

Anticholinergic Medications and Their Adverse Effect on Cognition

Most recent, relevant article on this subject (Neurology; Sep 2020):¹

Association of Anticholinergic Medication and AD Biomarkers with Incidence of MCI Among Cognitively Normal Older Adults

Methods: 688 cognitively normal participants from the Alzheimer's Disease Neuroimaging Initiative were evaluated (mean age = 73.5, 49.6% female). Cox regression examined risk of progression to mild cognitive impairment (MCI) over a 10-year period, and linear mixed effects models examined 3-year rates of decline in memory, executive function, and language as a function of anticholinergic medications. Interactions with APOE ε4 genotype and CSF biomarker evidence of AD pathology were also assessed.

Conclusion: *Anticholinergic medications increased risk of incident MCI and cognitive decline, and effects were significantly enhanced among individuals with genetic risk factors and CSF-based AD pathophysiological markers. Findings underscore the adverse impact of these medications on cognition.*

The following is the best, most comprehensive list of anticholinergic medications. It incorporates the 2015 American Geriatrics Society Beers Criteria, and many other lists and sources.:²

Score 3: (most anticholinergic [psych] medications): *amitriptyline, cyproheptadine, clozapine, desipramine, diphenhydramine (Benadryl), hydroxyzine (Atarax), imipramine, nortriptyline, olanzapine, paroxetine.*

Score 2: *amantadine (Artane), carbamazepine (Tegretol), oxcarbazepine (Trileptal), quetiapine.*

Score 1: *alprazolam, bupropion, citalopram, clonazepam, diazepam, escitalopram, fluoxetine, fluvoxamine, haloperidol, lithium, lorazepam, mirtazapine, risperidone, sertraline, trazodone, valproic acid, venlafaxine.*

Note: It is unclear from the above analysis what the anticholinergic status is of newer psychotropic medications, such as brexpiprazole (Rexulti), cariprazine (Vraylar), lumateperone (Caplyta), lurasidone (Latuda), paliperidone (Invega), Nudexta, pimavanserin (Nuplazid), vilazodone (Viibryd), and vortioxetine (Trintellix). There is no mention of them in the article.

¹ Weigand AJ, Bondi MW, Thomas KR. Association of anticholinergic medication and AD biomarkers with incidence of MCI among cognitively normal older adults. Neurology Sep 2020, 10.1212/WNL.0000000000010643; DOI: 10.1212/WNL.0000000000010643.

² Nery RT, Reis AMM. Development of a Brazilian anticholinergic activity drug scale. Einstein (Sao Paulo). 2019;17(2):eAO4435. Published 2019 Apr 1. doi:10.31744/einstein_journal/2019AO4435.