

# Effectiveness of Glimepiride and Metformin Fixed-dose Combination Therapy in Patients with Type 2 Diabetes and Comorbidities

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## Abstract

Type 2 diabetes mellitus (T2DM) is a prevalent metabolic disorder characterized by insulin resistance and  $\beta$ -cell dysfunction. Among available pharmacologic options, the combination of glimepiride, a sulfonylurea and metformin, a biguanide is widely used in India for its complementary mechanisms, enhancing insulin secretion and improving insulin sensitivity. The present study explores the clinical rationale, efficacy, safety, and real-world application of this fixed-dose combination in patients with T2DM, particularly those with comorbidities such as dyslipidemia and hypertension. Clinical evidence supports its ability to lower fasting plasma glucose, post-prandial glucose, and hemoglobin A1c while improving lipid profiles and maintaining weight neutrality when appropriately dosed. A structured expert opinion survey conducted among Indian clinicians affirmed its widespread use, affordability, tolerability, and patient adherence. Most clinicians preferred a dose of glimepiride 1 mg with metformin 500 mg, citing consistent glycemic and modest lipid improvements, minimal gastrointestinal side effects, and cardiovascular safety. The fixed-dose combination was considered, especially valuable in polypharmacy settings due to improved compliance. Although its direct effects on blood pressure were minimal, the combination was effective in reducing overall cardiometabolic risk. Experts emphasized its role in both early and long-standing T2DM management. The findings underscore the practical utility of the glimepiride–metformin combination in real-world settings and highlight its relevance in the Indian healthcare context, especially in resource-limited environments.

**Key words:** Cardiovascular safety, Dyslipidemia, Fixed-dose combination, Glimepiride, Glycemic control, Metformin, Real-world evidence, Type 2 diabetes mellitus

## INTRODUCTION

Dysregulation of protein, lipid, and carbohydrate metabolism is a characteristic of type 2 diabetes mellitus (T2DM), which is caused by either insulin resistance, reduced insulin production, or a combination of both.<sup>[1]</sup> Among the three main types of diabetes, T2DM is significantly more prevalent than either type 1 DM or gestational diabetes mellitus, accounting for over 90% of

all cases.<sup>[1]</sup> Tight regulation of the molecular mechanisms behind insulin synthesis and release, as well as the tissue's insulin response, is necessary to ensure that insulin action and release precisely meet the body's metabolic requirements. Thus, a metabolic imbalance that leads to the pathophysiology of T2DM may arise from abnormalities in any of the involved systems.<sup>[2]</sup> T2DM is strongly associated with obesity, particularly excess abdominal fat, which contributes to insulin resistance through increased release of free fatty acids and imbalances in adipokines, promoting inflammation.<sup>[3]</sup> Major contributors to the global rise in T2DM include growing obesity, sedentary behavior, high-calorie diets, and aging populations.<sup>[2]</sup> Organs, including the brain, small intestine, kidneys, liver, skeletal muscle, adipose tissue, and pancreas, are implicated in the pathophysiology of T2DM.<sup>[4]</sup> Epidemiological evidence shows an increasing worldwide burden. In 2019, 4.2 million deaths were

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attributed to diabetes, which affected 463 million adults between the ages of 20 and 79. By 2045, this figure is expected to surpass 700 million. At least USD 720 billion was spent on diabetes-related medical expenses in that same year. Approximately 232 million people with diabetes are undiagnosed, which is alarming. The majority of cases affect people between the ages of 40 and 59, and more than 80% reside in low- and middle-income nations, making illness management more challenging.<sup>[2]</sup>

## PHARMACOLOGICAL OVERVIEW

Metformin hydrochloride, a biguanide-class agent, is the most widely prescribed oral glucose-lowering medication globally and is commonly regarded as the cornerstone of initial therapy for individuals newly diagnosed with T2DM.<sup>[5,6]</sup> Its widespread use is attributed to its strong efficacy in lowering blood glucose, affordability, weight-neutral effect, favorable safety profile, particularly the minimal risk of hypoglycemia, and modest yet supportive evidence indicating cardiovascular (CV) protective benefits.<sup>[6]</sup> Most clinical guidelines recommend metformin as the first-line therapy for individuals who fail to achieve glycemic control through diet and lifestyle modifications alone.<sup>[7]</sup> Metformin is highly effective in combination therapies, which have become standard in managing T2DM due to progressive  $\beta$ -cell dysfunction. Its unique mechanism and low risk of hypoglycemia make it compatible with all other glucose-lowering drugs, and it is the most frequently used agent in fixed-dose combination (FDC) formulations.<sup>[8]</sup>

