

Sleep problems in Parkinson's Disease: PD patients' survey on common issues and treatments expectations

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Background

Sleep problems are common and varied in Parkinson's disease (PD) across all stages of the condition*. Medication early wearing off often results in troublesome nocturnal symptoms. CLE-600 is being developed as a night pill for the treatment of nocturnal PD symptoms and Early Morning OFF, using the proprietary OLAR® drug delivery platform (see <https://www.clexio.com/forpeople/#pipeline>). In order to better understand the patient's needs, Clexio conducted a patient survey with support from Parkinson's UK to better understand the nature and impact of sleep problems in Parkinson's.

Methods

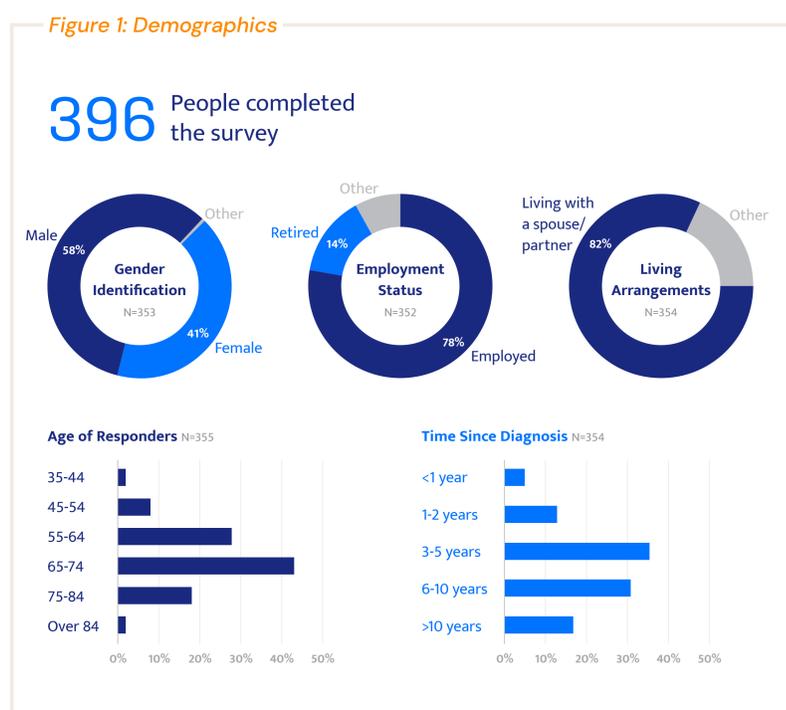
The survey was aimed at people with Parkinson's who experience sleep problems (it was not designed to assess the prevalence of sleep problems amongst people with Parkinson's).

The questions were developed by the team at Clexio with support from Parkinson's UK. Before survey dissemination, a group of Parkinson's disease patients gave feedback on the survey to ensure the purpose and questions were clear. Edits were made based on this feedback before launching the survey.

The survey included 22 questions (5 on demographics, 6 on Early Morning OFF and 11 on sleep) in addition to open text options. The survey was disseminated to the Parkinson's UK Research Support Network (<https://www.parkinsons.org.uk/rsn>) via email.

Results

396 PD patients experiencing nocturnal symptoms completed the survey (58% male), 89% between the ages of 55-84 and 66% within 3-10 years from diagnosis (Figure 1).



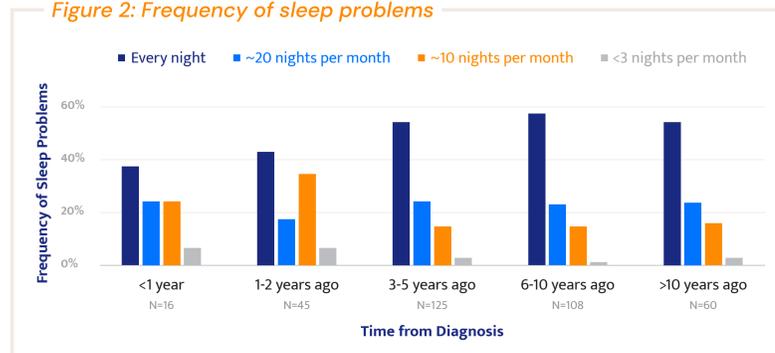
Survey respondents were presented with a list of common sleep complaints and were asked to select up to three which have the most significant impact on their life. The most common nocturnal complaints having a significant impact on patients' lives were: waking up frequently (52%), difficulty turning in bed (45%) and leg movements (32%). Respondents also reported pain, waking up too early, and only being able to sleep for short periods at a time (3-5 hours) (Table 1).

Table 1: The problems that have the most impact on life

Waking up frequently	52%
Difficulty turning in bed	45%
Leg movements	32%
Nocturia - frequent urination at night	29%
Daytime sleepiness	27%
Vivid dreams, sometimes acted out (REM sleep disorder)	27%
Difficulty falling asleep	26%
Feeling tired upon waking up in the morning	24%
Nightmares	7%
Sleep attacks - falling asleep very suddenly and without warning	4%
Sleep apnoea - pauses in breathing while sleeping	2%

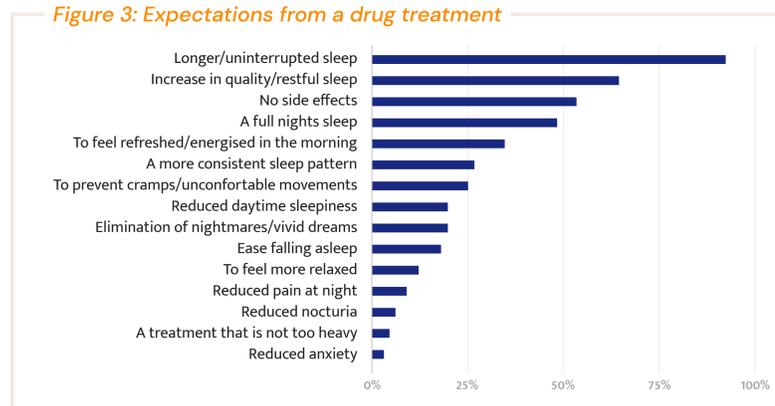
Over half of respondents (54%) reported experiencing sleep problems every night. 24% reported sleep problems around two out of three nights, 19% for one out of three nights and 4% reported problems less than three nights per month. Frequency of sleep problems increased with time since diagnosis — whilst 40% of people diagnosed within two years reported sleep problems every night, this rose to 55% in the group diagnosed over ten years ago. Worsening of problems have increased with time since diagnosis (Figure 2).

Figure 2: Frequency of sleep problems



PD Patients were asked, "What would you expect from a drug treatment that aims to improve sleep problems for people with Parkinson's?". The most common expectations from a potential drug treatment were to allow longer periods of uninterrupted sleep and better quality sleep, both to enable patients to wake up feeling refreshed and reduce their daytime sleepiness (Figure 3).

Figure 3: Expectations from a drug treatment



Conclusions

Nocturnal symptomatology is a high unmet need in PD and among the main reasons for low Quality of Life reported by patients.* Motor complications during the night are reflected by the most common complaints of difficulty turning in bed and leg movements leading to frequent waking up and interrupted sleep. CLE-600 is being developed as a potential solution for PD patients suffering from nocturnal problems and morning akinesia, integrating patient voice into the development process.