



In the news: Will eating one slice of bacon a day increase your risk of dementia?

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Recent headlines warn that eating just one rasher of bacon a day can “dramatically” increase the risk of dementia. While this new study feeds into the wider discussion around the importance of reducing the consumption of processed meats, there are a few things to keep in mind.

The study behind the headlines

The headlines follow a [new study](#) that looked into the potential link between meat consumption and the risk of dementia.¹

The study used data from the UK Biobank study - a database containing health and genetic information for half a million UK adults (aged 40 to 69 years) recruited between 2006 and 2010.

Initially, participants completed a survey (known as baseline dietary questionnaire) listing their eating habits, including how often they ate different kinds of processed and unprocessed meat. The list of processed meat included bacon, ham, sausages, meat pies, kebabs, burgers, chicken nuggets and unprocessed meat included unprocessed poultry, beef, lamb/mutton, and pork.

Between 2011 and 2012, a quarter of participants also filled in at least two additional dietary questionnaires, detailing the specific amounts of foods they had eaten over the previous 24 hours. Researchers used the data available from all food questionnaires to calculate the amount of the different types of meat participants ate a week.

Finally, researchers identified new cases of dementia among the participants - diagnosed at least 3 years after the first dietary assessment - by analysing hospital admissions records and death certificates.

Over an average of 8 years, close to 2,900 new cases of dementia (0.6% of the total participants) emerged. It was also highlighted that, compared to those who ate processed meat less than once a week, the risk of dementia increased the more often people ate processed meat.

Overall, the results pointed out that people who ate 25 g a day of processed meat had a 44 % higher risk of developing dementia and, more specifically, 55% higher risk of developing Alzheimer's disease. Interestingly, other types of meat were not associated with increased risk.

In contrast, participants who ate an additional 50 g a day of unprocessed red meat decreased their risk of developing dementia.

What to keep in mind when reading the study's conclusions?

- **Some media headlines may simplify the research conclusions**

Many media headlines reporting the study warned for the risks of eating just a slice of bacon every day. It's important to note that the study looked at various types and quantities of meat consumed by participants and that the possible mechanism by which eating meat could increase the risk of dementia is yet to be explained.

- **Observational studies can't prove direct cause and effect.**

The study has taken into account different health, lifestyle and socio-demographic factors (such as age, ethnicity, family history diet and physical activity), which may also be associated with dementia risk. However, it's difficult to fully ensure that such factors had no influence on the final results and to establish a clear link between meat consumption and dementia risk. The findings would have to be analysed alongside other research analysing the same hypothesis.

- **Estimates of processed meat intake may be inaccurate.**

Food frequency questionnaires are a well-accepted research method to assess dietary intake, but they still have limitations. While this study has made a rigorous effort to reliably estimate the intake of participants through repeated 24-hour dietary assessments, estimations of food intake are reliant on people's memory and their own subjective perception of portion sizes. This can affect the accuracy with which researchers estimated the participant's daily intake of meat in grams. Nevertheless, the clear association between eating processed meat and increased risk of dementia supports the possibility of a link.

- **The physiological mechanisms by which meat consumption could trigger dementia are still unclear.**

If eating processed meat does increase the risk of dementia, the mechanisms behind it are still

unknown. Prior research suggests that factors such as the high salt content or other specific compounds in processed meat may play a role in the disease formation but it's not certain. The links between meat consumption and the specific types of dementia also remain unproven and even more difficult to assess with a lower number of cases.

- **The study only considered a specific group of UK participants and may not be representative of other populations.**

This was a large study, but it included mostly middle-aged adults (aged 40 to 69 years) of white ethnicity from the UK. Other populations and ethnic groups, with different health and lifestyle and genetic characteristics, may have different disease risks.

What do authorities say on this topic?

- A 2020 report on dementia prevention and care by the Lancet Commission lists 12 risk factors that may prevent or delay up to 40% of dementias. These include tobacco smoke, excessive alcohol intake, physical inactivity and obesity. The impact of specific foods or nutrients in the risk of dementia is yet to be clarified. ²
- However, it's well accepted within the scientific community that people should limit or avoid the consumption of processed meats in their diets, as those are often high in energy, saturated fats, salt, cholesterol and other compounds that can harm our health when eaten in excessive amounts. ³ In fact, the World Health Organisation (WHO) recognises that diets high in processed and/or red meats can increase risk of some types of cancers such as colorectal cancer. ⁴
- National advice on how much meat and processed meat people should eat regularly varies within EU countries. Most countries advise to limit or avoid processed meat. However, some (such as Poland, Sweden, UK and Norway) give a combined weekly intake limit for both red and processed meat without making distinction between the two. ⁵ You can find out more about your national dietary guidelines [here](#).

It might also interest you:

- [What is a plant-based diet and does it have any benefits?](#)
- [What's important to vegetarians and vegans to eat?](#)

References

1. Zhang, H. *et al.* (2021). Meat consumption and risk of incident dementia: cohort study of 493,888 UK Biobank participants. *Am J Clin Nutr.*
2. The Lancet Commissions (2020). Dementia prevention, intervention, and care: 2020 report of the Lancet Commission.
3. [World Health Organisation \(WHO\) \(2015\). Cancer: Carcinogenicity of the consumption of red meat and processed meat.](#) Accessed on 26 Mar. 2021
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5. [EU Joint Research Centre. Health Promotion & Disease Prevention – Food-based Dietary Guidelines in Europe](#). Accessed on 26 Mar. 2021