Glimepiride is a second-generation sulfonylurea that causes the pancreatic  $\beta$ -cells to secrete more insulin. It also has extrapancreatic benefits, like improving peripheral tissues' sensitivity to insulin, which helps to enhance glycemic control.<sup>[9]</sup> Glimepiride efficiently lowers the levels of glycated hemoglobin (HbA1c), postprandial glucose (PPG), and fasting plasma glucose (FPG).<sup>[8]</sup> It can be used either alone or in combination with other antihyperglycemic medications, such as insulin and Metformin, for patients whose blood sugar levels are not sufficiently managed by dietary and lifestyle changes.<sup>[8,10,11]</sup> Glimepiride, like all sulfonylureas, carries a risk of hypoglycemia. However, evidence suggests that when compared to older agents such as Glibenclamide, it may present a relatively lower risk due to more predictable pharmacokinetics and the ability to use lower effective doses. Glimepiride has a safer profile in individuals with CV disease since it does not negatively impact ischemia preconditioning, in contrast to certain sulfonylureas.<sup>[12]</sup> Glimepiride is a cost-effective option for T2DM management, particularly beneficial in resource-limited settings.<sup>[9]</sup>

## RATIONALE OF COMBINATION THERAPY

- Complementary mechanisms of action: Metformin primarily decreases hepatic glucose production and enhances peripheral insulin sensitivity, addressing insulin resistance. Glimepiride targets insulin insufficiency by stimulating pancreatic  $\beta$ -cells to secrete more insulin. Their combination aims to tackle both core defects of T2DM. Figure 1 shows the combined synergistic mechanism and clinical advantages of Metformin and Glimepiride therapy<sup>[13]</sup>
- Enhanced glycemic control: A study by Charpentier *et al.* demonstrated that patients receiving the combination therapy experienced more significant reductions in fasting blood glucose and HbA1c levels compared to those on monotherapy, indicating superior glycemic control<sup>[8]</sup>
- Improved lipid profile: Beyond glycemic parameters, the combination therapy group showed favorable changes in lipid profiles, including decreased total cholesterol, triglycerides, and LDL cholesterol, along with increased HDL cholesterol levels, suggesting added CV benefits<sup>[14]</sup>

## IMPACT ON COMORBIDITIES

- Hypertension: While the glimepiride–metformin combination effectively improves glycemic control, its direct impact on blood pressure is less pronounced. In a 12-month, double-blind, randomized clinical trial, Derosa *et al.* found that combining glimepiride with Metformin did not result in significant improvements in blood pressure among T2DM patients with metabolic syndrome. Conversely, the combination of rosiglitazone and metformin showed notable blood pressure reductions.<sup>[15]</sup>
- Dyslipidaemia: The combination therapy has demonstrated favorable effects on lipid profiles. A study by Pareek *et al.* reported that Metformin combined with Glimepiride significantly improved dyslipidemia in drug-naïve T2DM patients, with reductions in total cholesterol and triglycerides and an increase in HDL cholesterol levels.<sup>[16]</sup>
- CV risk: Glimepiride, when used judiciously, does not appear to elevate CV risk. A prospective cohort study by He *et al.* indicated that Glimepiride use is associated with reduced CV mortality in patients with T2DM and chronic heart failure.<sup>[17]</sup> The following figure [Figure 2] provides a detailed overview of the key factors contributing to CV risk in T2DM and their interrelated effects.<sup>[2]</sup>
- Obesity: While weight neutrality is generally attributed to Metformin, the addition of Glimepiride at lower

