

The NUTPOOL International Prospective Study

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The NUTPOOL project is an important opportunity to shape public health recommendations and dietary guidelines, potentially influencing healthier dietary patterns worldwide.

In the last two decades, some prospective observational studies conducted in large populations have explored the associations between the frequency of nut consumption and the prevention of non-communicable diseases. Observational cohort studies follow a group of people (called a cohort) over a period of time, for example, 5, 10 or 20 years, collecting data on their exposure to a factor of interest (in this case, the quantity of nuts consumed). Their outcomes (in this case, non-communicable diseases) are then monitored, to investigate the association between the exposure and the outcome.

Regarding nut consumption, several studies have demonstrated that compared to individuals rarely consuming nuts, those frequently consuming nuts showed a lower risk of cardiovascular diseases. However, findings from previous studies have been conflicting for some health outcomes, such as type 2 diabetes, and largely underexplored for other outcomes, such as neurodegenerative diseases.

The reason for the inconsistencies observed between studies may be multiple, such as different analytical approaches and confounding factors considered across studies, or the population in which the study was based. Most of the previous studies have focused on populations in Europe or the United States of America, potentially restricting the broader applicability of the findings to other global regions.

“With over 1 million participants, this study will be the first of its kind.”


In addition, few studies have analyzed a potential dose-response relationship (that is, if more nuts are consumed, the preventive effect is greater).

In the context of the NUTS 2022 meeting, we —Dr. Marta Guasch-Ferré, from the University of Copenhagen (Denmark), and Prof. Jordi Salas-Salvadó, from Rovira i Virgili University (Spain)— had the brilliant idea of conducting an individual pooled data meta-analysis in order to overcome all the limitations inherent to the previous research in this field. The NUTPOOL study is funded by the INC, International Nut and Dried Fruit Council, as it tackles the great challenge of expanding the scientific evidence on the relationship between the consumption of nuts and health.

The goal of the NUTPOOL project, on which Dr. Guasch-Ferré is the principal investigator and Prof. Salas-Salvadó is the co-principal investigator, is to conduct an individual pooled data meta-analysis (a statistical approach) pooling results




Regions Studied




NUTPOOL

will explore the relationship between nut consumption and prevention of:

- TYPE 2 DIABETES
- CARDIOVASCULAR DISEASE
- CORONARY HEART DISEASE
- STROKE
- CANCER
- DEMENTIA
- ALZHEIMER'S DISEASE
- MORTALITY




3 years




>1 million participants


Relevance and Novelty




UNPRECEDENTED SCALE AND SCOPE




CUTTING-EDGE METHODS AND STANDARDIZATION



UNIQUE INSIGHTS INTO NUT CONSUMPTION



NOVEL PREDICTION APPROACH



ADDRESSING SELECTION BIAS

of worldwide representative large prospective cohort studies on the associations of total and specific types of nut consumption and the prevention of non-communicable diseases.

This project will use cutting-edge epidemiological approaches to leverage existing resources from worldwide prospective cohorts. We expect that about 20 cohorts with >1 million participants will be included in the analysis, representing populations across North America, Europe, Asia and Oceania. Therefore, NUTPOOL will undoubtedly represent a turning point in nutritional epidemiology in relation to nuts and health.

We hypothesize that higher consumption of nuts is associated with a lower risk of developing several non-communicable diseases and mortality, independent of other risk factors,

including dietary patterns, lifestyle and socio-demographic factors.

The following are the main aims of NUTPOOL: 1) to evaluate the associations between the consumption of total and specific types of nuts and the incidence of non-communicable diseases, including type 2 diabetes, total cardiovascular disease (coronary heart disease, stroke) and cardiovascular mortality, total cancer and cancer mortality, neurodegenerative diseases (dementia and Alzheimer's diseases), and all-cause mortality; 2) to determine whether these associations are consistent across specific types of nuts; and 3) to evaluate potential dose-response relationships and subgroup analyses based on demographics, geography or other relevant factors, including type 2 diabetes, obesity, age,

sex, race/ethnicity, physical activity and overall dietary pattern adherence, among others.

As of today, we have contacted several investigators around the world who are very interested in joining this initiative, which has made us see that this project has high expectations of successfully reaching its end.

We expect that the NUTPOOL project will contribute substantively to shaping public health recommendations and dietary guidelines, potentially influencing healthier dietary patterns worldwide and contributing to the sustainable development of the planet for future generations. 🌱

For more information: <https://nutpool.eu/>