

Summaries for Patients are a service provided by *Annals* to help patients better understand the complicated and often mystifying language of modern medicine.

The full report is titled “The Effects of Coffee and Napping on Nighttime Highway Driving: A Randomized Trial.” It is in the 6 June 2006 issue of *Annals of Internal Medicine* (volume 144, pages 785-791). The authors are P. Philip, J. Taillard, N. Moore, S. Delord, C. Valtat, P. Sagaspe, and B. Bioulac.

Coffee and Napping Improve Nighttime Highway Driving

What is the problem and what is known about it so far?

Sleepiness of the driver is a factor in about 20 of every 100 traffic accidents. Accidents are more common during the night than during the day. Many people drive at night despite being sleepy. Some people must drive at night to travel to or from work or because their jobs require nighttime driving. For these reasons, effective strategies to decrease sleepiness while driving could reduce accidents. Two common strategies to maintain wakefulness while driving are drinking coffee or other caffeinated drinks and napping. Several studies have examined the effects of coffee and napping on driving performance by using driving simulators. However, no studies have examined the effect of caffeine or napping on actual highway driving.

Why did the researchers do this particular study?

To see whether drinking coffee or taking a short nap improved nighttime driving performance.

Who was studied?

12 healthy young men.

How was the study done?

The study participants drove 125 miles on the same highway in France between 6:00 p.m. and 7:30 p.m. and then 3 times between 2:00 a.m. and 3:30 a.m. In preparation for the early morning drives, patients drank a half cup of either caffeinated coffee or decaffeinated coffee or took a 30-minute nap in the parked car at 1:00 a.m. The cars were equipped with a special video camera that recorded when the driver inappropriately crossed the center line during each drive. A professional driving instructor accompanied each participant and also monitored line crossings, as well as driving speed. The cars had another set of controls so that the instructor could take over if needed. After the experiment, the researchers compared the number of line crossings in each of the 4 driving conditions. Studies show that inappropriate line crossings are related to traffic accidents.

What did the researchers find?

Driving performance was better after drinking coffee or taking a nap than after drinking decaffeinated coffee. However, much of the improvement was concentrated in only some drivers.

What were the limitations of the study?

The study included only 12 healthy young men who drove on a highway. The results might not apply to other people or driving conditions. The study was too small to evaluate the effect of coffee or napping on actual traffic accidents.

What are the implications of the study?

Coffee or napping seems to improve nighttime highway driving performance.