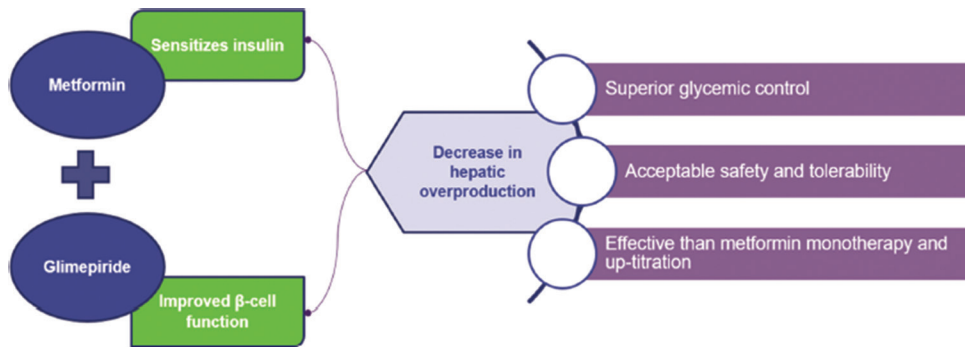


Figure 1: Synergistic mechanisms and therapeutic benefits of the metformin-glimepiride combination

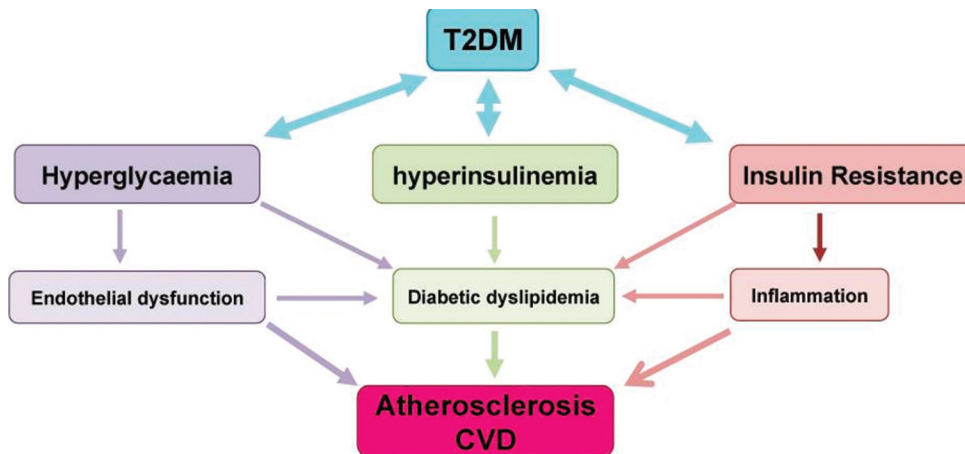


Figure 2: Factors contributing to cardiovascular risk in type 2 diabetes mellitus and their inter-relationships

doses may mitigate the weight gain commonly associated with sulfonylureas. A study observed that <10% of patients experienced weight gain when treated with the Glimepiride-Metformin FDC.<sup>[18]</sup>

### DOSAGE TRENDS

Among available FDCs of glimepiride and metformin, the 2 mg/500 mg strength is the most frequently prescribed, followed by 1 mg/500 mg and 0.5 mg/500 mg, according to Sahay *et al.* This trend reflects clinical preferences for moderate starting doses that ensure efficacy while minimizing hypoglycemia risk.<sup>[19]</sup> According to another study by Sheikh *et al.*, the most often prescribed combination was glimepiride 2 mg and metformin 500 mg (30.2%), subsequently followed by glimepiride 2 mg and metformin 1000 mg (26.0%).<sup>[20]</sup>

### SAFETY AND TOLERABILITY

The Glimepiride-Metformin combination is well-tolerated with a low risk of hypoglycemia and GI side effects when appropriately dosed. A study by Sinha *et al.*, evaluating the

use of Glimepiride and Metformin combinations, found that hypoglycemia was reported in only 6.5% of overweight patients and 6.0% of obese patients. Furthermore, 90.3% of overweight and 89.1% of obese individuals did not experience any weight gain during treatment.<sup>[18]</sup>

A comparative study by Vijayakumar *et al.* highlighted the importance of dose optimization in minimizing adverse effects associated with diabetes therapy. It indicated that the incidence of hypoglycemia and GI side effects were notably higher in the high-dose Metformin group, suggesting that appropriate dosing can significantly reduce such complications.<sup>[21]</sup>

As part of this study, a structured expert opinion survey was conducted among clinicians across India to gather insights into the real-world use of glimepiride-metformin combination therapy in T2DM patients with comorbidities such as hypertension and dyslipidemia. The responses highlighted its widespread adoption due to its efficacy in glycemic control, favorable CV and lipid effects, cost-effectiveness, and impact on treatment adherence. Clinicians also emphasized its utility in both early-stage and long-standing diabetes, particularly in patients requiring polypharmacy.

