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Title: **Neural correlates of apathy in patients with neurodegenerative disorders, acquired brain injury, and psychiatric disorders**

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Highlights

1. A review was performed on neuroimaging studies investigating apathy showing involvement of common regions across patient populations.
2. Alterations in frontal, striatal, anterior cingulate, and parietal regions are involved in apathy
3. Neural correlates of apathy can differ per patient population
4. Subtypes of apathy may be due to selective abnormalities in brain regions involved in cognitive, emotional, or motor processes
5. More in-depth study of specific processes involved in motivation and initiation of action within patient populations is needed to yield more definite conclusions

Abstract: Apathy can be described as a loss of goal-directed purposeful behavior and is common in a variety of neurological and psychiatric disorders. Although previous studies investigated associations between abnormal brain functioning and apathy, it is unclear whether the neural basis of apathy is similar across different pathological conditions. The purpose of this systematic review was to provide an extensive overview of the neuroimaging literature on apathy including studies of various patient populations, and evaluate whether the current state of affairs suggest disorder specific or shared neural correlates of apathy. Results suggest that abnormalities within fronto-striatal circuits are most consistently associated with apathy across the different pathological conditions. Of note, abnormalities within the inferior parietal cortex were also linked to apathy, a region previously not included in neuroanatomical models of apathy. The

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