

mixed pathology. Cocktail therapy targeting various misfolded proteins may be necessary for a cure. DMTs have limited use as most patients are diagnosed with advanced DLB. Sensitive diagnostic biomarkers with high specificity are required for accurate DLB diagnosis in the prodromal phase, a critical window for protein misfolding reversal with DMT.

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## Glucagon-Like Peptide-1 Receptor Agonists in Cognitive and Mental Health Disorders: A Comprehensive Review of Pre-Clinical and Clinical Evidence

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**Aims:** Glucagon-like peptide-1 receptor agonists (GLP-1RAs) such as semaglutide are considered breakthrough drugs in the management of diabetes and obesity. Beyond their metabolic benefits, these pharmacological agents interact with biological pathways that may influence brain function, and are therefore increasingly being investigated for possible repurposing in psychiatric and neurological disorders. This review aims to synthesise pre-clinical and clinical evidence on the effects of GLP-1RAs across a range of cognitive and mental health conditions, comprehensively assessing their therapeutic potential and translational implications for psychiatric practice.

**Methods:** A systematic literature search was conducted across multiple databases, using a broad search algorithm to maximise the scope of the evidence synthesis. Two researchers independently screened titles and abstracts, assessed full texts for eligibility, and extracted relevant data. Results were considered in a narrative and visual synthesis based on emerging categories: studies were divided into mechanistic and clinical evidence, and organised based on broad diagnostic domains (cognitive disorders, substance use disorders, psychotic disorders, mood and anxiety disorders, and eating disorders). Clinical evidence, including meta-analyses, randomised controlled trials (RCTs), and observational studies, was critically appraised and ranked by hierarchy of evidence.

**Results:** The main themes emerging from the 280 pre-clinical and 96 clinical studies identified consist of the potential benefits of GLP-1RAs in neurocognitive disorders (reducing dementia risk and cognitive impairment in various cohorts) and in substance use disorders. Mechanistic evidence suggests these are mediated through their multimodal neuroprotective effects (including via anti-inflammatory pathways) and by dopaminergic modulation of reward mechanisms, respectively. In psychotic disorders, GLP-1RAs primarily mitigate antipsychotic-induced metabolic side effects, with minimal evidence for direct effects on psychosis itself. Findings in mood and anxiety disorders are inconclusive, with some studies reporting antidepressant properties while others show no clear benefit. Evidence in eating disorders is scarce, but suggests

GLP-1RAs may influence binge-eating behaviour, aligning with pre-clinical findings on their influence on appetite and reward regulation.

**Conclusion:** Extensive pre-clinical literature on GLP-1RAs provides strong mechanistic support for their putative benefits in Psychiatry, particularly in cognitive and reward-related disorders. However, clinical studies have yet to fully confirm these effects, highlighting the need for high-quality, targeted trials to distinguish direct mental health effects from secondary metabolic improvements. As enthusiasm about the promise of GLP-1RAs continues to grow in both the scientific community and in the media, it is crucial to approach their adoption in Psychiatry cautiously, and focus on robust translational research to establish their long-term efficacy and safety in patients with mental health conditions.

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## Impulse Control Disorders and Other Compulsive Behaviours in Parkinson's Disease – What Is Current Evidence of Treatment?

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**Aims:** Parkinson's disease (PD) is a progressive neurodegenerative disorder that primarily affects motor function but also impairs cognitive and emotional regulation. Dopaminergic therapy, commonly used to treat motor symptoms, can lead to complications such as impulse control disorders (ICDs), compulsive behaviours, and dopamine dysregulation syndrome (DDS). These complications often result in significant deterioration of patients' quality of life. This dissertation aims to investigate effective interventions for managing ICDs and compulsive behaviours in PD patients on dopaminergic treatment while minimizing the risks of motor symptom deterioration and other neuropsychiatric consequences.

**Methods:** This systemic literature review examines a wide range of interventions for managing ICDs and compulsive behaviours in PD patients. A comprehensive search was conducted across major medical and psychological databases to identify studies evaluating pharmacological and non-pharmacological treatments. The review focused on interventions such as clonidine, atomoxetine, cognitive behavioural therapy (CBT), and subthalamic nucleus deep brain stimulation (DBS). Inclusion criteria were studies published in peer-reviewed journals within the last two decades that specifically addressed the treatment of ICDs and compulsive behaviours in PD patients receiving dopaminergic therapy.

**Results:** The review found that several interventions show promise in managing ICDs and compulsive behaviours without exacerbating motor symptoms. Clonidine and atomoxetine, both of which affect norepinephrine pathways, have been identified as potentially effective pharmacological options for controlling impulsivity and compulsive behaviours. CBT has been highlighted as an effective psychological intervention, particularly in improving patients' coping mechanisms and reducing maladaptive behaviours. Additionally, deep brain stimulation of the subthalamic nucleus has demonstrated positive effects on reducing impulsivity in PD

patients, though its use remains primarily for motor symptom management. However, the evidence remains inconclusive regarding the optimal approach for balancing treatment of both motor and non-motor symptoms.

