Eating a plant rich diet reduces risk of developing COVID-19

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A recent study, published in *Gut*, by researchers from King's and Harvard Medical School, examines data from nearly 600,000 ZOE COVID Study app contributors. Participants completed a survey about

the food they ate during Feb 2020 (pre-pandemic), making it the largest study in this space. 19% of these contributors contracted COVID-19.

People with the highest quality diet were around 10% less likely to develop COVID-19 than those with the lowest quality diet, and 40% less likely to fall severely ill.

This is the first longitudinal study of diet and COVID-19 and the first to show that a healthy diet cuts the chances of developing the disease in the first place.

Rather than looking at specific foods or nutrients, the survey was designed to look at broader dietary patterns which are reflective of how people actually eat. The survey produced a 'diet quality score' that reflected the overall merit of each person's diet. Diets with high quality scores were found to contain plant-based foods such as fruits, vegetables and whole grains, as well as oily fish, less processed foods and refined carbohydrates. A low diet quality score is associated with diets high in ultra processed foods and low amounts of plant based foods.

The researchers found that people who ate the highest quality diet were around 10% less likely to develop COVID-19 than those with the least nutritious diet and 40% less likely to become severely ill if they developed COVID-19.

The relationship between diet quality and COVID-19 risk still remained after accounting for all potential confounding factors. Factors included age, body mass index (BMI), ethnicity, smoking, physical activity and underlying health conditions. Mask-wearing habits and population density were also considered.

The impact of diet was amplified by individual life situations, with people living in low-income neighborhoods and having the lowest quality

diet being around 25% more at risk from COVID-19 than people in more affluent communities who were eating in the same way.

Based on these results, the researchers estimate that nearly a quarter of COVID-19 cases could have been prevented if these differences in diet quality and socioeconomic status had not existed.

This further highlights that improved access to nutritious, healthier food could be substantive for bettering public health, especially among the underprivileged members of the community.

Professor Tim Spector, professor of genetic epidemiology at the School of Life Course Sciences, says that "these findings chime with recent results from our landmark PREDICT study, showing that people who eat higher quality diets (with low levels of ultra-processed foods) have a healthier collection of microbes in their guts, which is linked to better health. You don't have to go vegan, but getting more diverse plants on your plate is a great way to boost the health of your gut microbiome, improve your immunity and overall health, and potentially reduce your risk from COVID-19."

More information: Jordi Merino et al, Diet quality and risk and severity of COVID-19: a prospective cohort study, *Gut* (2021). DOI: 10.1136/gutjnl-2021-325353

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