



Metformin for the Treatment of Type 2 Diabetes in Asian Adults: A Systematic Review

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- Type 2 diabetes (T2D) is three times more common in Asian than Western population, occurs at a younger age, at lower body mass index (BMI) of 23 kg/m², at lower lean muscle mass, and has worse trajectory and prognosis than Western population.
- This systematic review evaluated the safety and efficacy of metformin monotherapy and combination therapy (included oral GLDs such as sulphonylureas, thiazolidinedione, SGLT2i, and DPP4i, or injectable GLDs (insulin and GLP-1RA) in Asian adults.
- Metformin is glucose lowering drug (GLD) which exerts its glucose-lowering effects by inhibiting increased hepatic gluconeogenesis and improving peripheral glucose uptake and utilization and also associated with a low risk of hypoglycemia and lactic acidosis. Further metformin is also recommended in people with prediabetes along with lifestyle modification, especially in younger adults with risk factors for diabetes such as obesity), or impaired fasting glucose (IFG), or impaired glucose tolerance (IGT) with 2-h plasma glucose (2-h PG).
- Metformin monotherapy and combination therapy were associated with minimal gastrointestinal adverse events (AEs). However, none of the AEs were serious enough to require treatment discontinuations.

Metformin monotherapy may be initiated and continued in treatment naïve Asian patients with T2D and/or obesity if the monotherapy is adequate for achieving glycemic control. Sulphonylurea, DPP4i, SGLT2i, insulin and GLP-1RA may be added for better glycemic control for those who fail on monotherapy.

