



Review Article

Prevalence And Risk Factors of Muscular Dystrophies: A Systematic Review And Meta-Analysis

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ABSTRACT

Muscular dystrophies are a group of genetic disorders characterized by progressive muscle weakness and degeneration. Understanding the prevalence and risk factors of these conditions is important for improving disease management and patient outcomes. This systematic review and meta-analysis aims to synthesize the current evidence on the prevalence and risk factors of muscular dystrophies. A comprehensive literature search was conducted in PubMed, Embase, and Cochrane Library databases from inception to August 2023. Studies reporting the prevalence or risk factors of any type of muscular dystrophy were included. Two reviewers independently screened articles, extracted data, and assessed study quality. Random-effects meta-analyses were performed to pool prevalence estimates and calculate odds ratios for risk factors. A total of 118 studies with 2623 patients were included. The pooled global prevalence of muscular dystrophies was 39 per 100,000 population. Subgroup analyses revealed variations in prevalence by muscular dystrophy type, geographic region, and demographic factors. Several risk factors were identified, including family history, genetic mutations, and certain environmental exposures. In conclusion, this comprehensive systematic review and meta-analysis provides updated estimates of the global prevalence of muscular dystrophies and identifies key risk factors. The findings highlight the need for improved genetic testing, early diagnosis, and targeted prevention strategies to address this important group of neuromuscular disorders.

Keywords: *Muscular Dystrophies, Epidemiology, Risk Factors*

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