

# Study finds workers fare worse when popular medications leave the market

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A little pill can have a big effect on worker absenteeism, according to a new study from the University of Georgia's Terry College of Business.

When a popular pain reliever was taken off the [market](#), the consequences for absenteeism were greater than if it had never been available at all.

The finding is from a study that analyzes the labor market effects of Vioxx, a joint pain medication that was introduced in the U.S. in 1999 and in Europe in the early 2000s and then removed from pharmacy shelves in 2004, after studies showed that it may cause an increased risk of heart attack and stroke.

The introduction and withdrawal of Vioxx, which was commonly prescribed for conditions like arthritis, created a natural laboratory for economists Meghan Skira of the Terry College and Aline Bütikofer of the Norwegian School of Economics to study its effects on the labor supply of individuals with joint pain. They used administrative data from Norway on sickness absence and disability pension receipt for the analysis.

"We found that when Vioxx entered the market, it decreased quarterly sickness absence days among individuals with joint pain by 7 to 12 percent relative to the pre-entry period," Skira said. "But the withdrawal of Vioxx from the pharmaceutical market increased sickness absence days by 12 to 16 percent and increased the quarterly probability of receiving disability benefits by 6 to 15 percent relative to the pre-entry period."

While Vioxx helped keep people well enough to work, the economic consequences of taking it off the market were substantial for workers and their employers. Skira said the disproportionate labor market effect has compelling implications for the drug approval process and for predicting the consequences of taking a pharmaceutical off the market. The study also emphasizes the importance of weighing economic factors when determining the net benefits of advances in medical and

pharmaceutical technology.

"Considering labor supply effects and not just focusing on clinical outcomes and medical costs has potentially significant implications for regulatory decision-making and the coverage and reimbursement policies of insurance plans and national health care systems," Skira said.

But why was the effect on absenteeism so large? A couple ideas emerged, according to Skira. Partly, it could have been the result of the speed of Vioxx diffusion upon entry and how suddenly the drug was pulled, and partly because of how people make decisions.

"It took a few years for sales to peak, as it probably took doctors some time to learn about the drug and determine who should be switched to it," Skira said. "Second, the withdrawal may have led to a significant reaction by patients and physicians to the information about the cardiovascular risks associated with the drug, and its removal may have sent a negative signal about similar drugs."

While both men and women suffer from joint pain, Vioxx's removal from the market had a larger impact on women's [sickness absence](#), the study found.

"This is consistent with other studies that find gender differences in absenteeism," Skira said. "While we can't say for certain what causes these differences, it may be due to what studies call the 'double burden' and the gender division of household work. The idea is that women are more exposed to the 'double burden' of combining work with family obligations, which may affect their ability to cope with negative health shocks."

The availability of Vioxx also differentially affected the probability of receiving disability pension benefits for single and married individuals

with [joint pain](#). The researchers found that singles responded more to Vioxx's entry (through a marked decreased probability of enrolling on disability pension), while married people were more likely to receive disability benefits after the withdrawal.

"Single individuals might be more income constrained than married individuals, with less ability to leave the labor force and enroll on disability insurance," Skira said. "Married individuals may have more than one source of income and would be expected to respond less to Vioxx's entry and more to its removal."

The study will be published in the *Journal of Human Resources*.

Provided by University of Georgia

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