

## Contact

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The PKG is FDA 510(K) cleared in the USA and CE mark in Europe and TGA ARTG 236583 in Australia

### Indications for use

The Personal Kinetigraph® (PKG) System is intended to quantify kinematics of movement disorder symptoms in conditions such as Parkinson's disease, including tremor, bradykinesia and dyskinesia. It includes a medication reminder, an event marker and is intended to monitor activity associated with movement during sleep. The device is indicated for use in individuals 46 to 83 years of age.

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MM0094 - EN V6.0 US Wearing off CS February 2020



**“Wearing off:”  
if he can’t tell me,  
how will I know?”**

### Patient History:

- 68-year-old male with 6 year history of Parkinson's and still working as a clergyman.
- Four doses/day of oral levodopa.
- Patient considered himself to be well-controlled and not troubled by Parkinson's but did complain of tiredness during the day and was considering stopping work or reducing hours.
- Was unaware of early morning “Off” or “wearing off” when explicitly asked by neurologist.
- When shown the PKG® the patient disagreed with its demonstration of wearing off. However, his wife said that she could tell when his dose was due, because he looked drawn and slow. She thought that this was routinely present with almost every dose.
- After discussion that treatment may allow him to continue working and with some enthusiasm from his wife, he agreed to decrease the interval between doses of levodopa.



## “Wearing off:” if he can’t tell me, how will I know?

### The 1st PKG shows:

- PKG showing “early morning “off” with bradykinesia levels above the 75th percentile of controls.
- Although the median bradykinesia score over the course of the day was less than the 75th percentile (24.9), bradykinesia levels peaked well above this for about an hour at the time of each dose.
- From 06:00–10:00 the BKS was above the 75th percentile (“OFF”) for nearly five hours each day.

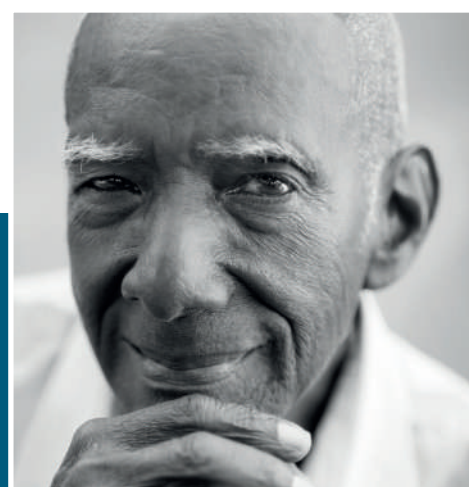
### Consultation following 2nd PKG:

- The patient felt much better and had decided to delay retirement.
- The time above the 75th percentile had substantially reduced (was only present between arising and the time of the first dose).

- Dyskinesia was now present and the FDS had increased (8.6 to 12.4). The patient was not aware of the dyskinesia.
- The likelihood that an advanced therapy would soon be required was discussed with the patient. This was not acceptable on religious grounds.

### Treatment Plan:

- The frequency of levodopa was increased from four-hourly to three-hourly with a Levodopa Equivalent Dose (LED) dose increasing from 800mg to 1000mg.
- A PKG was obtained prior to the next assessment to be available for the consultation to aid in assessing the effect of therapy.



## Conclusion

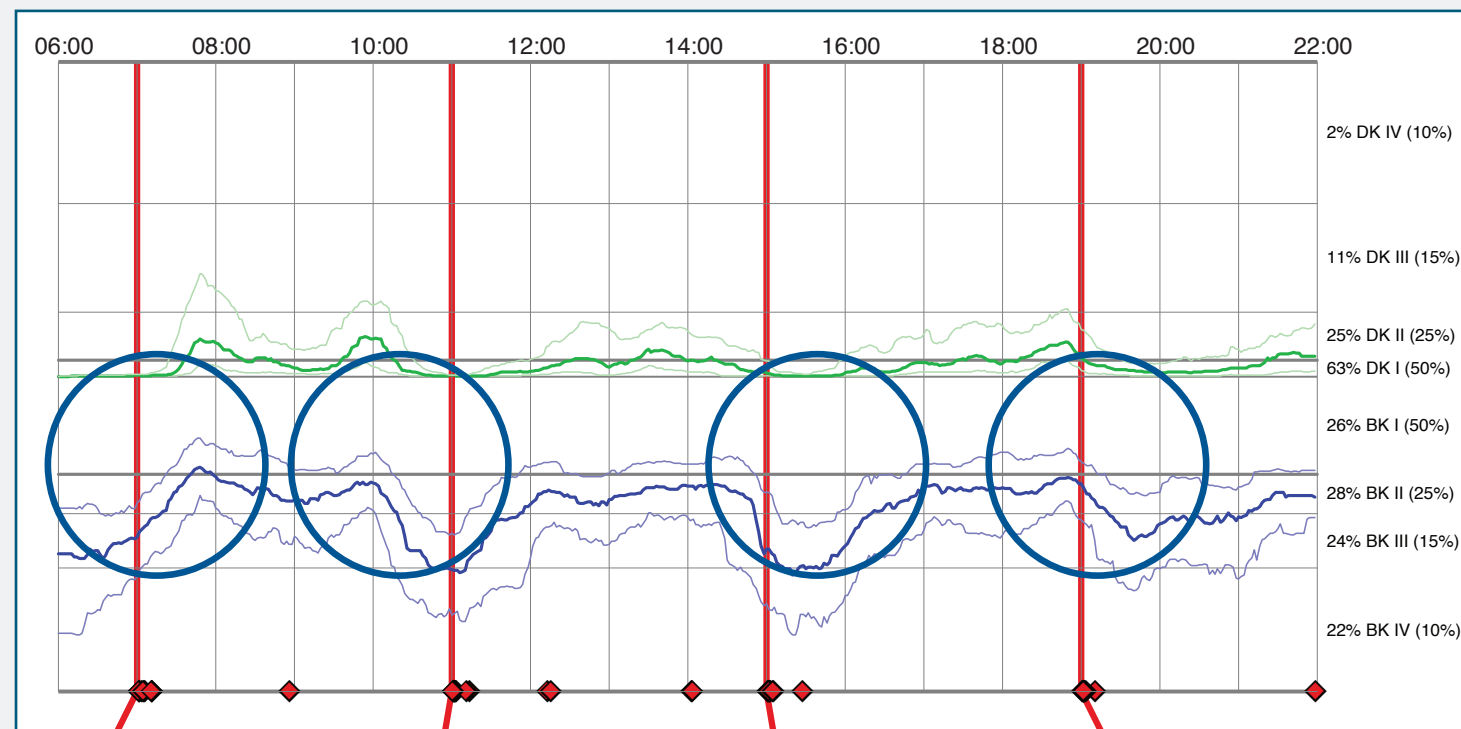
The patient did not report wearing-off and was assumed to be well-controlled with his oral medications. This is in-line with the findings of a recent study that showed that approx. 30% of patients do not recognise wearing-off, making it difficult for their treating neurologist to be aware of it.<sup>1</sup>

