

## University of Groningen

### Parkinson's disease

Koerts, J.

**IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.**

*Document Version*

Publisher's PDF, also known as Version of record

*Publication date:*

2009

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*

Koerts, J. (2009). *Parkinson's disease: neuroimaging and clinical studies on cognition and depression*. [Thesis fully internal (DIV), University of Groningen, Faculty of Medical Sciences]. s.n.

**Copyright**

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

**Take-down policy**

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

*Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.*

## Appendices **||**



---

## The Montgomery-Åsberg Depression Rating Scale

### *1. Apparent Sadness*

Representing despondency, gloom and despair (more than just ordinary transient low spirits) reflected in speech, facial expression, and posture. Rate by depth and inability to brighten up.

0. No sadness.
- 1.
2. Looks dispirited but does brighten up without difficult.
- 3.
4. Appears sad and unhappy most of the time.
- 5.
6. Looks miserable all the time. Extremely despondent.

### *2. Reported Sadness*

Representing reports of depressed mood, regardless of whether it is reflected in appearance or not. Includes low spirits, despondency or the feeling of being beyond help and without hope. Rate according to intensity, duration and the extent to which the mood is reported to be influenced by events.

0. Occasional sadness in keeping with the circumstances.
- 1.
2. Sad or low but brightens up without difficulty.
- 3.
4. Pervasive feelings of sadness or gloominess. The mood is still influenced by external circumstances
- 5.
6. Continuous or unvarying sadness, misery or despondency.

### *3. Inner tension*

Representing feelings of ill-defined discomfort, edginess, inner turmoil, mental tension mounting to either panic, dread or anguish. Rate according to intensity, frequency, duration and the extent or reassurance called for.

0. Placid. Only fleeting inner tension

- 1.
2. Occasional feelings of edginess and ill-defined discomfort.
- 3.
4. Continuous feelings of inner tension or intermittent panic which the patient can only master with some difficulty.
- 5.
6. Unrelenting dread or anguish. Overwhelming panic.

*4. Reduced sleep*

Representing the experience of reduced duration or depth of sleep compared to subject's own normal pattern when well.

0. Sleeps as usual.
- 1.
2. Slight difficulty dropping off to sleep or slightly reduced, light or fitful sleep.
- 3.
4. Sleep reduced or broken by at least two hours.
- 5.
6. Less than two or three hours sleep.

*5. Reduced appetite*

Representing the feeling of a loss of appetite compared with when well. Rate by loss of desire of food or the need to force oneself to eat.

0. Normal or increased appetite.
- 1.
2. Slightly reduced appetite.
- 3.
4. No appetite. Food is tasteless.
- 5.
6. Needs persuasion to eat at all.

*6. Concentration difficulties*

Representing difficulties in collecting one's thoughts mounting to incapacitating lack of concentration. Rate according to intensity, frequency, and degree of incapacity produced.

0. No difficulties in concentrating.

- 1.
2. Occasional difficulties in collecting one's thoughts.
- 3.
4. Difficulties in concentrating and sustaining thought which reduces ability to read or hold a conversation.
- 5.
6. Unable to read or converse without great difficulty.

7. *Lassitude*

Representing a difficulty getting started or slowness initiating and performing everyday activities.

0. Hardly any difficulty in getting started. No sluggishness.
- 1.
2. Difficulties in starting activities.
- 3.
4. Difficulties in starting simple routine activities which are carried out with effort.
- 5.
6. Complete lassitude. Unable to do anything without help.

8. *Inability to feel*

Representing the subjective experience of reduced interest in the surroundings, or activities that normally give pleasure. The ability to react with adequate emotion to circumstances or people is reduced.

0. Normal interest in the surroundings and in other people.
- 1.
2. Reduced ability to enjoy usual interest.
- 3.
4. Loss of interest in the surroundings. Loss of feelings for friends and acquaintances.
- 5.
6. The experience of being emotionally paralyzed, inability to feel anger, grief or pleasure and a complete or even painful failure to feel for close relatives and friends.

*9. Pessimistic thoughts*

Representing thoughts of guilt, inferiority, self-reproach, sinfulness, remorse and ruin.

0. No pessimistic thoughts
- 1.
2. Fluctuating ideas of failure, self-reproach or self depreciation.
- 3.
4. Persistent self-accusations, or definite but still rational ideas of guilt or sin. Increasingly pessimistic about the future.
- 5.
6. Delusions of ruin, remorse or unredeemable sin. Self-accusations which are absurd and unshakable.

