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No link between current or previous marijuana use and kidney disease, say researchers

New study of nearly 14,000 individuals finds reassuring lack of evidence of the effect of infrequent, relatively light use of marijuana on kidney function, reports The American Journal of Medicine

Philadelphia, March 1, 2018 – Marijuana is the most commonly used illicit drug in the United States, with an increasing trend of use among middle-aged and older individuals. However, potential health effects of marijuana use in the general population have not been extensively studied, and little is known about potential effects on kidney function. According to a new cross-sectional study of adults aged 18-59 in the US, there is no association between current or previous marijuana use and kidney function. The results are reported in The American Journal of Medicine.

Marijuana use among people aged 12 years or older in the US has increased from 7.5 percent to 8.3 percent from 2013 to 2015. From 2002 to 2015, the increase in percentage of adult users 26 years or older is even greater than the increase among those aged 18 to 25 years during the same period. Health effects of acute and chronic marijuana use remain controversial and the US Food and Drug Administration (FDA) has not officially approved marijuana as a medicine, nor has it been extensively studied within the general population. Little is known about its potential effects on kidney function.

Investigators analyzed a nationally representative sample of nearly 14,000 predominantly healthy adults aged 18-59 years living in the US who participated in the National Health and Nutrition Examination Survey from 2007 to 2014. Participants used an audio computer-assisted self-interview system to answer several questions. Questionnaires were administered at a mobile examination center. Participants were classified as never users, past users, and current users of marijuana. Nearly 5,500 users said they had smoked marijuana at least once, but not in the past 30 days, and over 2,000 users had smoked marijuana at least once within the last 30 days. Serum creatinine concentration was measured after blood collection at the mobile examination center.

The investigators did not find any association between current or past marijuana use and impaired kidney function. There was no statistically significant association between history of marijuana use and the likelihood of developing stage 2 or greater chronic kidney disease. Likewise, they did not observe a statistically significant association between the history of marijuana use and the incidence of microalbuminuria, a moderate increase in the level of urine albumin and a marker of kidney disease.
“Our research provides some reassuring evidence suggesting that there is no determinantal effect of infrequent, relatively light use of marijuana on kidney function among healthy adults under age 60,” commented lead investigator Murray A. Mittleman, MD, DrPH, Professor of Epidemiology at the Harvard T.H. Chan School of Public Health, Associate Professor of Medicine at Harvard Medical School, and a practicing preventive cardiologist at Beth Israel Deaconess Medical Center. “However, our research does not address heavy users, the elderly, or those with preexisting chronic kidney disease. Research is needed to evaluate the impact of marijuana use in adults 60 and over, and among those with existing or at risk of developing kidney disease.”

Under US Federal law it is illegal to possess, use, buy, sell, or cultivate marijuana, although it is legal in some US states. As of January 2018, medical marijuana is legal in 30 states and the District of Columbia (DC); in eight states and DC, it is also legal for recreational use. Other states have taken steps to decriminalize marijuana to some degree.

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Notes for editors
The article is “Marijuana Use and Renal Function among US Adults,” by Chang Lu, BS, Stefania I. Papatheodorou, MD, PhD, John Danziger, MD, and Murray A. Mittleman, MD, DrPH (DOI: https://doi.org/10.1016/j.amjmed.2017.10.051). This article will appear in The American Journal of Medicine, volume 131, issue 4 (April 2018) published by Elsevier.

Full text of this article is available to credentialed journalists upon request. Contact Heather Luciano at +1 347 443 4496 or ajmmedia@elsevier.com to obtain copies. Journalists who would like to interview the authors should contact Murray A. Mittleman at mmittlem@hsph.harvard.edu.

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