

Commonly used medications may produce cognitive impairment in older adults

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This is Malaz Boustani, M.D. of the Regenstrief Institute, the Indiana University School of Medicine and the Indiana University Center for Aging Research.
Credit: Regenstrief Institute

Many drugs commonly prescribed to older adults for a variety of common medical conditions including allergies, hypertension, asthma, and cardiovascular disease appear to negatively affect the aging brain causing immediate but possibly reversible cognitive impairment, including delirium, in older adults according to a clinical review now available online in the *Journal of Clinical Interventions in Aging*, a peer reviewed, open access publication.

Drugs, such as diphenhydramine, which have an anticholinergic effect,

are important medical therapies available by prescription and also are sold over the counter under various brand names such as Benadryl®, Dramamine®, Excederin PM®, Nytol®, Sominex®, Tylenol PM®, and Unisom®. [Older adults](#) most commonly use drugs with anticholinergic effects as sleep aids.

While it is known that these medications do have an effect on the [brain](#) and in the case of sleeping pills, are prescribed to act on the brain, the study authors suggest the amount of cognitive impairment caused by the drugs in older adults is not well recognized.

"The public, physicians, and even the Food and Drug Administration, need to be made aware of the role of these common medications, and others with anticholinergic effects, in causing cognitive impairment. Patients should write down and tell their doctor which over-the-counter drugs they are taking. Doctors, who often think of these medications simply as antihistamines, antidepressants, antihypertensives, sleep aids or even itching remedies, need to recognize their systemic anticholinergic properties and the fact that they appear to impact brain health negatively. Doing so, and prescribing alternative medications, should improve both the health and quality of life of older adults," said senior study author Malaz Boustani, M.D., Indiana University School of Medicine associate professor of medicine, Regenstrief Institute investigator, and research scientist with the IU Center for Aging Research.

Dr. Boustani and colleagues conducted a systematic evidence-based analysis of 27 peer reviewed studies of the relationship of anticholinergic effect and brain function as well as investigating anecdotal information. They found a strong link between anticholinergic effect and cognitive impairment in older adults.

"One of the goals of our work is to encourage the [Food and Drug Administration](#) to expand its safety evaluation process from looking only

at the heart, kidney and liver effects of these drugs to include effects of a drug on the most precious organ in human beings, our brain," Dr. Boustani said.

"Many medications used for several common disease states have anticholinergic effects that are often unrecognized by prescribers" said Wishard Health Services pharmacist, Noll Campbell, Pharm.D., first author of the study, noting that these drugs are among the most frequently purchased over the counter products. "In fact, 50 percent of the older adult population use a medication with some degree of anticholinergic effect each day."

"Our main message is that older adults and their physicians should have conversations about the benefits and harms of these drugs in relation to brain health. As the number of older adults suffering from both cognitive impairment and multiple chronic conditions increases, it is very important to recognize the negative impact of certain medications on the aging brain," said Dr. Boustani.

The brain pharmacoepidemiology group of the IU Center for Aging Research currently is conducting a study of 4,000 older adults to determine if the long term use of medications with anticholinergic effects is linked to the irreversible development of [cognitive impairment](#) such as Alzheimer disease.

Source: Indiana University ([news](#) : [web](#))

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