*10. Suicidal thoughts*

Representing the feeling that life is not worth living, that a natural death would be welcome, suicidal thoughts, and preparations for suicide. Suicidal attempts should not in themselves influence the rating.

0. Enjoys life or takes it as it comes.
- 1.
2. Weary of life. Only fleeting suicidal thoughts.
- 3.
4. Probably better off dead. Suicidal thoughts are common, and suicide is considered as a possible solution, but without specific plans or intention.
- 5.
6. Explicit plans for suicide when there is an opportunity. Active preparations for suicide.

---

**Unified Parkinson's Disease Rating Scale**

## Motor examination

*18. Speech*

0. Normal.
1. Slight loss of expression, diction and/or volume.
2. Monotone, slurred but understandable; moderately impaired.
3. Marked impairment, difficult to understand.
4. Unintelligible

*19. Facial expression*

0. Normal.
1. Minimal hypomania, could be normal "Poker Face".
2. Slight but definitely abnormal diminution of facial expression.
3. Moderate hypomania; lips parted some of the time.
4. Masked or fixed facies with severe or complete loss of facial expression; lips parted  $\frac{1}{4}$  inch or more.

*20. Tremor at rest*

0. Absent.
1. Slight and infrequently present.
2. Mild in amplitude and persistent. Or moderate in amplitude, but only intermittently present.
3. Moderate in amplitude and present most of the time.
4. Marked in amplitude and present most of the time.

*21. Action or postural tremor*

0. Absent.
1. Slight; present with action.
2. Moderate in amplitude, present with action.
3. Moderate in amplitude, with posture holding as well as action.
4. Marked in amplitude; interferes with feeding.



22. *Rigidity*

0. Absent.
1. Slight or detectable only when activated by mirror or other movement.
2. Mild to moderate.
3. Marked, but full range of motion easily achieved.
4. Severe, range of motion achieved with difficulty.

23. *Finger taps*

0. Normal.
1. Mild slowing and/or reduction in amplitude.
2. Moderately impaired. Definite and early fatiguing. May have occasional arrests in movement.
3. Severely impaired. Frequent hesitation in initiating movements or arrests in ongoing movement.
4. Can barely perform the task.

24. *Hand movements*

0. Normal.
1. Mild slowing and/or reduction in amplitude.
2. Moderately impaired. Definite and early fatiguing. May have occasional arrests in movement.
3. Severely impaired. Frequent hesitation in initiating movements or arrests in ongoing movement.
4. Can barely perform the task.

25. *Rapid alternating movements of hands*

0. Normal.
1. Mild slowing and/or reduction in amplitude.
2. Moderately impaired. Definite and early fatiguing. May have occasional arrests in movement.
3. Severely impaired. Frequent hesitation in initiating movements or arrests in ongoing movement.
4. Can barely perform the task.

---

*26. Leg agility*

0. Normal.
1. Mild slowing and/or reduction in amplitude.
2. Moderately impaired. Definite and early fatiguing. May have occasional arrests in movement.
3. Severely impaired. Frequent hesitation in initiating movements or arrests in ongoing movement.
4. Can barely perform the task.

*27. Arise from chair*

0. Normal.
1. Slow; or may need more than one attempt.
2. Pushes self up from arms of seat.
3. Tends to fall back and may have to try more than one time, but can get up without help.
4. Unable to arise without help.

*28. Posture*

0. Normal erect.
1. Not quite erect, slightly stooped posture; could be normal for older person.
2. Moderately stooped posture, definitely abnormal; can be slightly leaning to one side.
3. Severely stooped posture with kyphosis; can be moderately leaning to one side.
4. Marked flexion with extreme abnormality of posture.

*29. Gait*

0. Normal.
1. Walks slowly, may shuffle with short steps, but no festination (hastening steps) or propulsion.
2. Walks with difficulty, but requires little or no assistance; may have some festination, short steps, or propulsion.
3. Severe disturbance of gait, requiring assistance.
4. Cannot walk at all, even with assistance.

*30. Postural stability*

0. Normal.
1. Retropulsion, but recovers unaided.
2. Absence of postural response; would fall if not caught by examiner.
3. Very unstable, tends to lose balance spontaneously.
4. Unable to stand without assistance.

*31. Body bradykinesia and hypokinesia*

0. None.
1. Minimal slowness, giving movement a deliberate character; could be normal for some persons. Possibly reduced amplitude.
2. Mild degree of slowness and poverty of movement which is definitely abnormal. Alternatively, some reduced amplitude.
3. Moderate slowness, poverty or small amplitude of movement.
4. Marked slowness, poverty or small amplitude of movement.