

Even light alcohol consumption linked to higher risk of obesity and metabolic syndrome in study of 27 million adults

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Consuming more than half a standard alcoholic drink a day (equivalent to 7g of pure alcohol) is associated with an increased risk of obesity and

metabolic syndrome in both men and women, and the risk rises in proportion with alcohol intake, according to a nationwide study involving nearly 27 million adults (aged 20 years and older) from South Korea, being presented at The European and International Congress on Obesity (ECOICO), held online this year. The study is by Dr. Hye Jung Shin from the National Medical Center, Seoul, South Korea, and colleagues.

The study defines one standard alcoholic drink as 14g [alcohol](#) per day, which is roughly equivalent to a small (118ml) glass of wine or a 355ml bottle of beer. WHO defines a standard alcoholic drink as 10 g of pure ethanol, with both men and women advised not to exceed 2 standard drinks per day.

In the study, researchers analysed health data and [alcohol consumption](#) in over 14 million men and 12 million women between 2015 and 2016 from the Korean National Health Insurance System. Even after accounting for potentially influential factors including age, exercise, smoking, and income, the analysis found a strong association between alcohol consumption and obesity, as well as between [alcohol intake](#) and [metabolic syndrome](#) (a cluster of conditions including overweight/obesity, abnormal blood sugar, [high blood pressure](#) and abnormal blood fats that put people at higher risk of heart disease, heart attacks and stroke if uncontrolled).

Compared with non-drinkers, men who drank on average between half and one standard drink a day (7.1-14g alcohol) were around 10% more likely to have obesity and metabolic syndrome, while consuming up to two drinks a day (14.1-24g alcohol) was associated with 22% and 25% greater odds, respectively. The highest risk was seen in men who drank more than two drinks or 24g alcohol per day, with 34% higher odds of obesity and 42% greater odds of metabolic syndrome.

Similarly, women who consumed a higher quantity of alcohol were more likely to have obesity and metabolic syndrome. Consuming on average between half and one drink a day was associated with 9% higher odds of obesity, but 3% reduced odds of metabolic syndrome compared to non-drinkers. Women who reported [drinking](#) on average more than two drinks or 24g of alcohol per day, had 22% and 18% higher odds of obesity of metabolic syndrome respectively.

The authors conclude: "Our results suggest that the risk of obesity and metabolic syndrome increases in proportion to alcohol consumption when male and female adults drink more than half a standard drink per day."

The study is observational so cannot establish cause, and there's a possibility that some of the results may be due to unmeasured (confounding) factors. In addition, the study only measured who had obesity or metabolic syndrome and how much they drank at one moment in time, and was conducted in South Korea, which could limit the generalisability of the findings to other populations.

Provided by European Association for the Study of Obesity

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