

Links and description of this table can be found here: <https://www.psychiatrypodcast.com/psychiatry-psychotherapy-podcast/anticholinergic>

					Cognitive Outcomes				Anticholinergic-specific Outcomes				
					Ancelin 2006	Han	Sittironnarit	Ehrt	Rudolph	Chew	Carnahan 2006 & Appendix	Boustani	Orzechowski, 2015
Drug (Generic)	Drug (Brand)	Drug Class	Drug Indication	Drug indication (secocndary)	Cognitive Performance, Mild Cognitive Impairment	Memory Performance, Executive Function	Psychomotor Speed, Executive Function	Long Term Cognitive Decline	Frequency of Anticholinergic Adverse Events	Anticholinergic activity in vivo	Serum anticholinergic activity	ACB Scale: Add numbers. Limit Patients to Score of 3	
					n = 372, >60yo w/o dementia	n = 544, HTN males >65	n = 1112, >60, sub norm or w/ Alz's, mild cog impair	n = 78, mean 68.7, w/ Parkinson's	n = 132, 117, males >65, or geriatrics	n = 107, drugs used in older adults	n = 279, residents of long-term care, mean 87yo		
Acarbose			Diabetes								0		
Acepromazine					3								
Aceprometazine					3								
Acetaminophen											0		
Acetazolamide	Diamox	Carbonic Anhydrase	Glaucoma	Heart Failure							0		
Acetic Acid Topical	Vinegar		Ear infections	Cervical cancer							0		
Acetylsalicylic acid	Aspirin	NSAID	Analgesia	Pericarditis, Kawasaki			0	0		0	0		
Acyclovir	Zovirax	Nucleic acid analogue	HSV	EBV, CMV							0		
Adenosine	Adenocard	Nucleic acid analogue	Arrhythmia	Stress test							0		
Albuterol	Ventolin	Adrenergic (beta 2) agonist	COPD	Asthma							0		
Alendronate	Fosamax	Bisphosphonate	Osteoporosis								0		
Alimemazine					2			0				1	
Allopurinol							0	0			0		
Alprazolam	Xanax				3	1	1			0	1	1	
Aluminum carbonate	Basaljel		Indigestion								0		
Aluminum hydroxide	AlternaGEL		Indigestion	Antacid							0		

Alverine					2							1	
Amantadine	Symadine								2		1	2	
Amiloride	Midamor	Diuretic (Potassium-	Hypertension	Edema							0		
Amiodarone	Cordarone, Nexterone	Antiarrhythmic (Class 3)	V Tachy, V Fib	A Fib							0		
Amitriptyline	Elavil				3	3	3	3	3	3	3	3	
Amlodipine	Norvasc	Calcium channel blocker	Hypertension	CAD			0	0		0	0		
Ammonium lactate topical	Lac-hydrin		Moisturizing								0		
Amoxapine					3							3	
Amoxicillin		Beta-lactam Antibiotic	Antibiotic	Pneumonia			0			1	0		
Amoxicillin-Clavulanate	Augmentin	Beta-lactam Antibiotic, beta-	Antibiotic	UTI, Pneumonia							0		
Ampicillin	Principen	Beta-lactam Antibiotic	Antibiotic	URI, UTI							1		
Anagrelide	Agrylin	Phosphodiesterase inhibitor	Essential Thrombocytosis	CML							0		
Anastrozole	Arimidex	Aromatase inhibitor	Breast cancer								0		
Anileridine	Leritine	Piperidine analgesic	Analgesia								0		
Apraclonidine ophthalmic	lopidine	Adrenergic (alpha 2, 1)	Glaucoma	Post-surgical IOP							0		
Ascorbic acid	Vitamin C	Essential nutrient	Scurvy								0		
Atenolol	Tenormin						0	0		0	0	1	
Atorvastatin							0	0		0	0		
Atropine						3	3		3	3	3	3	
Azathioprine											1		
Azithromycin	Zithromax	Macrolide antibiotic	Ear infections	Pneumonia							0		
Bacitracin ophthalmic, topical	Baciim	Cyclic peptides	Antibiotic								0		
Baclofen	Lioresal, Liofen	GABA derivative	CNS Depressant	Muscle Relaxant		2			2	0	0		

