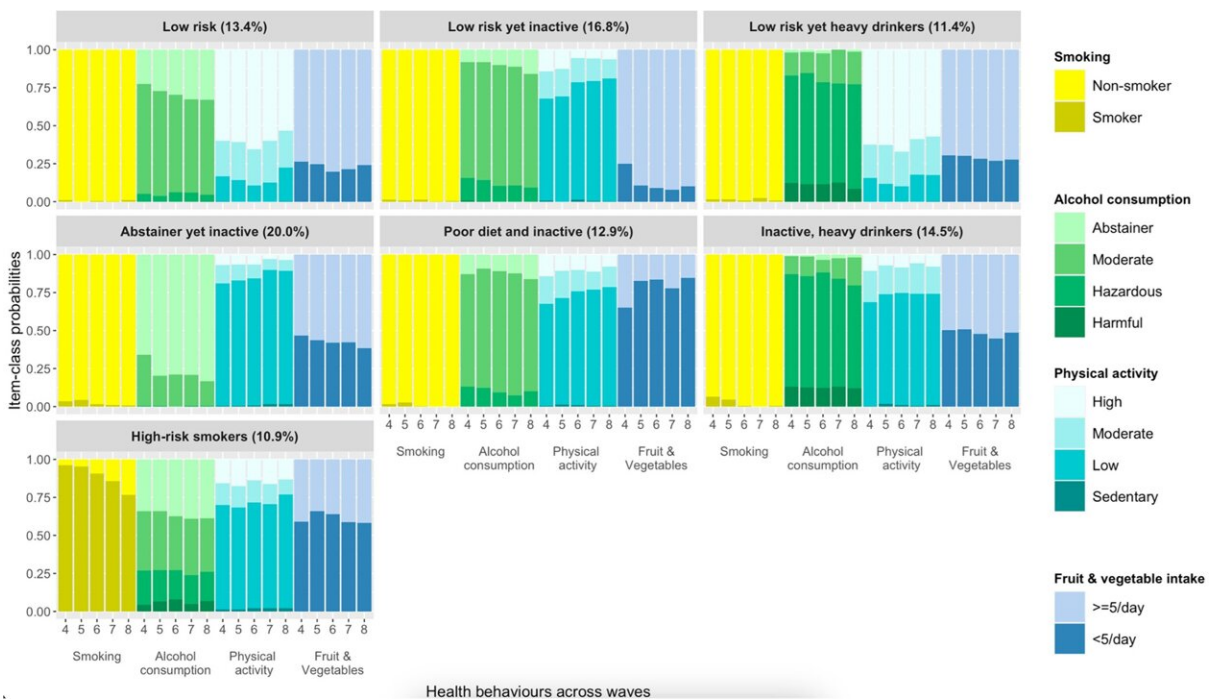


# New study identifies subgroups of older adults at high risk of multimorbidity

March 21 2024



Seven-class model reflecting different clusters of health behavior across time. Note. The x-axis lists each of the four behaviors—smoking, alcohol consumption, physical activity, and fruit and vegetable intake—across five time points. The y-axis provides the average probability for each of the indicators (i.e., four health behaviors) conditional on membership in a given class (i.e., cluster). Credit: *PLOS ONE* (2024). DOI: 10.1371/journal.pone.0297422

Research from the Healthy Lifespan Institute has identified subgroups of people with different health behaviors and their association with multimorbidity in older adults in England. [The findings](#) of this new study, published in *PLOS One*, question previous studies that suggest a linear relationship between the number of risky behaviors that people engage in and health outcomes

Multimorbidity is the presence of two or more of the [chronic health conditions](#) that create disability and poor quality of life in old age.

Many studies on multimorbidity focus on analyzing the health behaviors of an aging population by adding up the number of risky behaviors—such as drinking alcohol, low levels of physical activity and smoking—that a person is engaging with. However, this approach doesn't consider the possibility that specific combinations of behavior, or patterns of behavior over time, can increase the risk of disease.

A study led by Ph.D. student Alisha Suhag from the Healthy Lifespan Institute at the University of Sheffield was the first to identify subgroups, or clusters, of health behaviors and examine how they are associated with disease, as well as how they change over time.

The study analyzed the data of adults over the age of 50 living in England collected as part of the English Longitudinal Study of Aging. It identified seven different groups based on their patterns of health behavior over time. Some findings were predictable, such as finding that the cluster containing smokers had a higher prevalence of respiratory disorders.

But the research also highlighted [new relationships](#) between health behaviors and multimorbidity, such as identifying an "Abstainer yet

Inactive" group. This group was predominantly female, and while they only exhibited a single risky behavior (having low levels of physical activity), they showed higher levels of multimorbidity, complex multimorbidity, and endocrine disorders, even when compared to other clusters that engaged in two or three risky behaviors.

"This questions previous findings which suggest a more linear relationship between the number of risky behaviors that people engage with and their [health outcomes](#)" explains Suhag.

"This study allowed us to identify high-risk subgroups which had previously been overlooked. Our research showed that some groups actually had worse health outcomes than the clusters you would have expected to rate higher, such as Inactive, Heavy drinkers or the Poor diet and Inactive cluster.

"On the other hand, Low-risk yet Heavy drinkers had a lower prevalence of most health conditions studied, even lower than the overall Low risk [cluster](#). By identifying the specific health behavior profiles and demographic characteristics of these groups, interventions can be targeted to high-risk subgroups" she adds.

**More information:** Alisha Suhag et al, Longitudinal clustering of health behaviours and their association with multimorbidity in older adults in England: A latent class analysis, *PLOS ONE* (2024). [DOI: 10.1371/journal.pone.0297422](https://doi.org/10.1371/journal.pone.0297422)

Provided by University of Sheffield

Citation: New study identifies subgroups of older adults at high risk of multimorbidity (2024, March 21) retrieved 28 April 2024 from <https://medicalxpress.com/news/2024-03-subgroups->

[older-adults-high-multimorbidity.html](#)

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.