

Appendix F: Medication Table (for the treatment of cognitive impairment in the elderly)¹⁻⁶

Generic name (trade name) (dosage form, strengths)	Usual effective maximum dose	Annual cost	PharmaCare coverage	Common adverse effects	Therapeutic considerations					
Acetylcholinesterase Inhibitors (AChEIs)										
donepezil (Aricept) (tablet: 5 mg, 10 mg) (rapidly disintegrat- ing tablet: 5 mg, 10 mg)	5-10 mg PO once daily in the morning Dose titration: initial dose 5 mg once daily for 4-6 weeks; if tolerated, may increase to a maximum of 10 mg once daily. Consider initial dose of 2.5 mg once daily for frail patients or patients whom have experienced adverse effects due to other AChEls.	\$1850	Limited Coverage Rapidly Disintegrating Tablet: No Coverage	GI: nausea, vomiting, diarrhea (dose related), anorexia, weight loss, abdominal pain, dyspepsia, constipation CNS: dizziness, headache, fatigue, insomnia, somnolence, depression,	 May be administered without regard to food. Only AChEl approved for severe dementia of the Alzheimer's type. Lowest risk of Gl adverse effects. Maximum recommended dose in elderly women of low body weight is 5 mg daily. Use caution in doses exceeding 5 mg daily in elderly patients with chronic comorbid disease(s). 					
galantamine (Reminyl ER, G) (ER capsule: 8 mg, 16 mg, 24 mg)	16–24 mg PO once daily in the morning Dose titration: initial dose of 8 mg once daily for 4-6 weeks; if tolerated, increase to 16 mg once daily for at least 4 weeks; if tolerated, may further increase to a maximum of 24 mg once daily.	Generic: \$1810	Limited Coverage Limited Coverage	agitation, confusion, hallucinations, nightmares CV: hypertension, bradycardia, syncope Resp: rhinitis MSK: muscle cramps (donepezil),	 Administer with food. Some evidence to suggest that 16 mg per day dose appears to be the best tolerated, with similar efficacy to higher doses.⁷ If treatment is interrupted for ≥ 3 days, restart treatment as per initial dose titration. Maximum 16 mg daily in moderate renal (CrCl >10 mL/min) or moderate liver impairment (Child-Pugh 7-9). Not recommended for severe renal (CrCl < 9 mL/min) or severe liver (Child-Pugh 10-15) impairment. 					
rivastigmine (Exelon, G) (capsule: 1.5 mg, 3 mg, 4.5 mg, 6 mg) (oral solution: 2 mg/ mL) (patch: 4.6 mg released per 24 hours [as 9 mg/5cm² patch], 9.5 mg released per 24 hours [as 18mg/10cm² patch])	3-6 mg PO bid Dose titration (oral): initial dose 1.5 mg bid for 2–4 weeks; if tolerated, may titrate dose by 1.5 mg bid after a minimum of 2 weeks at each dose level to a maximum of 6 mg bid. Dose titration (transdermal patch): initiate 4.6 mg patch once daily for at least 4 weeks; if tolerated, may increase to a maximum dose of one 9.5 mg patch once daily. Switching from oral to transdermal: < 3 mg bid PO: use 4.6 mg patch 3-6 mg bid PO: use 9.5 mg patch 	Generic Capsule: \$2050 Transdermal Patch: \$1750 Oral Solution: \$810 – \$3240 (dose dependent)	Capsule: Limited Coverage Oral Solution: Limited Coverage Transdermal Patch: No Coverage	weakness, tremor, back pain Urogenital: urinary incontinence, UTI Rivastigmine patch Skin: application site hypersensitivity, urticaria, blister, allergic contact dermatitis	 Administer oral doses with food. Significantly fewer adverse effects of decreased appetite, nausea, vomiting, dizziness, and asthenia with transdermal patch as compared to oral doses of 6 to 12 mg day.⁸ If treatment is interrupted for > 3 days, restart treatment as per initial dose titration. For patients > 85 years of age and < 50 kg or patients with renal or mild-moderate hepatic impairment, initiate at 1.5 mg once daily and titrate slowly. Contraindicated in severe hepatic impairment. The transdermal patch has not been studied in renal or hepatic impairment. Titrate dose cautiously in renal impairment. In mild to moderate hepatic impairment, titrate dose cautiously. In severe hepatic impairment, use in contraindicated. 					

