Information in Pallidal Neurons Increases with Parkinsonian Severity

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Supplement

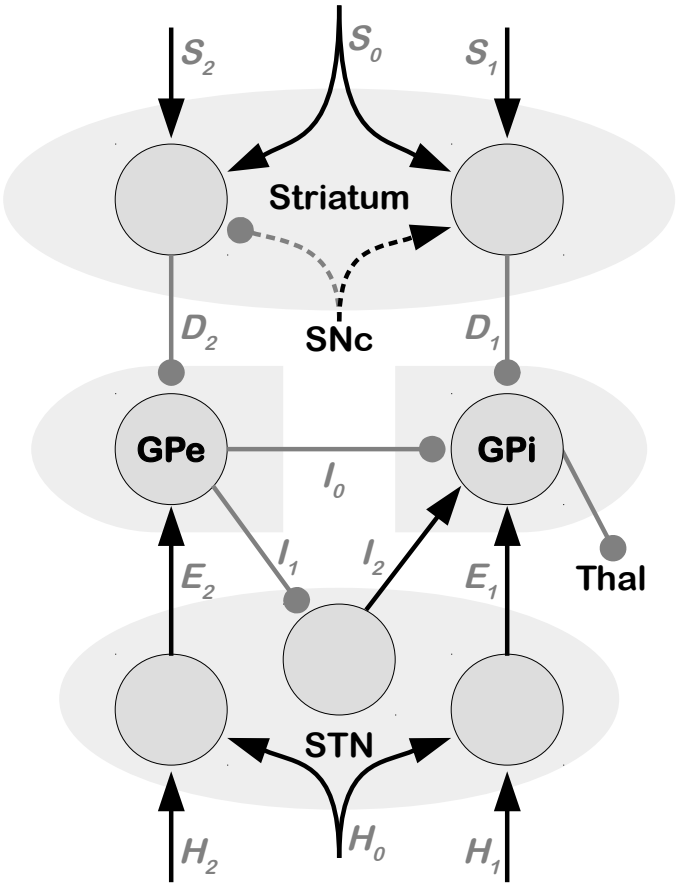

Figure S1. Diagram of conceptually distinct connections in four basal ganglia nuclei: striatum, GPe, GPi and STN. Solid black arrows depict glutamatergic, excitatory projections; solid grey circles depict gabaergic, inhibitory projections; dashed lines depict dopaminergic projections from SNc that can be excitatory (*black*) or inhibitory (*grey*) depending on dopamine receptor type (D_1 or D_2). Striatal input arrives from cortex through 3 conceptually distinct channels: S_1 drives the direct pathway, S_2 drives the indirect pathway, and S_0 represents cortico-striatal information common to both. Cortico-subthalamic signals through the hyperdirect pathway are divided into 3 analogous channels – H_1, H_2, and H_0, respectively – that drive GPi and GPe through E_1 and E_2 respectively. Information sent from GPe to GPi can transit I_0, or route through STN via I_1 and I_2. Processing performed by this network affects behavior via GPi efferents to thalamus.