



Oct 24, 2025

Version 3

Rotarod Test V.3

DOI

<https://dx.doi.org/10.17504/protocols.io.8epv5r6qjg1b/v3>

Sabina Marciano^{1,2}, Roberta Marongiu^{1,2}

¹Department of Neurological Surgery, Weill Cornell Medical College, New York, NY 10065;

²Aligning Science Across Parkinson's (ASAP) Collaborative Research Network, Chevy Chase, MD 20815, USA



Jacquelyn Haytayan

Weill Cornell Medicine

Create & collaborate more with a free account

Edit and publish protocols, collaborate in communities, share insights through comments, and track progress with run records.

Create free account

OPEN  ACCESS



DOI: <https://dx.doi.org/10.17504/protocols.io.8epv5r6qjg1b/v3>

Protocol Citation: Sabina Marciano, Roberta Marongiu 2025. Rotarod Test. **protocols.io**
<https://dx.doi.org/10.17504/protocols.io.8epv5r6qjg1b/v3> Version created by [Jacquelyn Haytayan](#)

License: This is an open access protocol distributed under the terms of the **Creative Commons Attribution License**, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

Protocol status: Working

We use this protocol and it's working



Created: October 24, 2025

Last Modified: October 24, 2025

Protocol Integer ID: 230700

Keywords: ASAPCRN, behavior, mouse, rotarod test behavioral, motor impairment, mice, coordination, balance

Funders Acknowledgements:

Aligning Science Across Parkinson's

Grant ID: 020608

Abstract

Behavioral assay to measure motor impairments, specifically balance and coordination, in mice.

Materials

- MedAssociates mouse rotarod equipment
- computer with rotarod software
- Papertowels/kimwipes
- ethanol
- water
- timer

- 1 Acclimate mice to room for at least 1 hour.
- 2 Set up rotarod equipment as needed and clean thoroughly (Med Associates 5 Station Rotarod Mouse (ENV-571 or ENV-574)).
- 3 Turn on rotarod using green button and log into computer. Open software directly from desktop once machine is ON and connected.
- 4 Specify settings:
 - a. Protocol: Increasing speed
 - b. Speed: 4.0- 40 RPM
 - c. File name [EXP NAME].txt
 - i. Important: save file as .txt to then convert to excel once saved.
 - d. Subject ID: animal number
- 5 Place mouse on rotarod—can place up to five animals at a time. Make sure mice are all facing the same direction (i.e. wall, AWAY from experimenter) before starting.
- 6 Press RESET to start. IMPORTANT. IF YOU DO NOT PRESS RESET, THE SPEED SETTINGS WON'T APPLY.
- 7 Record behavior for 5 minutes or until mouse falls. If mouse falls <5s, place back on rod, reset zone using button, and continue recording. If mouse stays static (not walking/running but gripping rod) and spins more than three times, remove and mark as failed trial.
 - a. IMPORTANT: The sensors register when a mouse falls and stops experiment for that zone. You must remove the fallen mouse as quickly as possible so that it doesn't intercept another zone.
- 8 Place mice back in home cage and leave to rest for one minute before starting next trial. Clean rod in the meantime (within cage, use only water and/or kimwipe. Between cages, clean rod with ethanol and water).
- 9 Wait 2-3 minutes before starting the next trial.
- 10 Perform five 5-minute (300 second) trials per cage.