Paroxetine

- Optimal Dosing of Nortriptyline-Topiramate and Verapamil-Paroxetine Combinations in Tinnitus Treatment
- Efficacy of Nortriptyline-Topiramate and Verapamil-Paroxetine in Tinnitus Management: A Randomized Placebo-Controlled Trial
- Effects of paroxetine, a P2X4 inhibitor, on cerebral aneurysm growth and recanalization after coil embolization: the NHO Drug for Aneurysm Study
- Treatments to post-stroke depression, which is more effective to HAMD improvement? A network meta-analysis
- Selective serotonin reuptake inhibitors and the risk of type 2 diabetes mellitus in youths
- Serotonin Syndrome Mimicking Intrathecal Baclofen Withdrawal in a Patient with Hereditary Spastic Paraparesis
- Joint replenishment of zinc and folic acid enhances the anti-depressive effect of paroxetine via increasing serum calcium and copper and decreasing serum arsenic
- Paroxetine ameliorates prodromal emotional dysfunction and late-onset memory deficit in Alzheimer's disease mice

Paroxetine is a **selective serotonin reuptake inhibitor (SSRI)** primarily used as an antidepressant. It is commonly prescribed for conditions such as major depressive disorder, generalized anxiety disorder, obsessive-compulsive disorder (OCD), post-traumatic stress disorder (PTSD), and social anxiety disorder. By increasing serotonin levels in the brain, paroxetine helps improve mood, anxiety, and overall mental health.

Key Characteristics of Paroxetine

- **Mechanism of Action**: Paroxetine works by inhibiting the reuptake of serotonin, a neurotransmitter associated with mood regulation. This results in increased serotonin availability in the brain, which can help improve mood and reduce symptoms of anxiety and depression.
- **Indications**: Beyond depression, paroxetine is effective in treating conditions involving anxiety, PTSD, and OCD.
- **Side Effects**: Common side effects include nausea, dizziness, drowsiness, sweating, dry mouth, and sexual dysfunction. Like other SSRIs, it may also cause withdrawal symptoms if discontinued abruptly, so it’s usually tapered off gradually under medical supervision.
- **Precautions**: Paroxetine is generally not recommended during pregnancy, especially in the first trimester, due to potential risks to the fetus. It can also interact with other medications, so it's important for patients to discuss all medications they are taking with their healthcare provider.

Emerging Research on Paroxetine

Recent studies have explored potential secondary effects of paroxetine outside its use as an antidepressant. For example, its role as a **P2X4 purinoceptor inhibitor** has been linked to vascular effects, with studies suggesting it may inhibit the growth of cerebral aneurysms and reduce recurrence (recanalization) post-coiling procedures [1]. These findings, if validated, could position paroxetine as a candidate for managing aneurysm growth and recurrence, potentially extending its applications beyond psychiatry into neurology and vascular medicine.

1)
Fukuda S, Niwa Y, Ren N, Yonemoto N, Kasahara M, Yasaka M, Ezura M, Asai T, Miyazono M, Korai M, Tsutsumi K, Shigeta K, Oi Y, Nishimura A, Fukuda H, Goto M, Yoshida T, Fukuda M, Yasoda A, Iihara K. Effects of paroxetine, a P2X4 inhibitor, on cerebral aneurysm growth and recanalization after coil embolization: the NHO Drug for Aneurysm Study. J Neurosurg. 2024 Oct 25:1-8. doi: 10.3171/2024.6.JNS24714. Epub ahead of print. PMID: 39454214.