Generic name (trade name) (dosage form, strengths)	Usual effective maximum dose	Annual cost	PharmaCare coverage	Common adverse effects	Therapeutic considerations				
N-methyl-D-aspartate (NMDA) Receptor Antagonist									
memantine (Ebixa, G) (tablet: 10 mg)	Dose titration: initial dose 5 mg once daily in the morning for at least 1 week. If tolerated, titrate dose to 5 mg bid for at least 1 week, then 10 mg in the morning and 5 mg in the afternoon for at least 1 week, followed by titration to a maximum dose of 10 mg bid.	\$920	No coverage	GI: diarrhea, constipation, nausea, vomiting CNS: dizziness, headache, confusion, somnolence, anxiety, hallucination CV: hypertension, angina, bradycardia, cardiac failure Resp: cough MSK: back pain Urogenital: incontinence, UTI Ocular: cataract, conjunctivitis	 Use cautious dose titration in moderate renal impairment (CrCl 30-49 mL/min). Maximum 5 mg bid in severe renal impairment (CrCl 15–29 mL/min). No dosage adjustment in mild-moderate hepatic impairment. Avoid use in severe hepatic impairment. 				

Abbreviations: AChEls: Acetylcholinesterase Inhibitors; bid: twice daily; cm: centimeter; CNS: central nervous system; CrCl: creatinine clearance in millimeters per minute; CV: cardiovascular; ER: extended release; G: generic brands available; GI: gastrointestinal; kg: kilogram; mg: milligrams; mL: milliliter; MSK: musculoskeletal; NMDA: N-methyl-D-aspartate; PO: oral; Resp: respiratory; UTI: urinary tract infection.

Note: Please review product monographs at hc-sc.gc.ca/dhp-mps/prodpharma/databasdon/index-eng.php and regularly review current Health Canada advisories, warnings and recalls at www.hc-sc.gc.ca/ahc-asc/media/advisories-avis/index_e.html.

Pricing is approximate as per PharmaNet 2012/11/14 and does not include dispensing fee or additional markups, updated to PharmaCare coverage made June 2016.

PharmaCare Coverage Definitions

Regular Coverage: also known as regular benefit; does not require Special Authority. Regular benefits may be fully or partially covered.*

Limited Coverage: requires Special Authority for coverage. Limited Coverage benefits approved by Special Authority may be fully or partially covered.*

No coverage: also known as non-benefit; does not fit the above categories.

* Information on which products PharmaCare covers can be obtained using the B.C. PharmaCare Formulary Search (www.health.gov.bc.ca/pharmacare/benefitslookup). In all cases, coverage is subject to drug price limits set by PharmaCare and to the patient's PharmaCare plan rules and deductibles. See: www.health.gov.bc.ca/pharmacare/plans/index.html and www.health.gov.bc.ca/pharmacare/policy.html for further information.

References

- 1. e-CPS [Internet]. Ottawa, ON: Canadian Pharmacists Association; c2012 [cited 2012 Dec 17]. Available from: www.e-cps.ca.
- 2. Virani A, Kalyna Z, Jeffries J. Clinical Handbook of Psychotropic Drugs. 18th ed. Ashland, OH: Hogrefe; 2009.
- 3. Semla T, Beizer J, Higbee M. Lexi-Comp Geriatric Dosage Handbook. 15th ed. Hudson, OH: Lexi-Comp, Inc.; 2010.
- 4. Lexi-Comp Online [Internet]. Hudson, OH: Lexi-Comp, Inc.; c2012 [cited 2012 Dec 17]. Available from: online.lexi.com.
- 5. Health Canada Drug Product Database Product Monographs. Ottawa, ON: Health Canada; 2013 [cited 2013 Feb 19]. Available from: hc-sc.gc.ca/dhp-mps/prodpharma/databasdon/index-eng.php.
- 6. Alzheimer's Drug Therapy Initiative [homepage on the Internet]. Province of British Columbia: British Columbia Ministry of Health; 2013 [cited 2013 Mar 1]. Available from: www.health.gov.bc.ca/pharmacare/adti/index.html.
- 7. Loy C, Schneider L. Galantamine for Alzheimer's disease and mild cognitive impairment. Cochrane Database of Systematic Reviews 2006, Issue 1. Art. No.: CD001747. DOI: 10.1002/14651858.CD001747.pub3.
- 8. Birks J, Grimley Evans J, lakovidou V, et al. Rivastigmine for Alzheimer's disease. Cochrane Database of Systematic Reviews 2009, Issue 2. Art. No.: CD001191. DOI: 10.1002/14651858.CD001191.pub2.