



## Purpose and Scope

Researchers at RTI International, Pavlov Medical University, Leningrad Regional Center of Addictions, Pacific Institute for Research and Evaluation and Johns Hopkins School of Medicine conducted a study from 2003 to 2005 in St. Petersburg, Russia comparing gender differences in the effects of alcohol on cognitive functioning.

The study was published in the May issue of *Alcoholism: Clinical and Experimental Research*.

## Key Findings

- Women become alcohol dependent more quickly than men.
- Women experience cognitive deficits associated with alcohol dependences in cognitive functioning such as visuoperceptual and visuospatial processing, working memory, and motor control more quickly than do men despite shorter durations of alcohol abuse.
- Female alcoholics also performed more poorly than male alcoholics on tests of spatial planning, problem solving and cognitive flexibility. These and the above processes are essential for effective daily functioning.

## Report Sponsor

The study was funded by a grant from the National Institute on Drug Abuse.

## About RTI International

RTI International is an independent nonprofit research organization based in Research Triangle Park, North Carolina, that provides research and technical solutions to governments and businesses worldwide in the areas of health and pharmaceuticals, education and training, surveys and statistics, advanced technology, democratic governance, economic and social development, energy, and the environment. For more information, visit [www.rti.org](http://www.rti.org).

*RTI International is a trade name of Research Triangle Institute.*

# Research & Policy Brief



## Alcohol Consumption More Detrimental to Women

### What the Study Found

Alcohol consumption more severely affects women than men. Women become alcohol dependent more quickly than men and alcohol more severely impairs women's cognitive functioning including perceptual and visual planning and processing, working memory and motor control.

Results from a new study showed that female alcoholics experience a greater decrement in cognitive and motor functions and sustain an accelerated decline in processing speed than males, which confirm and extend prior research that alcohol exerts more profound adverse effects more quickly on women compared to men.

Other studies have shown that female drinkers experience accelerated damage to the liver, heart and muscles, compared with male alcoholics.

Female alcoholic participants responded more slowly on tasks that measured reaction times than other groups, suggesting that alcohol more significantly impairs women's working memory processes. Female alcoholics also performed more poorly than male alcoholics on tests of spatial planning, problem solving and cognitive flexibility.

This was despite the fact that female alcoholics were, on average three years younger than male alcoholics, had four fewer years of alcohol dependence and two and a half fewer years of alcohol use than the male alcoholic subjects.

The study suggests that alcohol-dependent women experience cognitive problems associated with alcohol abuse in addition to the well-known findings of greater negative physiological effects.

The study compared 24 female alcoholics, 78 male alcoholics and 68 male and female non-alcoholics. All participants were under age 40 to avoid age effects of cognitive parameters.

According to the authors it is not known to what degree and at what period of sobriety alcoholics can recover cognitive impairments.