



Supplementary Figure 1. Categorization of movement patterns of getting out of bed in patients with Parkinson's disease

The arrow indicates the movement sequence from starting to the end of getting out of bed.

The categorization captured the movement patterns of leg movement and trunk rotation as follows:

A. *“Trunk lateral flexion with rotation”*: This movement pattern involved transverse plane rotation with the head and trunk, followed by turning to the preferred side (A1 to A3) and bringing legs out of the bed (A4), then lifting the trunk to an upright position (A4 to A5) and coming to the sitting and adopting the final position (A5 and A6).

B. *“Trunk lateral flexion without rotation”*: This movement pattern did not involve head and trunk transverse plane rotation. This incorporated flexing the head-trunk and grasping the edge of the bed by the hand (B1) and attempting to turn to the preferred side (B2), followed by dropping the legs off the edge of the bed (B3), and simultaneously elevating the trunk to an upright position without head-trunk rotation (B3 to B5). Finally, the subjects would come to the sitting and final positions (B6).

C. *“Sit and hip-hitching”*: This movement pattern consisted of two separate components. First, the patients flexed the head trunk symmetrically while pushing off with their hands (C1 to C2). Second, they demonstrated repeated repositioning movements of the hips, turning only in a long-sitting position. Then, by coming to the sitting position (C2 to C5), they adopted the final position (C6).