Cefaclor	Ceclor	Cephalosporin (2nd gen) beta	Antibiotic								0		
Cefalexin (Cephalexin)	Keflex	Cephalosporin (1st gen) beta	Antibiotic				0			1	0		
Cefamandole											1		
Cefazolin	Ancef	Cephalosporin (1st gen) beta	Antibiotic								0		
Cefixime		Cephalosporin (3rd gen) beta	Antibiotic								0		
Cefoxitin											1		
Ceftibuten	Cedax	Cephalosporin (3rd gen) beta	Antibiotic								0		
Ceftriaxone	Rocephin, Epicephin	Cephalosporin (3rd gen) beta	Antibiotic								0		
Cefuroxime	Zinacef, Ceftin	Cephalosporin (2nd gen) beta	Antibiotic								0		
Celecoxib	Celebrex	NSAID (COX-2 selective)	Osteoarthritis	Analgesia			1			1	0		
Cephalothin		Cephalosporin									1		
Cerivastatin	Baycol, Lipobay	Statin	HLD	ASCVD							0		
Cetirizine	Zyrtec	Antihistamine H1 antagonist	Allergies	Urticaria		2	2		2	0	0		
Cetylpyridinium topical			Mouthwash	Toothpaste							0		
Chloral hydrate		Anaesthetic	Insomnia	Procedures							0		
Chlorambucil	Leukeran	Chemotherapeutic	CLL	Hodgkin's lymphoma							0		
Chlordiazepoxide		Benzodiazepine	Anxiety			1					1		
Chlorhexidine topical	Betasept, Chloraprep	Disinfectant, Antiseptic	Procedures	Wound Cleaning							0		
Chlorothiazide	Diuril	Diuretic - Thiazide	CHF	Edema							0		
Chlorpheniramine					3	3	3		3		3	3	
Chlorpromazine	Thorazine, Largactil	Antipsychotic (Typical)	Schizophrenia	Bipolar		3			3	2	3	3	
Chlorpropamide	Diabinese	Sulfonylurea	Diabetes Mellitus 2								0		
Chlorthalidone	Thalitone	Sulfonamide diuretic	Hypertension				0				1	1	

Flunitrazepam								1					
Fluocinonide topical	Fluonex, Lidex	Glucocorticoid	Eczema	Seborrheic dermatitis							0		
Fluoride topical		Fluoride derivative	Dental procedures								0		
Fluorometholone ophthalmic	Efflumidex, Flucon	Glucocorticoid, synthetic	Inflammatory Eye Diseases								0		
Fluoxetine	Prozac	SSRI	MDD	Bulimia		1	1	1		1	1		
Fluphenazine	Prolixin	Antipsychotic	Schizophrenia	Psychosis			3		3		1		
Flurazepam	Dalmane	Benzodiazepine	Insomnia								1		
Flutamide	Eulexin	Nonsteroidal antiandrogen	Prostate cancer								0		
Fluticasone		Glucocorticoid, synthetic	Intranasal symptoms								0		
Fluticasone-salmeterol	Advair	Glucocorticoid	Asthma	COPD							1		
Fluvastatin	Lescol, Canef, Vastin	Statin	Hypercholesterolemia	ASCVD							0		
Fluvoxamine	Luvox	SSRI	OCD	MDD			1	1			1	1	
Folic acid	Folate	Vitamin B9 Derivative	Megaloblastic anemia								0		
Fosinopril	Monopril	ACE Inhibitor	Heart failure	Hypertension							0		
Furosemide	Lasix	Loop diuretic	CHF	Hypertension	3		0	1		1	1	1	
Gabapentin	Neurontin	GABA Agonist, Gabapentinoid	Neuropathic pain	Partial Seizures, Restless leg							0		
Galantamine	Nivalin, Razadyne	Acetylcholinesterase Inhibitor	Alzheimer's Dementia	Cognitive Decline			0	0		0	0		
Gemfibrozil	Lopid, Jezil	Fibrate	Hyperlipidemia (HLD)				0	0			0		
Gentamicin	Garamycin	Aminoglycoside	Antibiotic	Sepsis							1		
Gentamicin (ophthalmic, topical)	Genoptic	Aminoglycoside	Antibiotic								0		
Ginkgo		Supplement	Cognitive decline								0		
Glimepiride	Amaryl	Sulfonylurea antidiabetic	Diabetes mellitus 2								0		
Glipizide	Glucotrol	Sulfonylurea antidiabetic	Diabetes mellitus 2				0	0		0	0		

Naproxen	Aleve, Naprosyn	NSAID, nonselective	Analgesia	Inflammation							0		
Naratriptan							1						
Nateglinide	Starlix	Meglitinide	Diabetes mellitus 2								0		
Nefazodone	Serzone, Dutonin,	Serotonin antagonist and	MDD	Panic Disorder		1					0		
Neomycin ophthalmic	Neo-rx, Neomycin	Aminoglycoside	Antibiotic	Hepatic encephalopathy							0		
Niacin	Vitamin B3	Nutritional supplement	HLD	Pellagra							0		
Nifedipine	Adalat, Procardia	Calcium channel blocker	Angina Pectoris	Hypertension			0	0		0	1	1	
Nisoldipine	Sular	Calcium channel blocker	Hypertension								0		
Nitrofurantoin	Macrobid	Ribosomal protein	Antibiotic	UTI							0		
Nitroglycerin		Nitrate	Angina Pectoris				0	0		0	0		
Nizatidine	Tazac, Axid	Histamine (H2) Antagonist	GERD	PUD			0				1		
Norepinephrine	Levarterenol, Levophed,	Adrenergic alpha 1 and 2	Hypotension	Septic shock							0		
Norfloxacin	Noroxin, Chiboroxin	Fluoroquinolone	Antibacterial								0		
Nortriptyline	Pamelor					3		2	2	2	3	3	
Nystatin	Mycostatin	Antifungal, ergosterol	Antibiotic	Candida infection							0		
Octreotide	Sandostatin	Somatostatin analogue	Growth hormone	Esophageal varices							0		
Ofloxacin	Flxin, Ocuflax	Fluoroquinolone	Antibiotic								0		
Olanzapine	Zyprexa	Antipsychotic (Atypical)	Scizophrenia	Bipolar		1		2	2	2	1	3	
Olopatadine	Pazeo, Pataday, Ptanol	Antihistamine, Anticholinergic	Allergic conjunctivitis								0		
Omeprazole	Prilosec, Losec	Proton-pump inhibitor	GERD, PUD	Zollinger-Ellision Syndrome				0		0	0		
Opipramol					3								
Orphenadrine	Disipal, Norflex				3			3			3	3	
Oxazepam	Serax, Alepam	Benzodiazepine	Anxiety	Anticonvulsion			1	0		0	1		

