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Contact: National Cancer Institute Press Office

[ncipressoffice@mail.nih.gov](mailto:ncipressoffice@mail.nih.gov)

[Center for the Advancement of Health](#)

### **Double jeopardy: Obese smokers at higher risk of death**

People who are both very obese and who smoke increase their risk of death by 3.5 to 5 times that of people of normal weight who never smoke, finds a study in the November issue of the American Journal of Preventive Medicine.

According to the study, 20 percent of obese adults in the United States smoke, which puts them at a higher risk of death caused by cancer and circulatory disease. The authors further found that, in general, being a current smoker was a far stronger risk factor for cancer death than being obese.

"Smoking has been known as a very strong risk factor for many cancers, particularly lung cancer, which is the most common site of cancer death," said lead author D. Michal Freedman, Ph.D., of the Division of Cancer Epidemiology and Genetics at the National Cancer Institute.

The study surveyed more than 80,000 current and former radiologic technologists between the ages of 22 and 92 who completed a self-administered questionnaire in the period from 1983 to 1989. They all were followed through December 2002 and the number of deaths was reported.

The questionnaire collected information such as birth date, height, weight and smoking behavior. Participants' body mass indexes were calculated from their weight and height. A BMI of 30 to 34.9 was considered obese, and more than 35 was very obese.

Smoking behaviors were categorized by duration, intensity and current status. Freedman and her colleagues analyzed a measure that included both cigarettes smoked per day and duration of smoking. They found, in general, that more smoking or "pack-years" was related to a higher risk of death.

Also, in both women and men of all ages, the risk of death from circulatory disease increased with each additional increment in the BMI. When participants were obese and also current smokers, their risk of death from circulatory disease jumped even

higher to an increase of 6- to 11-fold for those under age 65, compared to the participants of normal weight who never smoked.

The study was part of an ongoing collaboration of the National Cancer Institute, the University of Minnesota and the American Registry of Radiologic Technologists.

Despite the many existing health campaigns aimed at educating the public about the dangers of smoking and obesity, experts say there is a definite need for increased efforts to change the behaviors of those at risk.

"We have long known that education and information are not sufficient for health behavior change," said Susan J. Curry, Ph.D., director of the Health Research and Policy Centers at the University of Illinois at Chicago. "We need to communicate realistic and achievable goals, and we need to help people understand that they are not solely responsible for their increased risk. The tobacco industry and food industry, for example, contribute greatly to an environment that promotes unhealthful behaviors such as tobacco use and unhealthful eating."

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#### FOR MORE INFORMATION

Health Behavior News Service: Lisa Esposito, editor at (202) 387-2829 or [www.hbns.org](http://www.hbns.org)

American Journal of Preventive Medicine: Contact the editorial office at (858) 457-7292.

Freedman DM, et al. The mortality risk of smoking and obesity combined. *Am J Prev Med* 31(5), 2006.

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