



PARKINSON'S DISEASE NEWS

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MONITORING TECHNOLOGIES TO ASSESS PARKINSON'S DISEASE

Researchers carried out a systematic review in order to (1) list, (2) compare and (3) classify technological-based devices used to measure motor function in people with Parkinson's Disease into three groups : wearable, non-wearable and hybrid devices. A systematic literature search of the PubMed database resulted in the inclusion of 168 studies.



These studies were grouped based on the type of device used. For each device they reviewed the availability, use, reliability, validity, and sensitivity to change. 73 devices were identified. Of these, 22 were wearable, 38 were non-wearable, and 13 were hybrid devices. In accordance with their classification, 9 devices were recommended, 34 were suggested, and 30 devices were classified as listed.

Within the wearable devices group, those classified as recommended were : the Mobility Lab sensors from Ambulatory Parkinson's Disease Monitoring (APDM), Physilog, StepWatch 3, TriTrac RT3 Triaxial accelerometer, McRoberts DynaPort, and Axivity (AX3). Within the non-wearable devices group, the Nintendo Wii Balance Board and GAITRite gait analysis system were classified as recommended. Within the hybrid devices group only the Kinesia system was classified as recommended.

Reference : Journal of Neuroengineering and Rehabilitation [2016] 13 (1) : 24 (C.Godinho, J.Domingos, G.Cunha, A.T.Santos, R.M.Fernandes, D.Abreu, N.Gonçalves, H.Matthews, T.Isaacs, J.Duffen, A.Al-Jawad, F.Larsen, A.Serrano, P.Weber, A.Thoms, S.Sollinger, H.Graessner, W.Maetzler, J.J.Ferreira) Complete study :

<https://jneuroengrehab.biomedcentral.com/articles/10.1186/s12984-016-0136-7>

<http://www.viartis.net/parkinsons.disease/news/160318.pdf>

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