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Asking People with Psoriasis about Lifestyle and Eating (APPLE) Study: an interim analysis of a cross-sectional study

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Psoriasis is a common inflammatory skin condition associated with cardiometabolic morbidity and mortality; gene-environment interactions drive the immunopathogenesis of the disease. Pro-inflammatory diets have been linked to psoriasis severity⁽¹⁾ and dietary patterns that reduce inflammation may reduce the severity of psoriasis⁽²⁾. The role of diet in psoriasis management has been identified as the first research priority by the James Lind – Psoriasis Association psoriasis Priority Settings Partnership⁽³⁾. The ongoing APPLE study aims to identify the dietary patterns and nutrient intake of individuals with psoriasis living in the UK. Interim results will be reported here.

A cross-sectional observational study was conducted using an online-multiple choice survey, including demographic questions and validated self-reported measures of psoriasis severity such as the Dermatology Life Quality Index (DLQI) and the self-assessed Simplified Psoriasis Index (sa-SPI) which are indicators of psoriasis severity. Diet was assessed with a modified European Prospective Investigation into Cancer food frequency questionnaire. Participants were recruited through social media advertisements and the Psoriasis Association. This study was approved by the KCL Research Ethics Committee.

Between June 2022 and March 2023, 264 participants responded to the survey. The cohort is predominately female (81%), of white ethnicity (73%), with a mean (SD) body mass index of 27.1 (6.5) kg/m². A diagnosis of psoriatic arthritis or depression was reported by 22% and 23%, respectively. An increased risk of alcohol dependency was present in 31% of the study population. The cohort presents with moderate psoriasis as determined by DLQI 9.2 (0.4) and sa-SPI 16.6 (0.7) (scores above 10 and 20 respectively, denote severe psoriasis). Participants reported avoidance of processed foods (71%), alcohol (68%) and refined sugar (67%) and making changes to increase consumption of vegetables (82%), fruits (76%) and incorporate vitamin D supplements (67%) to help their symptoms. Following hypocaloric (44%), dairy-free (41%) and vegetarian (40%) diets had been attempted frequently to improve psoriasis. Individuals adhering to a dairy-free diet reported the greatest self-reported skin improvements (40%). Five-a-day guidelines for fruit and vegetable intake were met by 60% of this cohort and 43% of the cohort met the recommendation for oily fish consumption (better than UK averages)⁽⁴⁾. Fibre intake (22.1g/day (10.1)) is below the dietary guideline, and the intakes of free sugars (12.8% energy (8.2)) and saturated fats (11.9% energy (3.2)) exceed recommendations. Only 8% of the cohort reported receiving dietary advice for the management of their psoriasis.

Respondents commonly sought dietary improvement of skin symptoms by omitting/introducing foods, or following specific diets. This cohort did not meet UK dietary guidelines, but their reported adherence was not worse than in the general UK population. Future work will focus on broadening recruitment to the APPLE study for a more representative sample to better understand diet-psoriasis severity associations.

References

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