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## **ABSTRACT**

### **Plant-based diets and long-term health: findings from the EPIC-Oxford study**

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Plant-based diets, which emphasize foods from plant sources, have become increasingly popular in recent years. They have the potential to reduce the environmental impacts associated with the high consumption of meat and dairy products, and to improve human health. Beneficial health aspects of plant-based diets include high intakes of fibre and low intakes of saturated fat, whereas potentially concerning aspects may include low intakes of specific micronutrients (such as vitamin B12). Although plant-based diets consist primarily of plant foods, they can include a diverse range of dietary patterns, including those that contain small amounts of animal foods. Therefore, not all plant-based diets are created equally and the evidence on the long-term health impacts of different plant-based diets remains inconclusive.

This presentation will give an overview of the health of adults following vegetarian (plant-based diets not containing meat or fish) and vegan diets (plant-based diets not containing meat, fish, dairy or eggs). The data presented are from the European Prospective Investigation into Cancer and Nutrition (EPIC)-Oxford study, a UK cohort of ~65,000 adults (50% non-meat eaters) recruited between 1993 and 2001 and followed through record linkage for ~20 years.

Vegetarians and vegans have a different pattern of diet and nutrient intakes compared with meat eaters, including higher intakes of dietary fibre and lower intakes of saturated fat, vitamin B12, vitamin D, and iodine, particularly in vegans. Vegetarians and vegans also have a lower body mass index and serum low-density lipoprotein cholesterol than comparable regular meat-eaters. Compared with meat-eaters, vegetarians have a relatively lower risk of ischaemic heart disease, diabetes, diverticular disease, kidney stones, cataracts and possibly some cancers, but a relatively higher risk of stroke (principally haemorrhagic stroke) and bone fractures. Similarly, vegans have a lower risk of diabetes, diverticular disease and cataracts and a higher risk of fractures, but additional data are needed to draw conclusions for other conditions.

Overall, data from this large prospective cohort of UK adults shows that plant-based diets may have beneficial health effects but also some risks. Additional data are needed to investigate the extent to which these risks may be mitigated by optimal food choices, fortification and supplementation.