional balance assessment.

StaticVR
Static force plates for postural control assessments.

VORTEQ™ Assessment
Functional VOR assessments (DVA, GST and fvHIT™).

BalanceVR, PhysioVR
Vestibular and comprehensive training.

MotionVR
Balance and comprehensive training using 360 degree dynamic force plate.

StaticVR
Static force plates for postural control training.

TRV Chair
Repositioning chair to treat BPPV.

Flexible use of products across DATA solutions.

Science **made** smarter

Interacoustics is more than state-of-the-art solutions

Our mission is clear. We want to lead the way in audiology and balance by translating complexity into clarity:
- Challenges made into clear solutions
- Knowledge made practical
- Invisible medical conditions made tangible and treatable

Our advanced technology and sophisticated solutions ease the lives of healthcare professionals.

We will continue to set the standard for an entire industry. Not for the sake of science. But for the sake of enabling professionals to provide excellent treatment for their millions of patients across the globe.

Interacoustics.com

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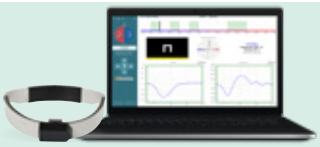
VIRTUALIS

Comprehensive rehabilitation solutions from Virtualis, part of the Interacoustics portfolio.

Go online to explore our full product range

Related products

TRV Chair
Diagnosing and treating Benign Paroxysmal Positional Vertigo (BPPV)



VORTEQ™ Functional Assessments Package
Stand-alone package

VisualEyes™ 505
Video Frenzel system for superior observation and recording of head and eye movements

Product specifications
All technical and hardware specifications concerning all products can be downloaded from our website.

Interacoustics

Audiometry | Tympanometry | ABR | OAE | Hearing Aid Fitting | **Balance**