

Prevention Research Center

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"Heavy drinking early in life is associated with overweight, abdominal fat, and low levels of "good" cholesterol later in life, increasing risk of heart disease, type 2 diabetes, and stroke"

Heavy drinking patterns learned when young can lead to long term health problems

BERKELEY – New research into lifelong alcohol consumption reveals that heavy binge drinking by adolescents and young adults is associated with increased long-term risk for heart disease, high blood pressure, type 2 diabetes, and other metabolic disorders. The risk is lower in people who start drinking alcohol later in life and maintain more moderate drinking patterns.

The study, which will be published in January edition of the *Journal of Clinical Endocrinology & Metabolism (JCEM)*, also indicates that the increased health risks occurred regardless of the total amount of alcohol consumed over a lifetime, or whether people stopped or cut back their drinking as they matured. This risk to long-term metabolic health adds to the already well-known risks associated with heavy drinking among young people – including greater vulnerability to alcohol dependence and problems such as drunken driving crashes, assaults and other violent crime.

“To fully understand the effect of alcohol consumption on health, you need to consider lifetime drinking patterns,” said Marcia Russell, Ph.D., of PIRE’s Prevention Research Center in Berkeley and senior author. “When people start drinking heavily at an early age they appear to be at greater risk of a number of adverse health effects. These effects are known collectively as the metabolic syndrome.”

The term “metabolic syndrome” describes a cluster of metabolic risk factors that increase the chances of developing heart disease, stroke, and type 2 diabetes. The exact cause of the metabolic syndrome is not known, but genetic factors, too much body fat (especially in the waist area), and lack of exercise increase the risk of developing the condition.

Russell and her colleagues based their research on data from the Western New York Health Study, conducted between 1996 and 2001. This study asked more than 2,800 people who reported that

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they were regular drinkers at one point in their lives about various aspects of their lifestyle. The study also collected data on the prevalence of the metabolic syndrome and its individual components, including obesity, high triglycerides, low HDL cholesterol, elevated blood pressure, and high fasting glucose.

The Western New York Health Study revealed two distinct lifetime drinking patterns among people who were ever regular drinkers. Some people in the study reported that they began drinking early and heavily and then sharply reduced their alcohol consumption. By contrast, other people had more moderate consumption over a longer period of their life. Lifetime drinking patterns included total years of drinking, first and last age of regular drinking, total volume of alcohol consumed, and many other factors. The early peak drinkers were those who reported drinking heavily in their early years. They were, on average, 10 years younger than stable drinkers. Despite this age difference, the early peak drinkers still had a somewhat higher risk of developing metabolic syndrome.

“Drinking patterns associated with early peak and stable drinking histories were distinctly different,” Russell said. “Early peak drinkers generally began drinking earlier than stable drinkers. They drank fewer years, less frequently, and consumed less volume of alcohol over their lifetimes, but averaged more drinks per drinking day and had higher rates of occasional heavy drinking and intoxication.”

The researchers speculate that the reason for the increased risk for metabolic syndrome found in the study may be associated with the adverse health effects of early unhealthy drinking patterns, which were carried over to later life. Also, early peak drinkers may have adopted other lifestyle habits that are detrimental to cardiac and metabolic health.

The lead author of the study is Dr. Amy Fan, also of PIRE’s Prevention Research Center. Other study authors include Dr. Saverio Stranges of the University at Buffalo, N.Y., and the University of Warwick, U.K.; and Drs. Joan Dorn and Maurizio Trevisan of the University of Buffalo.

For more information or to obtain a copy of the published report, contact [Jim Copple](#) at 301-755-2783 or jcopple@pire.org. PIRE (Pacific Institute for Research and Evaluation) is a national nonprofit public health research institute, supported primarily by federal and state research and program funds, with centers in seven locations around the country.

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