## METHODOLOGY

A structured, questionnaire-based expert opinion survey was conducted among practicing clinicians across India with experience in managing patients with T2DM and associated comorbidities. The survey consisted of multiple-choice and opinion-based questions covering key aspects of the Glimepiride-Metformin combination, including its efficacy, safety, tolerability, impact on lipid profiles, and suitability in comorbid conditions such as hypertension and dyslipidemia. Responses were collected digitally over a defined period and analyzed to identify trends and consensus in real-world clinical practice.

## EXPERT OPINION

1. Dr. Ligeesh Arumughan, MBBS, MD General Medicine, Consultant Physician, Changaramkulam

In my clinical experience, the combination of Glimepiride and Metformin is widely used in India due to its effectiveness in achieving glycemic control by addressing insulin secretion defects and insulin resistance. I support its use, especially in patients with comorbidities, as glimepiride has been associated with reduced all-cause and CV mortality. However, I believe the combination offers only moderate benefits in managing glycemia and associated risks in such patients. My preferred dose is glimepiride 1 mg with metformin 500 mg, and I have observed improvements in both lipid and glucose levels throughout my practice. Although I have not used it extensively in patients with comorbid conditions, I have noticed promising glycemic outcomes in the general patient population. The combination improves patient convenience and adherence while lowering FPG, PPG, and HbA1c levels. In addition, it is well-tolerated, with a low rate of GI side effects and good absorption. Overall, I found that the fixed-dose glimepiride/metformin 2/500 mg combination improves compliance, particularly in patients on multiple medications.

2. Dr. Jijun M Ignatius, MBBS, MD, DNB General Medicine and Diabetologist, Consultant Physician, Ernakulam

Based on my clinical experience, I have found that the Glimepiride and Metformin combination is highly effective for glycemic control. It addresses both insulin secretion abnormalities and resistance, making it ideal for long-standing T2DM. I prefer using the 1 mg/500 mg dose in most cases. I have observed improvements in lipid profiles, especially in patients with dyslipidemia. It is well tolerated, with fewer

GI side effects. For patients with comorbidities such as hypertension, this combination works reliably. I also value its CV safety profile. It is cost-effective and enhances adherence. The fixed-dose format is helpful for those on polypharmacy.

3. Dr. Abhishek Vaidya, MBBS, DNB - ENT, MS - ENT, Fellowship in Head and Neck Surgery, Senior Consultant, Oncosurgeon, Nagpur

According to my observations, the combination of Glimepiride and Metformin is frequently used in India because it effectively lowers blood sugar levels by acting on insulin resistance and secretion. This affordable combination becomes a reliable choice for long-term management because monotherapy frequently fails to keep up with the progression of the disease. I have observed significant outcomes in patients with comorbidities and poorly controlled diabetes. Glimepiride is typically safe, even for people who are at risk of hypoglycemia and has been linked to lower CV and all-cause mortality. For its balance of effectiveness and tolerability, I prefer the 500 mg dose of metformin with 1 mg of glimepiride. I have observed improvements in lipid and glycemic profiles in people with dyslipidemia. This combination successfully lowers FPG, PPG, and HbA1c while increasing adherence and lowering costs. It also reduces CV risk. Absorption is good, and GI side effects are low. Among patients taking several drugs, the 2/500 mg FDC has increased compliance. Overall, this combination remains a good choice for regular diabetes treatment.

4. Dr. Karol Joseph  
Cardiologist, Ernakulam

Based on my experience, the glimepiride and metformin combination is highly effective in improving glycemic control, especially in patients with comorbidities. The association of Glimepiride with reduced all-cause and CV mortality supports its use in such cases. I usually prescribe Glimepiride 1 mg with Metformin 500 mg, which balances efficacy with tolerability. In my practice, I have observed improvements in both lipid and glucose levels. This combination enhances patient convenience and adherence. Adding glimepiride to Metformin has consistently improved FPG, PPG, and HbA1c. It also has a low rate of GI side effects and is easily absorbed. The increased bioavailability contributes to better compliance. FDC of 2/500 mg further supports ease of use. Overall, it is a practical and effective approach to diabetes management.

