

Predominantly plant-based or vegetarian diet linked to 39% lower odds of COVID-19

Diet high in vegetables, legumes, nuts, and low in dairy and meat may be protective

A predominantly plant-based or vegetarian diet is linked to 39% lower odds of COVID-19 infection, finds research published in the open access journal **BMJ Nutrition Prevention & Health**.

The findings prompt the researchers to suggest that a diet high in vegetables, legumes, and nuts, and low in dairy products and meat may help to ward off the infection.

Several studies have suggested that diet may have an important role in the evolution of COVID-19 infection, as well as in the factors that heighten the risk of its associated complications.

The researchers therefore set out to evaluate the potential impact of dietary patterns on the incidence, severity, and duration of COVID-19 infection among 702 adult volunteers all of whom were recruited between March and July 2022.

Participants were surveyed on their usual eating patterns and food group frequency, as well as lifestyle and medical history, including vaccination against COVID-19. They were then divided into either omnivorous (424) or predominantly plant-based (278) dietary groups.

The plant-based food group was further divided into flexitarians/semi-vegetarians who ate meat 3 or fewer times a week (87); and vegetarians and vegans (191).

Those who reported following predominantly plant-based or vegetarian diets routinely ate more vegetables, legumes, and nuts, and less/no dairy and meat.

There were no significant differences in sex, age, or vaccination uptake between the omnivores and plant-based groups. But a significantly higher number of people had been educated to postgraduate degree level in the latter.

The omnivores also reported a higher rate of medical conditions and lower rates of physical activity. And the prevalence of overweight and obesity was significantly higher among the omnivores—all factors associated with higher COVID-19 infection risk and more severe symptoms/complications.

In all, 330 people (47%) said that they had had COVID-19 infection. Of these, 224 (32%) said they had mild symptoms and 106 (15%) moderate to severe symptoms.

The omnivores had a significantly higher reported incidence of COVID-19 than the plant-based dietary groups: 52% vs 40%. And they were more likely to have had moderate to severe infection: 18% vs just over 11%.

There was no difference, however, in how long symptoms lasted.

After accounting for potentially influential factors, such as weight, pre-existing medical conditions, and physical activity levels, there was no overall difference in symptom severity between the omnivores and the plant-based dietary groups.

But those following a predominantly plant-based or vegetarian/vegan diet were 39% less likely to become infected than the omnivores.

It may be that predominantly plant-based diets provide more nutrients that boost the immune system and help to fight viral infections, they suggest, by way of an explanation for their findings.

“Plant-based dietary patterns are rich in antioxidants, phytosterols and polyphenols, which positively affect several cell types implicated in the immune function and exhibit direct antiviral properties,” they write.

This is an observational study, however, and as such, can’t establish causal factors. The researchers also acknowledge that the study relied on personal recall and subjective assessment, both of which are prone to error.

Nevertheless, they conclude: “In light of these findings and the findings of other studies, and because of the importance of identifying factors that can influence the incidence of COVID-19, we recommend the practice of following plant-based diets or vegetarian dietary patterns.”

"This research adds to the existing evidence, suggesting that diet may have a role in susceptibility to COVID-19 infection," comments Shane McAuliffe, Senior Visiting Academic Associate, NNEdPro Global Institute for Food, Nutrition and Health, which co-owns ***BMJ Nutrition Prevention & Health*** with BMJ.

"But this remains an area of research that warrants more rigorous and high quality investigation before any firm conclusions can be drawn about whether particular dietary patterns increase the risk of COVID-19 infection," he adds.