
Competitive Benchmarking Wearable Sensors for Parkinson's Disease

What wearable solutions are currently available for Parkinson's disease monitoring? What technologies, features and capabilities differentiate them?

Explore this Competitive Benchmarking to discover selected solutions and compare their approaches, key features and capabilities.



STAT-ON

Sense4Care



What is it?

A waist-worn inertial recorder that continuously monitors Parkinson's Disease motor symptoms and generates automatic reports to support treatment adjustments and improve symptom control and quality of life.

Function?

Identifies and records patient's Parkinson's disease (PD) motor symptoms and transmits the data to mobile devices.

Device Class

Class IIa

Some interesting features

- FoG detector - Detects Freezing of Gait (FoG) episodes through the analysis of 1.6-second windows. The system reports the number and duration of FoG episodes
- Bradykinesia detector - The detector is self-adaptive and requires a minimum data period of three days.
- Stride fluidity - A measure of acceleration obtained as an intermediate result of the bradykinesia detector, related to the fluidity of movement while walking.

PDMonitor

PD Neurotechnology Ltd



What is it?

PDMonitor is a wearable device intended for remote patient monitoring and Parkinson's disease management. It measures activity pr posture, slowness, gait disturbances, freezing of gait, wrist tremor, leg tremor, involuntary movement, and on-and-off periods. It is worn on both wrists and ankles.

Function?

Traces record, processes, and stores a variety of motor and non-motor symptoms in patients with Parkinson's disease.

Device Class

Class IIa

Some interesting features

- Continuous Monitoring Of patient - Uses five lightweight wearable monitoring devices worn on different body parts to continuously collect three-dimensional kinematic data and monitor the patient's movement and symptoms.
- Sensor data + lifestyle drug adherence - Combines the analysis of motor symptoms with lifestyle and drug adherence information collected through the patient mobile app, providing physicians with a more comprehensive view of disease progression
- Broad motor symptom coverage - Monitors Bradykinesia, Dyskinesia, Tremor, Freezing of Gait, Gait Disturbances, Postural Instability, ON/OFF Conditions, Activity and Fluctuations.

Kinesia One

Great Lakes Neuro
Technologies Inc



What is it?

It is a finger wearable sensor-based motor assessment system intended for the monitoring of Parkinson's disease (PD). It is designed to monitor physical motion and muscle activity to quantify kinematics and measures the motor score using algorithm specific to motor symptoms in parkinson's disease.

Function?

Monitors physical motion and muscle activity to quantify kinematics and measures the motor score using algorithm specific to motor symptoms in parkinson's disease.

Device Class

Class I, Class II, Class IIb

Some interesting features

- Task-based Motor assessment - Patients perform brief pre-defined tasks based on common rating scales (e.g., UPDRS, TETRAS), guided by a mobile application.
- Clinically validated outcome for in clinic and at home - The system enables clinically validated motor assessments to be performed in the clinic or at home.
- Real-time remote data analysis, management, and reporting - Motion sensor data is uploaded to the Kinesia Web Portal in real time, where data and reports can be remotely accessed.

Comparative Benchmarking

Benchmarking	Kinesia One	PDMonitor	STAT-ON
Core use case	Monitors physical motion and muscle activity to quantify kinematics and generate motor scores using algorithms specific to Parkinson's motor symptoms.	Traces, records, processes and stores motor and non-motor symptoms in Parkinson's patients for remote monitoring and disease management.	Identifies and records Parkinson's motor symptoms during ambulatory monitoring and transmits data to mobile devices.
Wearable format / placement	Finger wearable sensor-based motor assessment system with patient module, computer unit, electromyography leads and interface software.	Multi-device system worn on both wrists and ankles, with five monitoring devices, docking station, mobile app, cloud and physician tool.	Waist belt equipped with a movement sensor, accelerometer, microprocessor, rechargeable battery and communication unit.
Symptoms / parameters measured	Physical motion, muscle activity, kinematics and motor score; used for tremor, bradykinesia and dyskinesia assessment.	Activity, posture, slowness, gait disturbances, freezing of gait, wrist tremor, leg tremor, involuntary movement and ON/OFF periods.	Bradykinesia, dyskinesia, freezing of gait, posture transitions, physical activity, ON/OFF fluctuations and falls.
Patient workflow	Patients perform brief predefined tasks based on common rating scales.	Supports continuous monitoring and practical self-assessment via a mobile app	Ambulatory monitoring system that collects and analyzes motor-symptom data and presents patient status through a mobile application.
Clinician workflow / data access	Data are made available to clinicians through the Kinesia web portal, with color-coded motor scores to show symptom severity.	Includes a cloud component and physician tool for patient monitoring and disease management.	Transmits collected data to mobile devices and uses an algorithm to analyze motor symptoms.

Benchmarking	Kinesia One	PDMonitor	STAT-ON
Regulatory / territories mentioned	Approved in multiple territories including Australia, Canada, Europe and the United States; classifications include Class I in Australia, Class II in Canada/US, and Class IIb in Europe.	Regulatory territory/classification details were not available in the retrieved excerpts.	Approved in Australia and Europe; Class IIa in Australia with TGA and Class IIa in Europe with CE for Parkinson's remote patient monitoring.
Use setting / intended use details	Prescription use, multiple-use, suitable for clinic, home, portable and remote use.	Remote patient monitoring and Parkinson's disease management system with wearable devices, app, cloud and physician tool.	Prescription use, multiple-use, suitable for ambulance and remote use; target patients listed as "All."
Innovation score	★★★★☆ 4/5	★★★★★ 5/5	★★★★☆ 4/5
Why this score?	Strong innovation profile due to Kinesia-specific technology, motor scoring algorithms, EMG integration and clinician-facing web portal, but the main workflow appears more task-based than fully continuous.	Highest innovation score because it combines five body-worn monitoring devices, mobile app, cloud infrastructure, physician tool, continuous monitoring, self-assessment and broad motor/non-motor symptom tracking.	Strong innovation profile due to real-world ambulatory monitoring, algorithmic analysis of multiple Parkinson's motor symptoms and practical mobile data transmission, but it appears less multi-point/body-distributed than PDMonitor.
Key strength	Best fit for structured neurological assessment and objective motor scoring.	Best fit for broad remote Parkinson's disease management and multi-symptom monitoring.	Best fit for ambulatory motor-symptom monitoring and ON/OFF fluctuation tracking.
Potential limitation from retrieved record	More assessment-centric and task-based compared with broader continuous monitoring systems.	Regulatory details were not available in the retrieved excerpts.	Waist-belt format may provide less distributed limb-level data than multi-device systems.

Interested in learning more about any of these solutions?

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