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# Venlafaxine Hydrochloride Extended Release

National Cancer Institute

## Source

National Cancer Institute. *Venlafaxine Hydrochloride Extended Release*. NCI Thesaurus. Code C150751.

An extended-release (ER) formulation composed of the hydrochloride salt form of venlafaxine, a synthetic phenethylamine bicyclic derivative and serotonin (5-hydroxytryptamine; 5-HT) and norepinephrine (NE) reuptake inhibitor (SNRI), with antidepressant and anti-anxiety activities and with potential use in the treatment of neuropathic pain. Upon administration, venlafaxine is released from the formulation in a controlled manner for an extended period of time. Venlafaxine, and its main active metabolite, O-desmethylvenlafaxine (ODV), selectively bind to the pre-synaptic 5-HT and NE transporters in the synaptic cleft and inhibit the re-uptake of 5-HT and NE, and to a lesser extent dopamine, thereby prolonging and potentiating the activities and signaling mediated by these neurotransmitters in the central nervous system (CNS). This relieves depressive and anxious states. Additionally, venlafaxine may exert analgesic effects through blockade of neuronal NE reuptake and inhibition of nociceptive pathways, or through its potential to regulate monoaminergic and opioidergic systems.