OxeFit is a commercial fitness/rehabilitation platform and is **not represented in the peer-reviewed medical literature**. No clinical trials, systematic reviews, or guideline recommendations specifically evaluating OxeFit's AI adaptive training or 3D motion tracking technology were identified. However, the underlying technological concepts — AI-driven adaptive exercise and 3D motion analysis — do have a growing evidence base in rehabilitation medicine that can be discussed.

AI-Adaptive Training in Rehabilitation

The concept of AI-driven, real-time adaptive exercise — where algorithms adjust resistance, repetitions, or movement parameters based on patient performance — has been studied across musculoskeletal rehabilitation contexts:

- A 2025 network meta-analysis of 33 RCTs found that **AI-feedback motion training** ranked among the most effective strategies for improving range of motion (SUCRA = 83.7%), while therapeutic exergaming (SUCRA = 87.6%) and robotic exoskeletons (SUCRA = 86.3%) ranked highest for pain relief in musculoskeletal disorders.
- An RCT of AI-assisted multimodal exercise telerehabilitation for chronic nonspecific low back pain demonstrated **significantly greater pain reduction** (NRS: -3.00 vs -1.50, $p < 0.001$) and improved disability scores compared to conventional video-guided exercise at 4 weeks, with benefits persisting at 8 weeks.
- However, a 2026 systematic review concluded that AI in rehabilitation currently acts more as a **"behavioural amplifier"** — structuring home programs and supporting execution — rather than replacing dose-matched therapist-delivered care. Clinical effects were modest and heterogeneous, with most AI-enabled interventions comparable to conventional rehabilitation.

3D Motion Analysis in Spine and Orthopedic Care

Three-dimensional motion capture and analysis — the technology category OxeFit's system falls into — has established clinical utility:

- 3D gait analysis in spinal disorders assists in **identifying biomechanical abnormalities, optimizing surgical strategies, and enhancing rehabilitation outcomes** by providing objective quantification of

movement patterns that static imaging and subjective reports cannot capture.

- A systematic review of motion detection-supported exercise therapy in musculoskeletal disorders (9 RCTs, 432 participants) found **similar or enhanced results** on pain, disability, mobility, and muscle strength compared to conventional exercise therapy, though methodological quality was generally low.
- Newer AI-integrated 3D spine reconstruction frameworks (e.g., HumanMoveNet) can extract biomechanical parameters such as lumbar ROM, pelvic tilt range, and spinal symmetry from monocular video, showing potential for community-based screening and rehabilitation assessment.

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