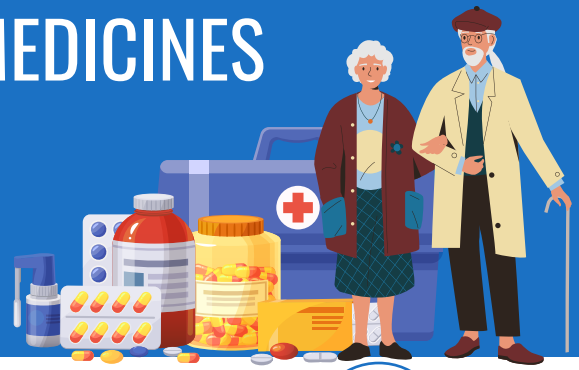






POTENTIALLY INAPPROPRIATE MEDICINES FOR OLDER AUSTRALIANS

CONSENSUS AGREEMENT FOR MEDICINES TO BE AVOIDED, CONDITIONS FOR AVOIDANCE, AND SUGGESTED ALTERNATIVES IN OLDER PEOPLE (65 YEARS OR ABOVE) LIVING IN AUSTRALIA



 Medicine or medicine class	 Avoid these drugs in older people	 Avoid this medicine or medicine class in older people with these conditions	 Instead of prescribing this medicine or class of medicines for older people, consider these alternatives
Alpha-adrenoreceptor antagonists (prazosin)	Prazosin	<ul style="list-style-type: none"> Risk of hypotension Taking other antihypertensive medications 	<ul style="list-style-type: none"> Frailty Risk of falls Initial dose adverse effects
Antiemetics – dopamine antagonist (chlorpromazine, domperidone, metoclopramide and prochlorperazine)	Chlorpromazine Prochlorperazine	<ul style="list-style-type: none"> Parkinson disease Polypharmacy Lewy body dementia Frailty 	<ul style="list-style-type: none"> ACE inhibitors (e.g. enalapril and lisinopril) Angiotensin II receptor blockers (e.g. candesartan and irbesartan) Calcium channel blockers (e.g. amlodipine and diltiazem) Sildenafil Tamsulosin
Antihypertensives, centrally acting (methyldopa, clonidine and moxonidine)	Methyldopa	<ul style="list-style-type: none"> Risk of hypotension Risk of falls Frailty 	<ul style="list-style-type: none"> ACE inhibitors (e.g. enalapril and lisinopril) Angiotensin II receptor blockers (e.g. candesartan and irbesartan) Thiazide diuretics (e.g. hydrochlorothiazide)
Antipsychotics (haloperidol, zuclopenthixol, trifluoperazine, thioridazine, periciazine and flupenthixol)	Haloperidol Zuclopenthixol Trifluoperazine Thioridazine Periciazine Flupenthixol	<ul style="list-style-type: none"> At risk of extrapyramidal reactions Taking anticholinergic medications Polypharmacy Frailty 	<ul style="list-style-type: none"> Neurodegenerative diseases (e.g. delirium) Cognitive impairment Cardiovascular diseases Cerebrovascular diseases Risk of falls
Antipsychotics (olanzapine, quetiapine, amisulpride, ziprasidone, lurasidone, risperidone, aripiprazole and paliperidone)	Olanzapine	<ul style="list-style-type: none"> Cardiometabolic syndrome (e.g. high blood pressure, high blood sugar) Risk of falls Polypharmacy 	<ul style="list-style-type: none"> When a nonpharmacological method has not been tried adequately Neurodegenerative diseases (e.g. delirium) Long-term use
Benzodiazepine, long-acting (clobazam, clonazepam, diazepam, flunitrazepam and nitrazepam)	Clonazepam Flunitrazepam	<ul style="list-style-type: none"> Dependence Other medications with sedative properties Polypharmacy Frailty 	<ul style="list-style-type: none"> Neurodegenerative diseases (e.g. delirium) Cognitive impairment Poor renal function Long-term use Risk of falls
Benzodiazepines, medium-acting (bromazepam and lorazepam)	Bromazepam Lorazepam	<ul style="list-style-type: none"> Falls With other medications with sedative properties Polypharmacy 	<ul style="list-style-type: none"> Frailty Neurodegenerative diseases (e.g. delirium) Cognitive impairment
Benzodiazepines, short-acting (alprazolam, oxazepam and temazepam)	Alprazolam	<ul style="list-style-type: none"> Falls With other medications with sedative properties Polypharmacy Frailty 	<ul style="list-style-type: none"> Neurodegenerative diseases (e.g. delirium) Dependency Renal impairment Long-term use
Genito-urinary anticholinergics (oxybutynin, propantheline, tolterodine and solifenacin)	Oxybutynin	<ul style="list-style-type: none"> With other anticholinergics Frailty Polypharmacy Risk of falls 	<ul style="list-style-type: none"> Neurodegenerative diseases (e.g. delirium) Constipation Cognitive impairment

