

Number of Heavy Smokers Decreased Dramatically in California and U.S. Since 1965

The days of "pack-a-day" smoking are all but a memory

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A study led by researchers at the University of California, San Diego shows that high-intensity smoking - more than 20 cigarettes per day - declined markedly in both California and the remaining United States since 1965. California dropped from 65 percent of all smokers to 23 percent (2.6 percent of the population) while the remaining states dropped to 40 percent (7.2 percent of the population). These changes help explain the larger drop in lung cancer seen in California than in the rest of the nation.

The study appears in the March 16, 2011 issue of *JAMA*.

"Gone are the days when the average smoker had a pack-a-day habit," said John P. Pierce, PhD, Sam M. Walton Professor of Cancer Research in the Department of Family and Preventive Medicine at UC San Diego School of Medicine and director of the Population Sciences Division at UC San Diego Moores Cancer Center. "We've seen a steady decrease in the number of young smokers who reach that dependence level as well as an increased number of smokers who quit."

The team analyzed major national surveys conducted since 1965 in California and the United States. In the 1960s, smoking more than a pack per day was the habit of a majority of smokers. That number has declined rapidly across the country and more quickly in California than the rest of the nation. Among younger generations, only a small minority of the population is expected to ever attain cigarette consumption levels of even ten cigarettes per day.

"There are a number of reasons why the decline in heavy smokers has been greater in California than in the rest of the nation," explained Pierce. "California was the first state to aggressively raise its cigarette tax in 1968 and from 1968-2007, the price of cigarettes was higher in California than the average for the rest of the nation. California was also the first state to introduce an ongoing, well-funded comprehensive tobacco control program which has been in place since 1989." Pierce says population norms supporting smoke-free environments in the rest of the nation have consistently lagged behind California and these changes are not explained by demographic changes. This study emphasizes the need for policies that offer cessation assistance to low intensity smokers, particularly in California.

The large decline in the prevalence of pack-a-day smoking has been reflected in declines in lung cancer as well. Lung cancer death rates peaked in California in 1987 at 109 per 100,000 and declined continuously to 77 per 100,000 in 2007. In the rest of the nation, lung cancer deaths peaked in 1993 at 117 per 100,000 and declined to 102 per 100,000 by 2007. Thus, the peak lung cancer rates occurred 13 to 17 years after the apparent peak in prevalence of high intensity smoking.

"Our research indicates that fewer than 10 percent of young Californians and fewer than 20 percent of young residents in the rest of the nation will ever reach even half a pack per day, and lung cancer rates should continue to drop at a faster rate in California over the next 15 years," added Pierce.

In addition to Pierce, the research team includes Karen S. Messer, PhD, and Martha M. White from the UC San Diego Moores Cancer Center; David W. Cowling, PhD, from the California Department of Public Health California Tobacco Control Program; and David P. Thomas, PhD, a visiting fellow at UCSD from Menzies School of Health Research and Lowitja Institute, Charles Darwin University, Darwin, Australia.

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