Modern wellness focuses on proactive measures. Discover how functional movement assessments can detect and mitigate risks before they impact mobility.

How functional movement assessments support proactive wellness

Modern wellness programs increasingly use **functional movement assessments** to spot problems early and guide targeted prevention.

What functional movement assessments do

Functional tools such as the **Functional Movement Screen (FMS)** and other performance-oriented mobility tests assess quality of fundamental patterns (squat, lunge, gait, balance, transfers) to reveal:

- Hidden deficits in **mobility, stability and motor control** even in asymptomatic, physically active adults (Vypasniak & Fedyniak, 2024; Köchli et al., 2025)- **Compensatory patterns and asymmetries** that may raise musculoskeletal injury risk (Maleki et al., 2025; Köchli et al., 2025; Clark et al., 2022; Toriki et al., 2025)- Early signs of **physical frailty** and reduced functional reserve in older adults (Hayati et al., 2025)FMS, for example, uses seven standardized tasks scored on a 0–3 scale to rapidly identify functional limitations and asymmetries in otherwise “healthy” individuals, with the goal of **proactive injury prevention**, not diagnosis (Vypasniak & Fedyniak, 2024; Maleki et al., 2025; Köchli et al., 2025; Clark et al., 2022).

In older adults, PFF batteries such as the Tinetti Performance-Oriented Mobility Assessment (POMA), chair stands, balance tests, and grip strength differentiate frail from non-frail individuals and predict **physical frailty syndrome**, informing early interventions to maintain independence (Hayati et al., 2025).

How they help mitigate risk before mobility declines

Research highlights several preventive pathways:

- **Risk stratification and targeted programming**
  - Low FMS scores (≤13–14) are associated with higher likelihood of sports injury, allowing practitioners to flag "high-risk" athletes for corrective exercise programs (Köchli et al., 2025; Clark et al., 2022; Toriki et al., 2025).
  - In community-dwelling older adults, poorer balance, gait, and strength scores on tools like Tinetti, chair stand, and physical activity level mark those at higher frailty risk, guiding timely strength, balance, and activity interventions (Hayati et al., 2025).
- **Guiding effective corrective training**
  - Systematic reviews show that **resistance, neuromuscular, core stability, and functional training** reliably improve FMS scores (≈+2–3 points), reflecting better movement quality that may lower injury risk (Maleki et al., 2025; Clark et al., 2022).
  - Movement screens can also support "return-to-play" decisions and tailoring of training loads (Köchli et al., 2025; Velarde-Sotres et al., 2025).
- **Early detection in clinical and home settings**
  - Functional mobility batteries in hospitals and ICUs are used to set daily mobility goals, target rehabilitation resources, and prevent immobility-related decline, improving functional status at discharge (Young et al., 2020; Schujmann et al., 2019).
  - New sensor-based systems integrating **wearables and computer vision** can autonomously score sit-to-stand, balance, and gait tests at home with high agreement to clinicians, pointing toward low-burden, continuous monitoring of mobility risks (Spangler et al., 2023).

Important limitations and nuances

Evidence is mixed on how well a **single screening score** predicts actual injuries or falls:

- FMS shows **good reliability** but modest validity for stability/mobility and relatively poor accuracy as a stand-alone injury predictor; sensitivity for injury is generally low (Bhudarally et al., 2025; Warren et al., 2018; Eckart et al., 2025).
- An umbrella review of gait and balance tests found that **no single mobility test** predicts falls in older adults with high certainty; gait speed has moderate value but should be part of a broader assessment (Jepsen et al., 2022).
- Reviews now recommend **multifactorial models** (workload, prior injuries, sleep, sport-specific demands) combined with movement screens, rather than relying on one tool alone (Eckart et al., 2025).

Practical takeaway

Functional movement assessments are best viewed as **early-warning, decision-support tools**:

- In fitness and sport: use FMS or similar screens to reveal movement faults, then prescribe individualized strength, mobility, and neuromuscular training.
- In aging and rehabilitation: integrate balance, gait, and functional tests (e.g., Tinetti, chair stand, Timed Up and Go) into routine checks to flag emerging frailty and trigger preventive programs (Hayati et al., 2025; Jepsen et al., 2022; Young et al., 2020).
- Across settings: pair movement assessments with broader risk factors and, where possible, sensor-based monitoring for a more complete, proactive approach to preserving mobility.

Examples of common functional movement tools

Tool / approach	Primary purpose in proactive care	Key strengths & caveats	Citations
Functional Movement Screen (FMS)	Screen movement quality, asymmetry, basic competence in active adults/athletes	Reliable; supports targeted corrective training; limited stand-alone injury prediction and convergent validity	(Vypasniak & Fedyniak, 2024; Maleki et al., 2025; Bhudarally et al., 2025; Warren et al., 2018; Köchli et al., 2025; Velarde-Sotres et al., 2025; Eckart et al., 2025; Clark et al., 2022; Toriki et al., 2025)
Tinetti POMA & related PFF tests	Detect frailty risk, balance/gait issues in older adults	Predictive of physical frailty; supports early exercise/rehab planning	(Hayati et al., 2025)
Hospital/ICU functional batteries	Track function, set mobility goals, allocate rehab resources	Early mobilization programs improve functional status and shorten ICU stay	(Young et al., 2020; Schujmann et al., 2019)
Sensor-based home mobility testing	Automate sit-to-stand, balance, gait scoring at home	High agreement with clinicians; promising for continuous monitoring	(Spangler et al., 2023)

FIGURE 1 Common functional movement tools and their preventive roles.

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