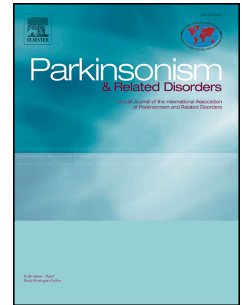


# Accepted Manuscript

The bidirectional longitudinal relationship between insomnia, depression and anxiety in patients with early-stage, medication-naïve Parkinson's disease

Sonja Rutten, Chris Vriend, Ysbrand D. van der Werf, Henk W. Berendse, Daniel Weintraub, Odile A. van den Heuvel



PII: S1353-8020(17)30034-2

DOI: [10.1016/j.parkreldis.2017.01.015](https://doi.org/10.1016/j.parkreldis.2017.01.015)

Reference: PRD 3225

To appear in: *Parkinsonism and Related Disorders*

Received Date: 8 October 2016

Revised Date: 24 December 2016

Accepted Date: 29 January 2017

Please cite this article as: Rutten S, Vriend C, van der Werf YD, Berendse HW, Weintraub D, van den Heuvel OA, The bidirectional longitudinal relationship between insomnia, depression and anxiety in patients with early-stage, medication-naïve Parkinson's disease, *Parkinsonism and Related Disorders* (2017), doi: 10.1016/j.parkreldis.2017.01.015.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

## TITLE PAGE

Title:

**The bidirectional longitudinal relationship between insomnia, depression and anxiety in patients with early-stage, medication-naïve Parkinson's disease**

List of authors:

Sonja Rutten, MD<sup>1,2,\*</sup>, Chris Vriend, PhD<sup>1-4</sup>, Ysbrand D. van der Werf, PhD<sup>2,3</sup>, professor Henk W. Berendse, MD PhD<sup>3,4</sup>, professor Daniel Weintraub, MD PhD<sup>5</sup>, professor Odile A. van den Heuvel, MD PhD<sup>1,2,3</sup>

Affiliations:

1. Department of Psychiatry, VU university medical center (VUmc), the Netherlands
2. Department of Anatomy & Neurosciences, VUmc, the Netherlands
3. Amsterdam Neuroscience, Amsterdam, the Netherlands
4. Department of Neurology, VUmc, the Netherlands
5. Departments of Psychiatry and Neurology, University of Pennsylvania School of Medicine, Philadelphia, United States

\* Corresponding author:

Name: Sonja Rutten  
 Postal address: VU university medical center, O|2-gebouw  
 Department of Anatomy & Neuroscience (13th floor)  
 PO box 7057  
 1007 MB Amsterdam  
 The Netherlands  
 E-mail: s.rutten@vumc.nl  
 Telephone: +31204449683  
 Fax: +31204440197

Key words:

Insomnia, anxiety, depression, Parkinson's disease, longitudinal, risk factor

Word count: 3385  
 Abstract word count: 246  
 Number of figures: 1  
 Number of tables: 4  
 Number of references: 36

Download English Version:

<https://daneshyari.com/en/article/5503893>

Download Persian Version:

<https://daneshyari.com/article/5503893>

[Daneshyari.com](https://daneshyari.com)