5. Dr. Laxmikant Sahu, MBBS, MD Internal Medicine  
Consultant Physician, Raipur

According to my clinical observations, glimepiride and metformin are widely used in India because of their

long-term efficacy over monotherapy, cost-efficiency, capacity to tackle both insulin resistance and secretory difficulties, and effectiveness in glycemic management. This combination, in my opinion, reduces the burden of uncontrolled diabetes in practical applications. Glimepiride is safe for individuals who are at risk of hypoglycemia or who have comorbid conditions, including obesity and CV disease. It has also been linked to a lower risk of CV and all-cause mortality. In terms of risk reduction and glycemic control, I believe the combination provides modest but consistent advantages. Glimepiride 1 mg along with 500 mg of Metformin is my recommended dosage. I have noticed slight but significant reductions in lipid and glucose readings. In patients with dyslipidemia and hypertension, it offers effective management. The combination improves lipid profiles, glycemic control (HbA1c, FPG, and PPG), and CV risk while enhancing adherence and reducing costs. With good GI tolerance and bioavailability, it remains a reliable option for the treatment of T2DM with comorbidities.

6. Dr. Rita Patil, MBBS, MD  
Diabetologist, Indore

In my clinical practice, I find that the combination of Glimepiride with Metformin works well because of its dual effects on insulin resistance and secretion, cost-effectiveness, and reliable glycemic control. It provides modest but significant improvements for diabetes management, especially for those with concomitant conditions, including hypertension and dyslipidemia. I often prescribe 500 mg of Metformin with 1 mg of Glimepiride, and I have observed improvements in both glucose and lipid levels. The medication lowers CV risk, improves FPG, PPG, and HbA1c, and increases treatment adherence. It has few GI adverse effects, is well tolerated and the FDC increases patient adherence.

7. Dr. Vikas Garg, MBBS, MD - Social and Preventive  
Medicine/Community Medicine  
Physician, Ludhiana

Due to its low cost and dual effects on insulin production and resistance, the Glimepiride-Metformin combination is frequently employed in my clinical practice. Particularly for patients with dyslipidemia, I usually recommend 500 mg of metformin with 1 mg of glimepiride, which has shown small reductions in cholesterol and glucose levels. It effectively regulates blood sugar levels in patients with comorbid conditions, including hypertension and CV risk. The combination promotes better lipid management, lowers treatment costs, and improves adherence. It reduces CV risks and raises FPG, PPG, and HbA1c levels. In general, its tolerability and safety are good. FDC helps patients comply with their daily diabetes care.

8. Dr. Mahesh Kumar Upadhyaya, MD Medicine  
Uttar Pradesh

According to my clinical observations, glimepiride and metformin are a common combination in India because of their cost-effectiveness, capacity to treat insulin resistance and secretory abnormalities, and efficacy in glycemic management. The combination of glimepiride and metformin is effective in improving glycemic control and reducing risks, especially in patients with comorbidities. I prefer glimepiride 1 mg with Metformin 500 mg, which has shown slight improvements in lipid and glucose levels. However, glycemic control has been consistently good. The therapy reduces treatment costs, improves FPG, PPG, and HbA1c levels and offers higher bioavailability. FDC also enhances patient compliance, making it a practical choice in daily diabetes management.

9. Dr. Rajesh Kumar Rahul, MD Medicine  
General Physician, Patna

Based on my professional experience, I think that the combination of Glimepiride and Metformin works well together to improve glycemic management and lower related risks, particularly in patients with comorbid conditions such as dyslipidemia. Evidence suggests that the use of Glimepiride in such patients lowers CV and all-cause mortality. I usually prescribe 500 mg of Metformin and 1 mg of glimepiride, and I have seen improvements in lipid and glucose levels with this combination treatment. I have observed advantages in diabetic patients with comorbidities, and it has proven beneficial in attaining adequate glycemic control. A powerful way to improve control over FPG, PPG, and HbA1c levels is to combine glimepiride with metformin. This combination is also associated with higher bioavailability, contributing to improved clinical outcomes. Furthermore, I have observed that it significantly improves patient compliance, making it a practical and reliable option for diabetes management.

10. Dr. Suresh Kumar Khute, MD  
Gynaecologist and Obstetrician, Raipur

I have found that Glimepiride and Metformin work well together to manage diabetes by addressing insulin resistance and secretion. I believe that all of the above factors contribute to its widespread use, including its moderate glycemic control and risk reduction capabilities. Glimepiride is safe even for patients at high risk of hypoglycemia, which makes it a suitable choice for diverse patient populations. My preferred dose is Glimepiride 1 mg and Metformin 500 mg. I have observed similar improvements in lipid and glucose levels when using this combination, especially in patients with dyslipidemia.