This patient case study shows that “off time” associated with wearing off can be considerable.

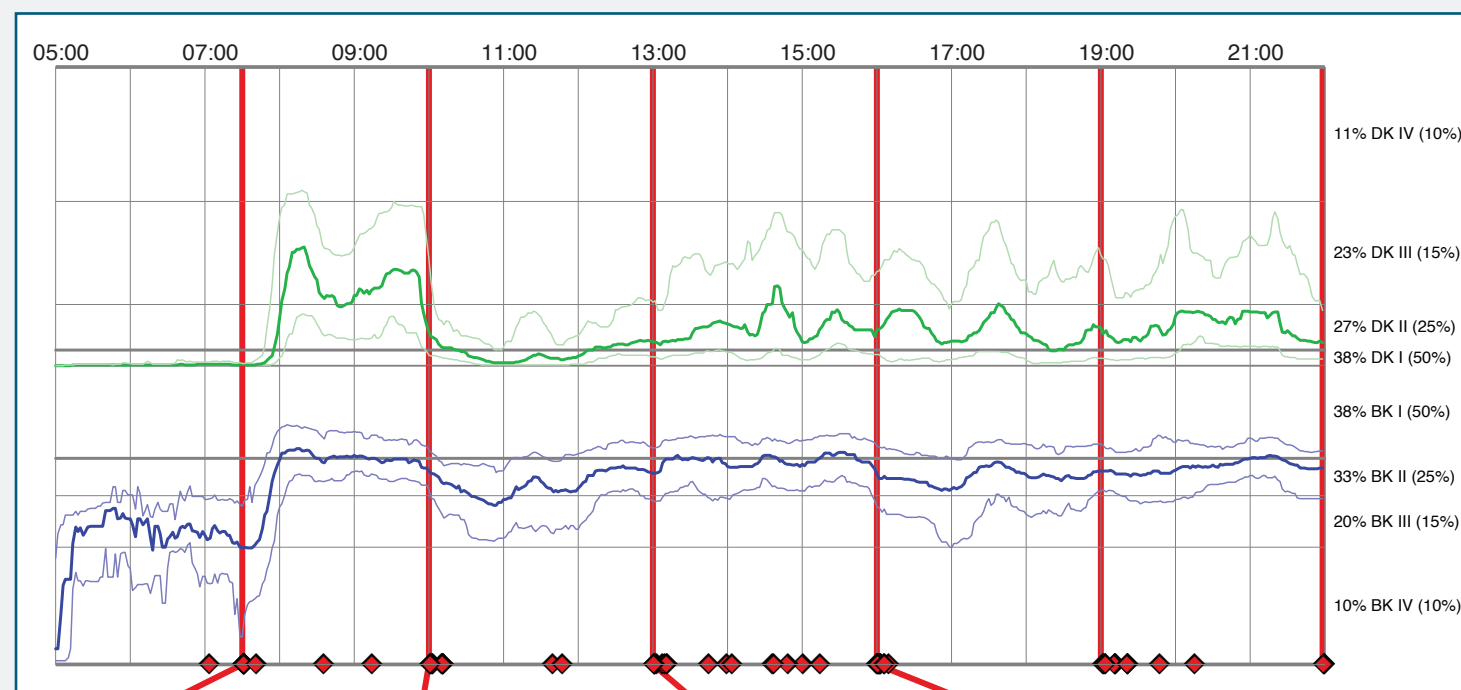
Measuring the effect of a therapeutic intervention is important in patients who are less able to objectively assess their symptoms.

The pattern of increased number of doses and dyskinesia emerging when bradykinesia is treated, indicates that advanced therapies would be appropriate.

### 1st PKG



### 2nd PKG



<sup>1</sup> Farzanehfar, P et. al, (2017) “Objective Measurement in Clinical Care of Patients with Parkinson’s Disease results in improved outcomes”, npj Parkinson’s Disease (2018) 4:10