Diet rich in vegetables may help stave off acute pancreatitis

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A diet rich in vegetables could help stave off the development of the serious condition acute pancreatitis, suggests a large study published online in the journal *Gut*.

Pancreatitis refers to inflammation of the pancreas - the gland behind the stomach, which, among other things, releases digestive enzymes to break down food. Occasionally these enzymes become active inside the pancreas, and start to digest the gland itself. In up to one in five of those with acute pancreatitis symptoms are severe and potentially life threatening.

Previous research suggests that excessive production of free radicals, which are by-products of cellular activity, is associated with acute pancreatitis. Furthermore, levels of antioxidant enzymes, which mop up free radicals, are increased during an attack. The authors therefore wanted to know if an imbalance in antioxidant levels, associated with dietary factors, might make the pancreas more sensitive to the effects of free radicals and so increase the risk of acute pancreatitis.

They tracked the health of a population-based sample of 80,000 adults living in central Sweden for an average of 11 years, following the completion of a comprehensive dietary questionnaire in 1997 on how often they had eaten from a range of 96 food items over the preceding year.

Average vegetable and fruit consumption was around 2.5 and just under

2 servings, respectively, every day. In general, those who ate the fewest daily servings of vegetables were men, smokers, and those who had not gone on to higher education.

A similar profile was seen for fruit consumption, although people in this group were more likely to drink alcohol and to have diabetes.

During the monitoring period, 320 people developed acute pancreatitis that was not associated with the complications of gallstones - a relatively common cause of the condition.

The amount of fruit consumed did not seem to influence the risk of developing acute pancreatitis, but this was not the case for vegetables.

After taking account of factors likely to influence the results, the analysis showed that those who ate the most vegetables - more than 4 servings a day - were 44% less likely to develop acute pancreatitis than were those who ate the least - less than 1 serving a day.

The protection afforded by a diet rich in vegetables seemed to be the strongest among those who consumed more than one drink of alcohol a day and those who were overweight (BMI of 25 or more).

The risk of developing the condition fell by 71% among drinkers and by 51% among those who were overweight, when comparing those in the highest with those in the lowest, category of vegetable consumption.

The most likely explanation for the protective effect of vegetables is the high level of antioxidants they contain, say the authors.

The reason why fruit (which also contains high levels of antioxidants) did not seem to affect the risk of acute pancreatitis may lie in its fructose content, which might counter the effects of antioxidants say the

authors. Previous research has linked fructose to free radical production.

If their findings are confirmed by other research, the authors suggest that boosting dietary intake of vegetables may help to stave off the development of acute pancreatitis that is unrelated to gallstones.

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