phenylpropanolamine													
Phenytoin										1	0		
phytonadione													
pilocarpine													
Pimozide	Orap										2	2	
pindolol													
Pioglitazone							0			0	0		
Piperacillin	Pipracil	Beta-lactam	Antibiotic								1		
pirbuterol													
Piroxicam							0	0			0		
pivampicillin													
polycarbophil													
polyethylene													
polymyxin													
polypeptide													
polysaccharide													
potassium													
Pramipexol								0	1		0		
pramipexole													
pramoxine													
pravastatin													
prazosin													
Prednisolone		Glucocorticoid	Rheumatoid arthritis	Inflammation				0			1	1	

Tamoxifen							0	0			0		
tamsulosin													
Temazepam	Restoril	Benzodiazepine	Insomnia	Anticonvulsion			1			1	1		
terazosin													
terbinafine													
Terbutaline							0	0			0		
terconazole													
tetracycline													
Theophylline	Theolair	Methylxanthine	COPD	Asthma		2	2	1			1	1	
thiamine													
Thioridazine	Mellaril	Antipsychotic (Typical)	Schizophrenia	Bipolar		3		3	3	3	3	3	3
Thiothixene, Tiotixene	Navane	Antipsychotic (Typical)	Schizophrenia	Bipolar					3		1		
thyroid													
ticlopidine													
Timolol							0	0			0		
Tizanidine									3				
tobramycin													
tolbutamide													
tolcapone													
Tolterodine	Detrol					3	3		2	3	3	3	3
Topiramate										1	0		
torseamide													
Tramadol	Ultram	Opioid, SNRI	Analgesia			2	2			0	1		

Trandolapril						1					0		
Trazodone	Desyrel, Trialodine					1			1	0	0	1	
Triamcinolone	Kenalog	Glucocorticoid	Eczema	Psoriasis							1		
Triamterene	Dyrenium	Diuretic (Potassium-	Hypertension	Edema			0				1	1	
Triazolam	Halcion	Benzodiazepine	Insomnia	Anticonvulsion		1					1		
trichlormethiazide													
triethanolamine													
Trifluoperazine	Stelazine	Antipsychotic (Typical)	Schizophrenia	GAD					3		1	3	
Trihexyphenidyl	Artane, Tremin				3	3		3			3	3	
Trimethoprim							0			0	0		
Trimipramine	Surmontil				3			3			3	3	
troglitazone													
Tropatepine					3								
trypsin													
tuberculin													
ursodiol													
Valproate sodium											1		
Valproic acid	Depakote, Convulex		Anticonvulsion	Bipolar, Migraine			0			0	1		
valsartan													
Vancomycin	Vancocin	Glycopeptide antibiotic	Antibiotic	MRSA							1		
vecuronium													
Venlafaxine								0		0	0		
Verapamil							0	0			0		

Warfarin	Coumadin	Anticoagulant	DVT, PE	Stroke			0	0		0	1	1	
zafirlukast													
zaleplon													
zinc													
Ziprasidone									1	0			
Zolmitriptan							1						
Zolpidem							0			0	0		
Zopiclone							0	0			0		

*The Foundation of this table as noted in the blog post was adapted from Duran 2013, with Boustani 2008 and Carnahan 2006 and appendix studies. We also added clinical indications, colors, and hopefully this resource will be of help to clinicians. Please share freely. We updated this sheet on 9/26/2021 changing hydroxyzine. Orzechowski, R.F., et al. Comparative Anticholinergic Activities of 10 Histamine H1 Receptor Antagonists in Two Functional Models. European Journal of Pharmacology 2005; 506(3): 257-64.

Abstract

We determined the relative rank orders of anticholinergic potencies of 10 antihistamines in two functional bioassays: (1) an in vitro assay measuring inhibition of carbachol-induced contractions of isolated guinea pig trachealis muscle, (2) an in vivo bioassay comparing systemic hypotensive responses to bolus i.v. injections of acetylcholine before and after infusions of an antihistamine in anaesthetized rats. In vitro, the rank order of anticholinergic potencies of the antihistamines was cyproheptadine>promethazine>desloratadine>diphenhydramine>loratadine>chlorpheniramine>hydroxyzine>pyrilamine. The pA₂ values ranged from 8.2±0.4 for cyproheptadine to 4.8±0.4 for pyrilamine. Fexofenadine and cetirizine (up to 3 x 10⁻⁴ M) were inactive. In vivo, five