

Australian scientists call for targeted fibre diets to boost health

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A new study published in Food Research International by RMIT University in Australia introduces a more detailed classification of dietary fibre based on five key characteristics: backbone structure, water-holding capacity, structural charge, fibre matrix, and fermentation rate.

Lead author Christo Opperman, a PhD candidate at RMIT, explained that this "bottom-up approach" accurately describes fibre's health effects. For instance, one can select fibres based on characteristics like fermentation rate to promote colonic health.

The team has analysed 20 types of fibre and their interactions with the gut microbiome. "These specific interactions have been understudied, but this framework opens the door to a deeper understanding," Opperman stated.

Eri, another team member, highlighted significant interest among dietitians and clinicians in integrating more fibre into diets, noting a deficiency across surveyed populations in Europe and the USA. While the recommended intake is 28 to 42 grams per day, Americans average only 12 to 14 grams, and Europeans consume 18 to 24 grams.

Current classifications of dietary fibres as soluble or insoluble fail to capture their complexity. Insoluble fibres help maintain regularity, whereas soluble fibres help reduce cholesterol and glucose absorption. However, some insoluble fibres can also ferment quickly and affect glucose levels.

Eri emphasised that the existing binary classification is too simplistic, lacking the nuance needed to understand the diverse effects of dietary fibres. This new framework is essential for bridging that gap.