Use in specific population[9]:

- **Renal Impairment:**
  eGFR 30 to 45mL/minute/1.73m^2: Consider benefits/risks of continuing therapy. If continuing therapy, a dosage reduction of 50% (maximum: 1g/day) and monitoring of renal function every 3 months is recommended.
- **Hepatic Impairment:**
  Use cautiously in patients at risk for lactic acidosis (e.g., renal impairment, alcohol use).
- **Geriatrics:**
  The initial and maintenance dosing should be conservative, due to the potential for decreased renal function (monitor).

Contraindications[9]:

Hypersensitivity to metformin or any component of the formulation; severe renal dysfunction (eGFR <30 mL/minute/1.73 m^2); acute or chronic metabolic acidosis with or without coma (including diabetic ketoacidosis); severe hepatic dysfunction.

Precautions[9]:

- **Lactic Acidosis:**
  Discontinue immediately if lactic acidosis is suspected.
- **Heart Failure:**
  Avoid use in unstable or hospitalized patients with heart failure.
- **Vitamin B12 Concentrations:**
  Monitor vitamin B12 serum concentrations periodically with long-term therapy.
- **Bariatric Surgery:**
  Metformin ER tablets may have a reduced effect after gastric bypass or sleeve gastrectomy.

Major Drug Interactions[9]:

Cimetidine, Dolutegravir, Iodinated Contrast Agents, Patiromer, Ranolazine, Tafenoquine; for other Interactions, See Uptodate, Metformin monograph.

Reference:

1. Blonde et al. Gastrointestinal tolerability of extended-release metformin tablets compared to immediate-release metformin tablets: Results of a retrospective cohort study. Current Medical Research and Opinion. 2004. 20: 5057-
2. Donnelly L.A., Morris A.D., Pearson E.R. Adherence in patients transferred from immediate release metformin to a sustained release formulation: A populationbased study Diabetes, Obesity and Metabolism 2009 11:4 (338342-).
3. Gao et al. The metabolic effects of once-daily extended release metformin in patients with type 2 diabetes: a multicentre study. International Journal of Clinical Practice. 2008. 62:5 (695700-).
4. Timmins P, Donahue S, Meeker J Steady-state pharmacokinetics of a novel extended-release metformin formulation. Clin Pharmacokinet 2005; 44(7):72129-. Eldorado Doc ID 0900000d1805ceese
5. Giuseppe Derosa, Angela D'Angelo, Effects of metformin extended release compared to immediate release formula on glycemic control and glycemic variability in patients with type 2 diabetes; Drug Des Devel Ther. 2017; 11: 1481-1488; doi 10.2147/DDDT.S131670.
6. Dailymed, drug information of metformin hydrochloride tablet, May 31, 2018
7. FDA, Prescribing Information, Metformin ER,2008
8. Naresh Aggarwal, Anuj Singla, Chantal Mathieu, Metformin extended-release versus immediate-release: An international, randomized, double-blind, head-to-head trial in pharmacotherapy-naïve patients with type 2 diabetes; Diabetes Obes Metab. 2018 Feb; 20(2):463467-. Dot: 10.1111/dom.13104. Epub 2017 Oct 2.
9. Uptodate, drug information, metformin XR, 2019

www.faranshimi.com Tel: +98 (21) 57941000 Patient Care: +98 (21) 57941444 Faranshimi

Forbetmin

Metformin Hydrochloride Extended-Release Tablet 500mg

- Improved gastrointestinal tolerability compared to immediate release Metformin[1].
- Enhance patient adherence and subsequently improves glycemic control[2,3].
- Beneficial to patients with compensated heart failure.
- The overall absorption of Forbetmin ER and Metformin IR are the same, making them bioequivalent.

Keep Life Sweet

Forbetmin extended-release tablet, is designed to release metformin hydrochloride more slowly and gradually. This formulation is taken only once daily. Metformin ER formulation seems to be more effective than metformin IR in improving glyco-metabolic control, lipid profile, and levels of some adipocytokines in patients with type 2 diabetes mellitus[5].

Metformin causes side effects that affect the gastrointestinal (GI) system.

These side effects include diarrhea, nausea, vomiting, gas (flatulence), indigestion, and abdominal discomfort or stomach upset. Metformin IR also commonly causes fatigue or lack of energy (asthenia) as well as headaches. Metformin ER has fewer side effects compared to metformin IR[6].

	Metformin IR		Metformin ER	
Side Effect	**Applicable?**	**Frequency**	**Applicable?**	**Frequency**
Diarrhea	Yes	53%	Yes	10%
Nausea or vomiting	Yes	26%	Yes	7%
Flatulence	Yes	12%	Yes	1%-5%
Asthenia	Yes	9%	No	-
Indigestion	Yes	7%	Yes	1%-5%
Upset stomach	Yes	6%	Yes	1%-5%
Headache	Yes	6%	Yes	1%-5%
Constipation	No	-	Yes	1%-5%
Taste disturbance	Yes	1%-5%	Yes	1%-5%
Dizziness/lightheadedness	Yes	1%-5%	Yes	1%-5%

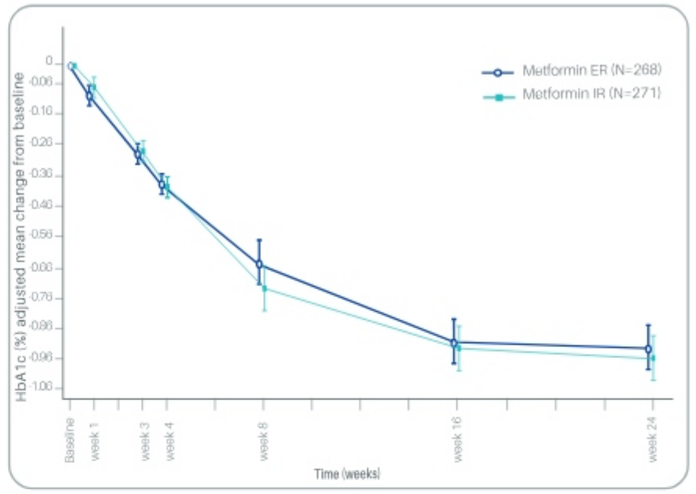
Dosing and Administration[7]

Dosage of Forbetmin must be individualized on the basis of both effectiveness and tolerance, while not exceeding the maximum recommended daily doses.

The maximum recommended daily dose of Forbetmin is 2g in adults.

The usual starting dose of Forbetmin in adults and children ≥10 years is 500 mg once daily with the evening meal. Dosage increases should be made in increments of 500 mg weekly.

☑ Metformin ER demonstrated efficacy and safety similar to that of metformin IR over 24 weeks, with the advantage of once-daily dosing[8].



Adjusted mean change in HbA1c (%) from baseline to week 24 for patients receiving twice-daily metformin IR or once-daily metformin ER (randomized data set), adjusted for baseline HbA1c, treatment group, time, baseline-by-time interaction and time-by-treatment group interaction and excluding data after rescue medication.

Conversion Recommendation[9]

Patients receiving metformin immediate-release may be switched to Forbetmin once daily at the same total daily dose, up to 2g once daily.

Pregnancy & Breast-Feeding[9]

- Metformin crosses the placenta; metformin may be used as an alternative agent in some patients requiring therapy for gestational diabetes mellitus or type 2 diabetes mellitus. Clearance of metformin may increase during pregnancy and dosing may need adjusted in some women when used during the third trimester.
- Metformin is present in breast milk. The decision to breastfeed during therapy should consider the risk of infant exposure, benefits of breastfeeding to the infant, and benefits of treatment to the mother. Metformin may be used in breastfeeding women.