**Conclusion:** The management of ICDs and compulsive behaviours in PD patients remains complex due to the delicate balance between controlling motor symptoms and minimizing dopaminergic side effects. While pharmacological interventions such as clonidine and atomoxetine, as well as non-pharmacological treatments like CBT and DBS, offer potential benefits, further research is needed to refine these approaches. Additionally, more tools are required for the comprehensive risk assessment of ICDs and compulsive behaviours to guide clinicians in tailoring treatments that safeguard both motor function and mental well-being, ultimately improving patient quality of life.

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## Memantine in Psychiatry: An Underutilized Therapeutic Breakthrough?

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**Aims:** Memantine, an N-methyl-D-aspartate receptor antagonist, is primarily approved for the treatment of Alzheimer's disease and other forms of dementia. However, multiple studies have explored its potential applications in psychiatric disorders. This literature review aims to evaluate existing evidence on the efficacy of memantine in conditions such as trichotillomania, skin picking disorder, depression, bipolar disorder, obsessive-compulsive disorder, ADHD, autism spectrum disorder, substance use disorder, schizophrenia, and reducing cognitive effects of electroconvulsive therapy. The review hypothesizes that, based on available literature, memantine may have therapeutic potential across these psychiatric disorders, particularly as an adjunct treatment.

**Methods:** A literature search was conducted using PubMed from 2020 to 2025 (5 years), employing the search strategy ((Memantine) AND (Psychiatry)) NOT (Dementia). This literature review was conducted by screening 27 searched titles. The inclusion criteria encompassed systematic reviews, meta-analysis and randomised controlled trials. Exclusion criteria included animal and cell studies, case studies, reviews, editorials, case reports, and letters to editors. A total of 23 papers were included in this review and 4 were excluded as they focused on conditions outside the scope of this review.

**Results:** Emerging evidence from the 23 selected studies (9 RCTs, 8 systematic reviews, 2 meta-analyses, and 4 combined systematic reviews with meta-analyses) suggests that memantine may be beneficial across various psychiatric disorders, particularly as an adjunct. Most of the available literature points towards a positive response of using memantine in conditions like trichotillomania, skin picking disorder, depression, bipolar disorder, obsessive-compulsive disorder, ADHD, autism spectrum disorder, substance use disorder, schizophrenia, mitigating cognitive effects of electroconvulsive therapy, and other conditions. However, the number of studies per disorder that met the inclusion criteria was limited. This highlights the lack of extensive research for individual disorders and the need for further clinical validation.

**Conclusion:** Memantine's NMDA receptor antagonism offers a promising yet underexplored therapeutic approach in psychiatry.

While preliminary findings suggest potential benefits across multiple psychiatric disorders, the number of high-quality studies per condition remains very limited, with most disorders represented by only three or four studies meeting the inclusion criteria. This underscores the need for more randomized controlled trials with larger sample sizes to validate its efficacy, refine dosing strategies, and assess long-term safety. Expanding research in this area is crucial to clarify memantine's role in psychiatric practice and prevent its underutilization.

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## Comparing Hormone Therapies in Peri- and Post-Menopausal Women With Psychosis: A Literature Review

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**Aims:** The menopausal transition, marked by a sharp decline in oestrogen, is increasingly recognised as a critical period for new onset of psychosis or worsening symptoms in women with pre-existing schizophrenia, yet treatment strategies remain largely overlooked. Oestrogen's profound neuroprotective effects – modulating dopaminergic, serotonergic, and glutamatergic pathways, and mediating neural apoptosis – suggest that hormone-based therapies could revolutionize the management of menopause-associated psychosis (MAP) and exacerbation of pre-existing schizophrenia in peri- and post-menopausal women. However, concerns over the long-term risks of hormone replacement therapy (HRT), including breast and uterine cancer and cardiovascular disease, have hindered its widespread adoption. In contrast, the emergence of selective oestrogen receptor modulators (SERMs) have offered a novel, safer alternative with a potentially broader therapeutic window. This review synthesises the current evidence, explores the differential efficacy of hormone therapies including HRT and SERMs, compares response between the above populations of peri- and post-menopausal women with psychosis, and identifies gaps in the literature that warrant further investigation. To our knowledge, this is the first literature review specifically comparing efficacy of HRT vs SERMs in the peri- and post-menopausal population of women with psychosis.

**Methods:** To address the questions posed about (1) efficacy of SERMs vs HRT in (2) menopause-associated psychosis vs menopausal women with pre-existing schizophrenia, the authors searched PubMed databases from years 1990 to 2025, with various combinations of the following terms: schizophrenia, late-onset schizophrenia, psychosis, late-onset psychosis, menopause, perimenopause, postmenopause, menopause-associated psychosis, oestrogen, estradiol, raloxifene, HRT, and SERMs. Over 743 relevant abstracts were found, and narrowed down to 72 reviews and experimental studies to be included in this review. Studies were selected based on their applicability to answer the authors' questions.

**Results:** This comprehensive review reveals that both HRT and SERMs significantly alleviate not only psychotic but also cognitive and negative symptoms, with SERMs demonstrating superior long-term safety and sustained efficacy, as well as a longer therapeutic window of action. Crucially, differences in treatment response between menopause-associated psychosis and pre-existing