

Changes needed for oft-ignored prescription warning labels

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Prescription warning labels need to be more effective. Credit: Photo by G.L. Kohuth

Each year, an estimated four million Americans experience adverse reactions to prescription medications. Many of these reactions, ranging from mild rashes and drowsiness to hospitalization and death, could be avoided if warning labels were more effective, according to a Michigan

State University study.

When patients are handed a new prescription, few read the critical [warning labels](#) such as "do not consume alcohol while taking this medication" or "for external use only." Using eye-tracking technology, MSU researchers found that one source of the labels' ineffectiveness is an inability to capture patients' attention.

The study, which appears in the current issue of *PLoS ONE*, reveals that only 50 percent of [participants](#) looked directly at the warning labels, and 22 percent did not look at any. Laura Bix, associate professor in MSU's School of Packaging, suggests that relatively simple changes could improve the labels' effectiveness.

"Given our results, we are recommending a complete overhaul of the design and labeling of the ubiquitous amber bottles, which have seen little change since their introduction some 50 years ago," Bix said. "Our initial recommendations would be to move all of the warnings from the colored stickers to the main, white label, which 100 percent of the participants read, or to reposition the warnings so that they can be seen from this vantage point."

The impact of this study could be especially beneficial to older patients. On average, more than 30 percent of those 65 and older take 10 different medications daily. Taking multiple medications increases the odds of [adverse reactions](#). This combination is complicated further since older participants were less likely to notice or remember warning labels. Not surprisingly, more people who saw the stickers could recall them better, suggesting that enhancing the labels' noticeability is a key factor for people remembering the warnings.

The results highlight the importance of how labels influence the attention process, said Mark Becker, assistant professor of cognition and

cognitive neuroscience.

"By applying basic research on the control of attention to the design of labels, we may greatly improve their effectiveness," he said. "This collaboration between the School of Packaging and the Department of Psychology makes such efforts possible."

Bix and other MSU researchers have plans to continue testing the effectiveness of new and existing prescription packaging as well as reviewing prescription drug leaflets, currently under regulatory debate.

Provided by Michigan State University

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