Medicine or medicine class	Avoid these drugs in older people	Avoid this medicine or medicine class in older people with these conditions	Instead of prescribing this medicine or class of medicines for older people, consider these alternatives
NSAIDs, nonselective (indomethacin, diclofenac, ketorolac, piroxicam, meloxicam, ibuprofen, naproxen, ketoprofen and mefenamic acid)	<ul style="list-style-type: none"> Diclofenac Indomethacin Ibuprofen Ketoprofen Piroxicam Meloxicam Ketorolac 	<ul style="list-style-type: none"> • History of gastrointestinal bleeding • Increased bleeding risks • Frailty • Poor renal function 	<ul style="list-style-type: none"> • Peptic ulcer disease • Multimorbidity • Chronic kidney disease • Heart failure • Cardiovascular diseases
NSAIDs, selective (celecoxib and etoricoxib)	N/A	<ul style="list-style-type: none"> • History of gastrointestinal bleeding • Increased bleeding risks • Frailty • Poor renal function • Heart failure 	<ul style="list-style-type: none"> • Cardiovascular disease • Chronic kidney disease • Long-term use • Taking ACE inhibitors or diuretics
Opioids (morphine, pethidine, fentanyl, dextropropoxyphene, hydromorphone, buprenorphine, oxycodone and codeine)	<ul style="list-style-type: none"> Pethidine Fentanyl Codeine Hydromorphone Dextropropoxyphene 	<ul style="list-style-type: none"> • Polypharmacy • Risk of falls • Frailty • Poor renal function • Neurodegenerative diseases (e.g. delirium) 	<ul style="list-style-type: none"> • Constipation • Opioid dependency • Long-term use • Impaired cognition • Chronic pain
Oral anticoagulants – direct thrombin inhibitors (dabigatran)	Dabigatran	<ul style="list-style-type: none"> • Increased risk of bleeding • Multimorbidity • Peptic ulcer disease • Frailty • Risk of falls 	<ul style="list-style-type: none"> • Poor blood pressure control • Chronic kidney disease • Poor renal function
Oral anticoagulants – Factor Xa inhibitors (apixaban and rivaroxaban)	Rivaroxaban	<ul style="list-style-type: none"> • Peptic ulcer disease • Increased bleeding risk • Risk of falls • Multimorbidity 	<ul style="list-style-type: none"> • Polypharmacy • Poor renal function • Chronic kidney disease
Sedating antihistamines (diphenhydramine, doxylamine, dexchlorpheniramine, pheniramine, promethazine, cyclizine, chlorpheniramine and cyproheptadine)	Promethazine	<ul style="list-style-type: none"> • Taking other medications with sedative properties • Cognitive impairment • Taking anticholinergics • Frailty 	<ul style="list-style-type: none"> • Neurodegenerative diseases (e.g. delirium) • Risk of falls • Polypharmacy
Sulfonylureas (glibenclamide, glipizide, gliclazide and glimepiride)	<ul style="list-style-type: none"> Glibenclamide Glimepiride 	<ul style="list-style-type: none"> • With other glucose-lowering medications • High risk of falls • Frailty • Chronic kidney diseases 	<ul style="list-style-type: none"> • Polypharmacy • Multimorbidity • Renal impairment • Irregular diet • Dehydration
Tramadol	N/A	<ul style="list-style-type: none"> • Multimorbidity • Frailty • Neurodegenerative diseases (e.g. delirium) • Risk of falls • Polypharmacy • Poor renal function 	<ul style="list-style-type: none"> • Cognitive impairment • Long-term use • Taking antidepressant medications • Epilepsy • Risk of seizures
Tricyclic antidepressants (imipramine, clomipramine, amitriptyline, nortriptyline, doxepin and dosulepin)	<ul style="list-style-type: none"> Doxepin Dosulepin (dothiepin) 	<ul style="list-style-type: none"> • With other anticholinergics • Frailty • Polypharmacy • Risk of falls • Neurodegenerative diseases (e.g. delirium) • Constipation 	<ul style="list-style-type: none"> • Cognitive impairment • With other medications with sedative properties • Risk of postural hypotension • Benign prostatic hyperplasia
Z-drugs (zolpidem and zopiclone)	N/A	<ul style="list-style-type: none"> • Dependency • Taking other medications with sedative properties • Neurodegenerative diseases (e.g. delirium) 	<ul style="list-style-type: none"> • Frailty • Risk of falls • Polypharmacy • Cognitive impairment • Long-term use

Abbreviations: ACE, angiotensin-converting enzyme; N/A, not applicable; NSAID, nonsteroidal anti-inflammatory drug; PIM, potentially inappropriate medicine.