

Common drugs adversely impair older adults' physical as well as cognitive functioning

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A class of medications previously linked to cognitive impairment in older adults also appears to negatively affect their physical functioning according to investigators from the Regenstrief Institute, the Indiana University Center for Aging Research, the University of East Anglia and several other United Kingdom institutions.

In a systemic review of more than a decade of studies on the effects of drugs with anticholinergic properties, they report that these drugs have a significant adverse effect on both cognitive and physical functioning, including the ability to feed and dress oneself. Anticholinergic medications affect the brain by blocking acetylcholine, a nervous system neurotransmitter. They are sold over the counter as sleep aids and bladder leakage preventives and prescribed for many diseases including hypertension and [congestive heart failure](#).

The review found that these 46 studies, which followed 60,944 patients, showed only limited evidence of a connection between anticholinergics and delirium, a short-term decline in cognition. Additionally the review indicated that the studies did not demonstrate a strong tie between medications with anticholinergic properties and death. According to Regenstrief Institute investigator Noll Campbell, Pharm.D., senior author of the review paper, this may be because most studies were insufficient in length to reveal a significant link between the medications and death.

This is the first systematic review to assess the effects of medications with anticholinergic properties on physical function and delirium. The authors say it also provides an important update on cognitive function and mortality.

"Anticholinergics, both over-the-counter and prescription medications, impact the lives of older adults in ways doctors, patients and their families may not realize," said Dr. Campbell, who is also a research assistant professor in the Purdue University College of Pharmacy. "I don't see use of these medications declining. Doctors and patients are familiar with these drugs and unfortunately are far less familiar with equally effective alternatives."

For example, Dr. Campbell advised, rather than taking sleeping pills with anticholinergic properties, one could refrain from napping, limit evening exercise and remove distractions from the bedroom. Institutions like hospitals and nursing homes could work to keep older adults awake and stimulated during the day, naturally encouraging nighttime slumber.

Dr. Campbell and colleagues from the Regenstrief Institute and the IU Center for Aging Research are working to identify diagnosis- and patient-dependent alternatives to exposure to anticholinergic medications as well as methods to inform physicians of their advisability via prompts within electronic [medical](#) record systems.

"Significant ongoing concerns remain about these medicines, and this review paper for the first time in one place has highlighted the impact on function as well as memory and death," said Chris Fox, M.D., of the University of East Anglia, the review paper's first author. Dr. Fox is a psychiatrist. In 2011, he and Regenstrief and IU Center for Aging Research collaborators published the results of a study of 13,000 men and women age 65 and older in which they found a link between anticholinergic medications and death.

Provided by Indiana University

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