I have also observed good glycemic control in diabetic patients with comorbidities, supporting its efficacy. In addition, the combination helps reduce treatment costs, making it more accessible for long-term use. The addition of glimepiride to metformin enhances glycemic control by improving FPG, PPG, and HbA1c levels. This therapy is well tolerated with minimal GI side effects and has higher bioavailability, ensuring better clinical outcomes. Finally, the FDC improves patient compliance, simplifying treatment regimens and making it a practical option for daily diabetes management.

11. Dr. Satanand Mishra, MBBS, MD  
General Physician, Chhattisgarh

I have found that Glimepiride and Metformin work well together to improve glycemic management and lower related risks, especially in people with comorbidities. In my experience, the success of Glimepiride–metformin lies in its ability to address both insulin resistance and secretion defects. The combination of 1 mg Glimepiride and 500 mg Metformin is particularly effective, offering modest improvements in glucose and lipid levels, especially in patients with dyslipidemia. I have consistently observed good glycemic control in diabetic individuals with comorbidities. The combination lowers FPG, PPG, HbA1c, and CV risks. Its safety profile, with minimal GI side effects and good absorption, enhances clinical efficacy. In addition, it reduces treatment costs and improves patient compliance, making it a practical choice for daily diabetes management.

12. Dr. Jyoti Shanker Pandey, MD Medicine  
General Physician, Madhya Pradesh

Based on my clinical experience, I find the combination of glimepiride and metformin to be highly effective in managing diabetes, particularly in patients with comorbidities. This combination improves glycemic control and helps reduce the risk of CV complications. Glimepiride, in combination with metformin 500 mg, is effective in improving lipid levels, particularly in patients with comorbidities and dyslipidemia. It enhances control over FPG, PPG, and HbA1c, offering valuable benefits in managing diabetes. It also reduces treatment costs and improves patient compliance by simplifying the regimen. Moreover, the combination is well tolerated, with minimal GI side effects, and offers better bioavailability, ensuring sustained efficacy and long-term patient adherence.

13. Dr. Deepak Jaiswal, MBBS, MD General Medicine,  
General Physician, Raipur

In my experience, glimepiride and metformin work well together to improve glycemic management and lower related risks, particularly in individuals with comorbid conditions

such as dyslipidemia. I recommend glimepiride 1 mg and metformin 500 mg combination because it significantly lowers blood sugar and cholesterol. Glimepiride effectively improves overall glycemic management and improves FPG, PPG, and HbA1c levels when combined with metformin. In addition to providing modest advantages in risk mitigation and glycemic control, this combination also lowers treatment expenses and improves patient compliance. Furthermore, it has few GI side effects and is well tolerated, which ensures improved adherence and long-term success in managing diabetes.

14. Dr. Vinitha Gadri Palappa, MBBS  
General Physician, Kerala

I believe that the combination of glimepiride and metformin offers moderate benefits in glycemic control and risk reduction. In my clinical practice, I have observed slight improvements in lipid and glucose levels with this combination therapy, particularly in patients with comorbidities such as dyslipidemia. I typically prescribe glimepiride 1 mg and metformin 500 mg because it provides good glycemic control in diabetic patients with comorbidities. The addition of Glimepiride to Metformin is an effective modality to improve FPG, PPG, and HbA1c levels, contributing to better overall glycemic control. Moreover, this combination helps reduce treatment costs and significantly improves patient compliance by simplifying the treatment regimen. All these factors make this therapy a valuable option for managing diabetes and its associated risks.

15. Dr. Alka P Gandhi, MBBS, Diploma in Diabetology  
Diabetologist, General Physician, Maharashtra

According to my clinical experience, Glimepiride and Metformin together improve glycemic management and reduce risks in diabetic patients with comorbidities. Glimepiride is a good choice because it is associated with lower CV and all-cause mortality. I usually administer 500 mg of metformin with 1 mg of glimepiride, as it improves glucose and lipid levels. Because the therapy is convenient, patients with comorbidities have greater adherence and good glycemic control. Glimepiride improves HbA1c, PPG, and FPG levels. It has a low frequency of GI adverse effects and is effectively absorbed. Its overall therapeutic efficacy is influenced by these characteristics. In my opinion, it is a trustworthy option for managing diabetes.

