

# Neuroleptics

Antipsychotics, also known as neuroleptics, are a class of psychotropic medication primarily used to manage psychosis (including delusions, hallucinations, paranoia, or disordered thought), principally in schizophrenia but also in a range of other psychotic disorders.

Antipsychotic-induced [weight gain](#) is associated with alterations to the composition of the [gut microbiota](#). The purpose of the study was to determine the effect of probiotics plus dietary fiber on antipsychotic-induced weight gain.

Study design: Two sequential, randomized clinical trials were conducted. In Study 1, 90 drug-naïve, first-episode schizophrenia patients were randomized to receive either olanzapine plus probiotics or olanzapine monotherapy for 12 weeks. In Study 2, 60 drug-naïve, first-episode schizophrenia patients were randomly assigned to receive either olanzapine plus probiotics and dietary fiber or olanzapine monotherapy for 12 weeks.

Study results: In Study 1, no significant differences in weight gain were observed between the two groups. The insulin resistance index (IRI) was lower in the olanzapine plus probiotics group compared with the olanzapine monotherapy group at week 12 (estimated mean difference, -0.65, [95% confidence interval (CI), -1.10 to -0.20];  $p = .005$ ). In Study 2, weight gain was lower in the probiotics plus dietary fiber group than in the olanzapine monotherapy group at week 12 (estimated mean difference -3.45 kg, [95% CI, -5.91 to -1.00];  $p = .007$ ). At week 12, IRI increased significantly in the olanzapine monotherapy group (mean, 1.74; standard deviation (SD) = 1.11,  $p < .001$ ), but not in the olanzapine plus probiotics and dietary fiber group (mean 0.47, SD = 2.16,  $p = .35$ ) with an estimated mean difference of -0.95 between the two groups [95% CI, -1.77 to -0.14];  $p = .022$ ).

These results provide support for the efficacy and safety of probiotics plus dietary fiber in attenuating antipsychotic-induced weight gain in drug-naïve, first-episode [schizophrenia](#) patients <sup>1)</sup>.

1)

Huang J, Kang D, Zhang F, Yang Y, Liu C, Xiao J, Long Y, Lang B, Peng X, Wang W, Wang X, Liu F, Davis JM, Zhao J, Wu R. Probiotics Plus Dietary Fiber Supplements Attenuate Olanzapine-Induced Weight Gain in Drug-Naïve First-Episode Schizophrenia Patients: Two Randomized Clinical Trials. *Schizophr Bull.* 2022 May 15;sbac044. doi: 10.1093/schbul/sbac044. Epub ahead of print. PMID: 35569003.

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