

# Abnormal liver tests in a Mediterranean population

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**A recent population-based study in a small town in Southern Italy found that one in eight residents had abnormal liver tests.**

While alcohol consumption was the most common causative factor, nonalcoholic [fatty liver disease](#) (NAFLD) is an increasingly prevalent source of the problem.

The study is published in the May 2005 issue of *Hepatology*, the official journal of the [American Association for the Study of Liver Diseases \(AASLD\)](#). Published by John Wiley & Sons, Inc., the journal is available online via [Wiley InterScience](#).

Chronic liver disease is a serious public health issue in many communities. It can be caused by high alcohol consumption, hepatitis B and C, and nonalcoholic fatty liver disease, a condition associated with obesity, insulin resistance, high cholesterol and the like. The importance of these causative factors varies from one location to another. For example, in the U.S., the majority of altered liver enzymes are related to NAFLD, while in northern Italian populations, much is related to alcohol. Factors leading to liver disease had not been thoroughly studied in Southern Italy, so researchers, led by Gaspare Maria Pendino of Reggio Calabria, assessed the prevalence and etiology of altered liver tests in the general population of Cittanova, a small southern Italian town.

They generated a random sample of residents 12 years or older and screened 1645 participants for abnormal liver values, antigens to hepatitis B and C and alcohol consumption. From each individual, they also gathered socioeconomic data, medical history and [body mass index](#).

More than 12 percent of those screened had abnormal liver values, with prevalence increasing with age. The age-trend was mainly due to chronic HCV infection, which affected 6.5 percent of the study population overall and increased in prevalence with age. More men than women had elevated liver tests, which was probably attributable to greater alcohol consumption among men.

Almost 46 percent of the altered liver values in Cittanova were attributable to excessive alcohol consumption. Nearly 20 percent was due to hepatitis (18.6 percent hepatitis C, 1 percent for hepatitis B.) A combination of alcohol and hepatitis caused 9 percent of cases. A tiny percentage was caused by rare conditions. And researchers estimated that the remaining 24 percent of cases were due to NAFLD. High BMI, high cholesterol, and hyperglycemia were independently associated with those cases, and 63.3 percent had a bright liver at echography.

While the use of medications could not be excluded as a cause of the abnormal test results in the suspected NAFLD cases, "it must be stressed," say the authors, "that in almost all cases the medication was for one of the possible alterations related to the metabolic syndrome (i.e. anti-hypertensive, lipids lowering, antidiabetic)."

Cittanova is involved in the epidemic of obesity, with nearly 17 percent of the population having a BMI above 30, however, that rate is still far below other parts of the world, like the U.S. where more than 30 percent of the population has a BMI of 30 or more.

"The leading causes of altered liver tests are alcohol, HCV and NAFLD in Cittanova," the authors conclude, "NAFLD is emerging as an important etiology."

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