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Cholinesterase Inhibitors

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Synonyms

Acetylcholinesterase inhibitors; AChEIs; CHEIs; ChEIs

Definition

A class of medications that targets the cholinergic neurotransmitter system and is used in the treatment of Alzheimer's disease and other dementias. The treatment is based on the observation of a cholinergic deficiency in the condition. Cholinesterase inhibitors (CHEI) block the activity of acetylcholinesterase, the primary enzyme that breaks down acetylcholine, allowing the neurotransmitter substance to remain in the synaptic cleft longer in order to stimulate postsynaptic receptors. The oldest CHEI, Tacrine (Cognex), is infrequently prescribed due to its unsafe side effects. Other CHEIs include Donepezil (Aricept), Rivastigmine (Exelon), and Galantamine (Razadyne). The newest addition to the CHEI class is a combination treatment, Namzaric, consisting of donepezil

and memantine, the latter being an N-methyl-D-aspartate-receptor antagonist. CHEIs are modestly effective in short-term (6–12 months) improvement of cognitive processes (attention, concentration, memory), functional abilities (activities of daily living), and possibly, neuropsychiatric symptoms. To date, research has shown these drugs do not show efficacy in treating mild cognitive impairment (MCI). The drugs do *not* prevent the further degeneration of cholinergic neurons or stop the progression of Alzheimer's disease.

See Also

► [Alzheimer's Dementia](#)

References and Reading

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