Comment: Muscle strength at age 18 and Parkinson disease among Swedish men from a nationwide cohort

Gustafsson et al.[1] report an association between low muscle strength at age 18 years and incidence of Parkinson disease (PD) later in life using a unique nationwide Swedish cohort of men. They report that low handgrip strength (hazard ratio [HR] = 1.38 between lowest and highest fifth) and elbow flexion strength (HR = 1.34) at age 18 years in Swedish men were associated with higher risk of incident PD later in life, and suggest that this may be an early marker for development of PD. The strength of the article is the large population data ($n > 1$ million) with long follow-up (mean 30 years), mainly from the Swedish National Patient Register. The large number of 977 incident PD cases is uncommon for PD studies. Possibly as both a strength and as a cautionary note, the modest magnitude of association found here would be difficult to detect in smaller studies. As with most longitudinal studies, censoring due to emigration and death during follow-up might influence results if related to PD. The result on parental PD is exploratory as it is subject to censoring. The finding from this study needs to be interpreted with caution, as it might not be applicable to women or other races and ethnicities. However, it presents an intriguing hypothetical biomarker that prompts further study.

1. Gustafsson H, Aasly J, Stråhle S, Nordström A, Nordström P. Low muscle strength in late adolescence and Parkinson disease later in life. Neurology 2015;84:xxx–xxx.

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