

Does the festive season lead to a period of hypercholesterolemia in the new year?

Cardiovascular diseases (CVDs) are the leading cause of death around the world. The World Health Organisation (WHO) estimated 17.9 million deaths are due to CVD. Most CVDs are preventable by following a healthy diet and lifestyle¹. The importance of diet and lifestyle is also emphasised in the EAS/ESC guidelines for the management of dyslipidaemias and for CVD prevention in clinical practice^{2,3}.

A Danish study found that celebrating Christmas is associated with higher levels of both total and LDL cholesterol⁴. Additionally, the festive season is also linked to a higher risk of hypercholesterolemia.

Increased serum cholesterol after the holiday period

A Danish study showed that typically in December Danes have social gatherings with friends and family where large amounts of food and drinks are served⁴. These dishes are often high in fat and sugar, such as treats with whipped cream, pork, and sugar-glazed potatoes. Diets high in fat, esp. saturated fat, have been linked to higher total and esp. LDL-cholesterol levels, which are risk factors for CVD⁴.

The study observed individuals from the Copenhagen General Population Study, randomly selecting adults between 20-100 years old. The cholesterol levels of participants were measured at multiple points throughout the year (Figure 1). Results showed that cholesterol levels (both total and LDL) were higher during and right after the festive Christmas period. The proportion of participants with hypercholesterolemia was also higher in this period compared to the rest of the year⁴.

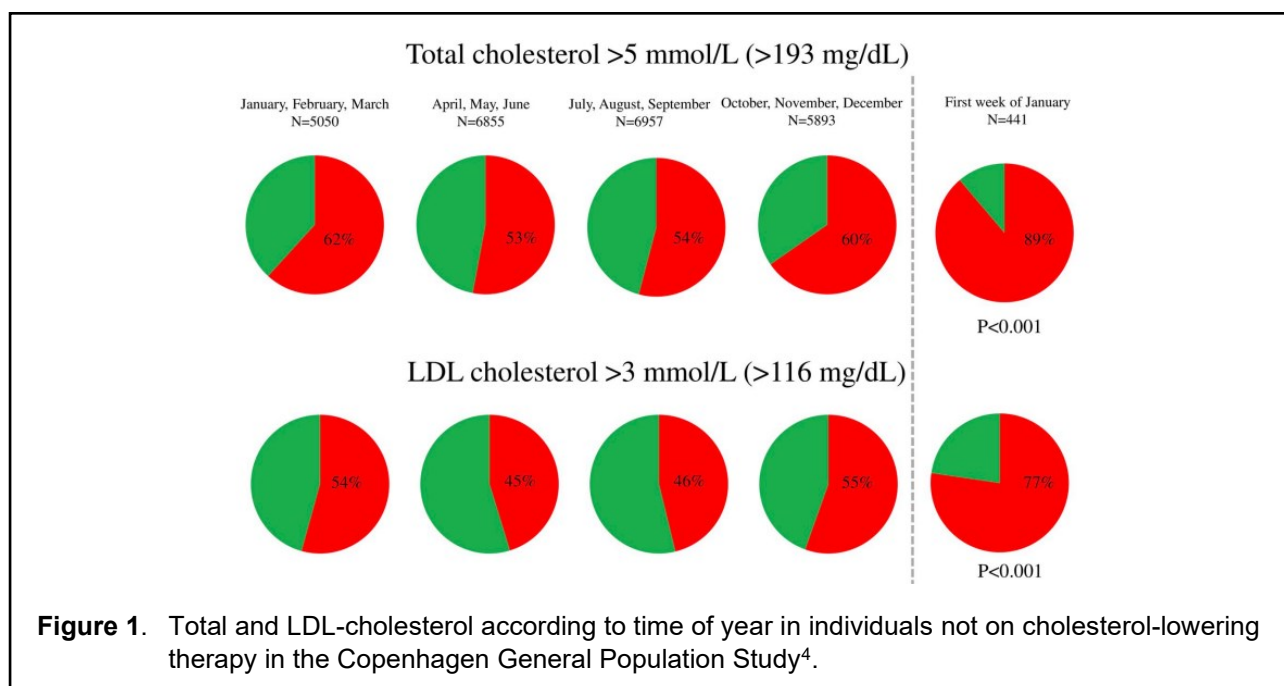


Figure 1. Total and LDL-cholesterol according to time of year in individuals not on cholesterol-lowering therapy in the Copenhagen General Population Study⁴.

Diet and lifestyle intervention is key to managing cholesterol levels and for CVD prevention in the new year and beyond.

The results of the study highlight the benefits of a healthy diet on blood cholesterol levels. A healthy diet and lifestyle are vital for the management and prevention of dyslipidaemia and CVD^{2,3}. Healthcare professionals should provide patients with CVD, and those who are at risk of developing CVD in the future, with practical dietary and lifestyle advice based on recommendations summarised in the guidelines, esp., at the begin of the new year.

Practical educational materials and resources are available for healthcare professionals to support patients pursuing behavioural change, such as the educational tool "Diet at the heart of CVD prevention" <https://www.dietattheheart.com/>, which is hosted under "Apps, tools & resources" at the EAS website.

References

1. Cardiovascular diseases (2021, June 21). Retrieved January 19, 2023, from [https://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-\(cvds\)](https://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds))
2. Mach F *et al.* ESC/EAS Guidelines for the management of dyslipidaemias: lipid modification to reduce cardiovascular risk. *Eur Heart J* 2020; 41(1):111-188.
3. Visseren FLJ *et al.* 2021 ESC Guidelines on cardiovascular disease prevention in clinical practice. *Eur Heart J* 2021; 42(34): 3227-3337.
4. Vedel-Krogh S, Kobylecki CJ, Nordestgaard BG, Langsted A. The Christmas holidays are immediately followed by a period of hypercholesterolemia. *Atherosclerosis*. 2019; 281: 121-127. doi: 10.1016/j.atherosclerosis.2018.12.011. Epub 2018 Dec 19.