

'Risk' genes heighten the chances of heavy drinkers developing alcoholic hepatitis

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New research presented today at The International Liver Congress 2016 in Barcelona, Spain has uncovered a genetic link that explains why certain people with alcohol dependence are more susceptible to developing severe alcoholic hepatitis.

Severe alcoholic hepatitis is a serious clinical syndrome associated with high short-term mortality.¹ According to the study, [heavy drinkers](#) who carry a specific variant in the PNPLA3 gene are more susceptible to developing this serious and life-threatening illness. The study also identified another important variant in the SLC38A4 gene, which is also thought to increase the risk of developing hepatitis in individuals who suffer from alcoholism.

According to the World Health Organization, Europe is the heaviest drinking region in the world in terms of the prevalence of alcohol consumption.² Furthermore, in 2010, [liver cirrhosis](#) (scarring of the [liver](#) caused by continuous long-term liver damage) resulting from ARLD was responsible for 493,300 deaths (156,900 female deaths and 336,400 male deaths) worldwide.³

There is currently no specific medical treatment for severe alcoholic hepatitis and patients who develop cirrhosis have less than a 50% chance of living for five years if they fail to stop drinking.³

"Given that the spectrum of alcohol-related liver disease varies widely, with the majority of patients being asymptomatic, we were interested to

find out why a small proportion of these people go on to develop severe alcoholic hepatitis," said Dr Stephen Atkinson, Clinical Research Fellow in Hepatology at Imperial College London and lead study author. "This first analysis of data means that we may now be able to use genetic profiles to identify people who are at increased risk of developing severe alcohol hepatitis."

The authors of the British study proposed that genetic factors contributed to the risk of developing severe alcoholic hepatitis. A two-stage genome-wide association study (GWAS) was conducted comparing people with severe alcoholic hepatitis (n=860), with alcohol dependent subjects who had no evidence of liver disease (n=1191).

The study results show that the PNPLA3 gene was associated at genome-wide significance levels as having a significant risk association with severe alcoholic hepatitis (PTHRESHOLD

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