PARKINSON'S AND MOVEMENT DISORDERS

The association between animal protein sources and risk of Parkinson's disease: a systematic review and dose-response meta-analysis

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We aimed to investigate the associations between dietary intake of animal protein sources and the risk of developing Parkinson's disease (PD). These animal protein sources included total dairy, milk, yogurt, cheese, total meat, red meat, processed meat, poultry, fish, and egg. PubMed, Scopus, Web of Science, and Google Scholar were searched until October 2021. Prospective cohort study designs that investigated the association between dietary animal protein sources and PD risk were included. Relative risks (RR) were pooled using a random-effects model. In addition, a dose-response relationship was examined between dietary animal protein source intake and PD risk. The Grading of Recommendations Assessment, Development, and Evaluation (GRADE) was used to rate the certainty of the evidence. Eight prospective cohort studies were eligible. The risk for developing Parkinson's disease was significantly higher in those with the highest compared to the lowest intake categories of total dairy (RR: 1.49, 95% CI: 1.06, 2.10; n = 5) and milk (RR: 1.40, 95% CI: 1.13, 1.73; n = 6). A linear dose-response meta-analysis revealed that each additional 200g/d of total dairy consumption was associated with an 11% higher risk of PD (RR: 1.11, 95% CI: 1.02, 1.20; n = 4). There was evidence of departure from linearity between total dairy intake and risk of PD (P non-linearity= 0.31, P dose-response= 0.01; n = 6). Overall, a higher intake of dairy consumption is associated with an increased risk of Parkinson's disease. Future, well-designed prospective studies, incorporating well-controlled randomized controlled trials are needed to validate the present findings.

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Biography

Hamed Mohammadi has completed his PhD at the age of 28 from Isfahan University of Medical Sciences, Isfahan, Iran. He is currently an assistant professor at Tehran University of Medical Sciences, Tehran, Iran. He has published more than 100 papers in reputed journals and has been serving as an editorial board member of repute.

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