16. Dr. Sagar Vijay Kajbaje, MBBS, DNB  
Diabetologist, Thane

In my clinical experience, the glimepiride–metformin combination offers strong glycemic control by targeting

insulin resistance and secretion defects. Its efficacy, affordability, and long-term benefits support its widespread use in India. I typically prescribe glimepiride 1 mg with Metformin 500 mg, which delivers consistent results, especially in patients with dyslipidemia and comorbidities. The association of glimepiride with reduced CV and all-cause mortality adds value. The combination improves both glucose and lipid levels while enhancing CV safety. It is well tolerated with minimal GI side effects and good absorption. FDC improves compliance, making it a reliable therapy for T2DM.

17. Dr. Hardik Harish Thakker, MD  
General Physician, Maharashtra

My clinical experience has led me to believe that the combination of Glimepiride and Metformin is beneficial in treating T2DM, particularly in patients with other medical conditions. This combination improves FPG and PPG levels and enhances HbA1c control, with added CV benefits. The association of glimepiride with reduced all-cause and CV mortality further supports its use. I typically prescribe the 1 mg glimepiride and 500 mg metformin dose, which has shown good results, particularly in patients with dyslipidemia. The combination offers comprehensive metabolic benefits, improves patient adherence due to dosing convenience, and is well tolerated with minimal side effects. Overall, it plays a valuable role in optimizing real-world diabetes care.

18. Dr. Saba Samad Memon, MBBS, DM, MD  
Consultant Endocrinologist, Maharashtra

The Glimepiride and Metformin combination has proven to be quite successful in my clinical practice in attaining glycemic control while treating insulin resistance and abnormalities in insulin secretion. I think patients who are not adequately treated with monotherapy will benefit the most from this combination. This combination shows promising outcomes in patients with CV disease or obesity, where glimepiride is often a preferred choice. I commonly prescribe glimepiride 1 mg with metformin 500 mg for its balanced efficacy and tolerability. I have observed consistent improvements in both lipid and glucose levels in patients with dyslipidemia. It also proves to be effective in managing diabetes alongside comorbidities such as hypertension and CV risk. The therapy improves FPG, PPG and reduces HbA1c, offering CV benefits and is well tolerated. It is associated with a low rate of GI adverse events, effective absorption, and increased bioavailability. The FDC enhances patient adherence and compliance in real-world settings. Overall, it serves as a cost-effective, comprehensive strategy for managing type 2 diabetes with comorbidities.

19. Dr. Pooja Pardhi, MBBS, DNB  
General Physician, Diabetologist, Navi Mumbai

In my experience, Glimepiride and Metformin provide some benefits, such as better lipid profiles, CV advantages, and efficient glycemic control. I usually prescribe 500 mg of Metformin with 1 mg of Glimepiride, and I have seen comparable results in patients with comorbidities and dyslipidemia. Although glycemic control has many advantages, further empirical data would confirm its long-term effects. This combination has a good safety and tolerability profile, raises FPG, PPG, and HbA1c levels, and increases patient compliance due to the cost-effectiveness and convenience of fixed doses.

20. Dr. Sajera Nafeesa Beevi, MBBS, MD  
General Physician, Kerala

In my clinical practice, I find the combination of Glimepiride and Metformin to be highly effective in achieving glycemic control by addressing insulin secretion disorders and insulin resistance. I generally prescribe glimepiride 1 mg with metformin 500 mg and have observed slight improvements in lipid and glucose levels, particularly in patients with comorbidities. The combination is safe, even for those at high risk of hypoglycemia, and offers improved convenience that enhances adherence. It also demonstrates good tolerability with a low rate of GI side effects, effective absorption, and increased bioavailability. Although it may only somewhat improve compliance, the overall clinical benefits make it a valuable option in managing T2DM.

## CONCLUSION

In conclusion, this expert opinion survey highlights the widespread clinical endorsement of the Glimepiride-Metformin combination for the management of T2DM in India. Clinicians reported consistent improvements in glycemic parameters (HbA1c, FPG, and PPG), along with favorable effects on lipid profiles, particularly in patients with dyslipidemia. The 1 mg/500 mg fixed-dose formulation emerged as the preferred regimen due to its efficacy, tolerability, and CV safety. The combination is well tolerated, cost-effective, and enhances adherence, especially in patients with comorbidities and those on polypharmacy. These findings support its continued use as a practical and effective option for real-world T2DM management.

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