

Obesity and alcohol act together to increase the risk of liver disease

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Two studies published in the British Medical Journal today show that obesity and alcohol act together to increase the risk of liver disease in both men and women.

Together, these findings have important clinical and public health implications.

Rates of liver disease and [obesity](#) are increasing in the UK. While alcohol is a major cause of liver cirrhosis, recent evidence suggests that excess body weight may also play a role.

In the first study, researchers from the University of Oxford examined the link between [body mass index](#) (BMI) and liver cirrhosis in 1.2 million middle-aged UK women as part of the Million Women Study.

Each woman was tracked for an average of 6.2 years, and risks were adjusted for factors such as age, alcohol consumption, smoking, socioeconomic status and [physical activity](#).

Compared to women of a healthy weight, women who were overweight or obese had an increased relative risk of liver cirrhosis. Although this relative risk did not differ significantly by alcohol consumption, the absolute risk did.

For example, among women who reported drinking an average of about a third to half a drink a day, 0.8 in 1000 will be admitted to hospital with

or will die from liver cirrhosis over five years if they are of healthy weight compared with 1 in 1000 women who are obese.

However, among women who reported drinking an average of two and a half drinks a day, 2.7 in 1000 will be admitted to hospital with or will die from liver cirrhosis over five years if they are of healthy weight compared with 5 in 1000 women who are obese.

In the second study, researchers from the Universities of Glasgow and Bristol investigated the joint effects of BMI and alcohol consumption on liver disease in more than 9,000 men in Scotland. Participants were tracked for an average of 29 years.

Both factors were related to liver disease and, more importantly, the combination of high BMI and alcohol consumption was greater than the additive effect of the two separate factors.

For example, obese men who reported drinking 15 or more units per week had the greatest risk of liver disease: almost 19 times higher than underweight or normal weight non-drinkers. The authors suggest that lower, BMI specific "safe" limits of alcohol consumption may need to be defined for people who are overweight. Preventive efforts are also needed to limit the affordability and availability of alcohol and to increase physical activity, they say.

Both studies conclude that, from a public health perspective, strategies to jointly reduce both excessive alcohol consumption and excessive body weight should lead to a reduction in the incidence of liver disease.

In an accompanying editorial, Professor Christopher Byrne at the University of Southampton and Dr Sarah Wild from the University of Edinburgh say that future research must focus on better diagnosis and treatment of non-alcoholic fatty liver disease (a build-up of fat in the

liver caused by obesity, high alcohol intake and diabetes, which can lead to cirrhosis).

In the meantime, the old adage of "prevention is better than cure" remains pertinent, they write. "Reducing [alcohol consumption](#) and obesity are, at present, our only weapons against non-viral liver disease. The progression of non-alcoholic fatty liver disease to end stage [liver disease](#) can now be added to the list of the undesirable consequences of modern lifestyles."

Provided by British Medical Journal

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