Olanzapine for Children and Adolescents with Anorexia Nervosa: A narrative synthesis of efficacy, safety and NHS applicability (2000 – 2025)

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Introduction

Anorexia nervosa (AN) is a severe psychiatric disorder with the highest mortality of any mental illness. While psychological therapies such as Family Therapy remain first-line, up to 30% of adolescents experience partial or non-recovery, prompting interest in adjunctive pharmacological options. Olanzapine, an atypical antipsychotic associated with reduced cognitive rigidity and anxiety, and restorative weight gain is increasingly used off-label in adolescent AN despite limited evidence and lack of NICE endorsement. This review synthesised international research on Olanzapine use in under-18s with AN, appraising efficacy, safety, tolerability and relevance to UK NHS practice.

Methodology

Structured searches of CINAHL Ultimate, EMBASE and Cochrane databases (2000 – 2025) identified peer-reviewed studies examining Olanzapine in patients under 18 with AN. Eligible designs included RCTs, open-label and observational studies, case series, audits and guidelines. Data were narratively synthesised to explore efficacy, adverse effects, and implementation within NHS CAMHS.

Results

Thirty-six studies met inclusion criteria. Evidence from adolescent RCTs (e.g., Kafantaris et al., 2011; Said et al., 2025) was limited and underpowered, showing modest BMI gains and variable psychological benefit. Open-label and naturalistic studies (e.g., Spettigue & Norris 2018; Pruccoli et al., 2022; Karwautz et al., 2023) demonstrated more consistent short-term improvements in BMI and reductions in anxiety and rigidity, particularly at low doses (2.5 – 5mg/day). Sedation, appetite increase, and mild metabolic changes were common but generally reversible; a single case of neuroleptic malignant syndrome was reported. Adherence improved when families were engaged in shared decision-making and monitoring. UK data indicate off-label prescribing continues in specialist CAMHS, highlighting a gap between clinical practice and formal guidance.

Summary of Evidence*

*Simplified for poster presentation

Study Type	Key Findings	Limitations
RCTs (e.g. Kafantaris 2011; Said 2025)	Small samples; modest BMI gain; inconsistent psychological change	Underpowered; short follow-up
Open-label / naturalistic (e.g. Spettigue 2018; Pruccoli 2022; Karwautz 2023)	Low-dose (2.5–5 mg) associated with BMI ↑ and ↓ anxiety/rigidity	No control groups
Case reports / audits	Some positive weight and mood changes; rare adverse events	Anecdotal evidence
Guidelines (NICE, RCPsych, Maudsley)	Olanzapine not routinely recommended; can be considered in severe cases within MDT	Evidence limited

References

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Discussion

Current evidence supports cautious, short-term, low-dose Olanzapine use as an adjunct to multidisciplinary care in treatment-resistant adolescent AN. Benefits appear greatest in reducing pre-meal anxiety and rigidity rather than producing sustained weight restoration. However, findings are constrained by small sample sizes, short follow-up and heterogeneous measures.

Conclusions

Within NHS CAMHS, safe prescribing requires Consultant oversight, family consent, and metabolic monitoring per RCPsych QED standards and NICE NG69/NG219. Further UK-based, adequately powered RCTs are needed to clarify efficacy, acceptability, and long-term outcomes.

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