

## PDF hosted at the Radboud Repository of the Radboud University Nijmegen

The following full text is a publisher's version.

For additional information about this publication click this link.

<http://hdl.handle.net/2066/88203>

Please be advised that this information was generated on 2018-07-08 and may be subject to change.

## IMAGES IN CLINICAL MEDICINE

## Cycling for Freezing of Gait



Anke H. Snijders, M.D.  
Bastiaan R. Bloem, M.D.

Donders Institute for Brain, Cognition,  
and Behavior  
Radboud University Nijmegen Medical  
Center  
Nijmegen, the Netherlands

**A** 58-YEAR-OLD MAN WITH A 10-YEAR HISTORY OF IDIOPATHIC PARKINSON'S disease presented with an incapacitating freezing of gait (Panel A, Video 1). The patient had severe difficulties initiating gait and was able to take only a few shuffling steps when provided with a visual cue (the examiner's foot placed in front of the patient). Attempts to walk evolved rapidly into forward festination and ultimately a fall to the ground. Axial turning was impossible. However, the patient's ability to ride a bicycle was remarkably preserved (Panel B, Video 2). Gait freezing recurred instantaneously after he dismounted the bicycle. This striking kinesia paradoxa may be explained by the bicycle's rotating pedals, which may act as an external pacing cue. Alternatively, the motor-control mechanisms involved in gait as compared with other activities engaging the legs, such as cycling, could be affected differentially in Parkinson's disease. Cycling may offer a useful approach for exercise training in patients with Parkinson's who are "grounded" by severe freezing of gait. (*Editor's note:* In Video 2, the patient is not wearing a safety helmet because in the Netherlands, unlike the United States, wearing a safety helmet is neither required by law nor customary.)

Copyright © 2010 Massachusetts Medical Society.