Magnesium Hydroxide

Magnesium hydroxide is used as an antacid and osmotic laxative. Side effects include diarrhea and hypermagnesemia. Hypermagnesemia can present with hyporeflexia, hypotension, and cardiac arrest. Magnesium hydroxide should be administered carefully in patients taking other drugs because it is a chelating agent.



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Clinical Use

Antacid
Ant-acid-bottle
Magnesium hydroxide, also called milk of magnesia, works by neutralizing acid in the stomach, increasing pH inside the stomach and duodenal bulb. Magnesium hydroxide can be used to treat heartburn, acid indigestion, and upset stomach.

Osmotic Laxative
Water on Pooping-pill
Magnesium hydroxide works by drawing water into stool, resulting in softer stool, and triggers bowel movements within 30 minutes to 6 hours after administering it. Magnesium hydroxide is indicated for occasional constipation on a short-term basis in children and adults. Patients should drink a full glass of water when taking this drug.

Side Effect

Diarrhea
Toilet
Because of its laxative effect, diarrhea is an adverse event seen in patients taking magnesium hydroxide. The tendency to cause diarrhea makes most manufacturers combine it with aluminum hydroxide, which has a mild constipating effect. This diarrhea can result in dehydration.

Hypermagnesemia
Hiker-magnesium-magazine
Excess consumption of magnesium hydroxide can lead to hypermagnesemia, which is serum magnesium >2 mEq/L (>1 mmol/L).

Hyporeflexia
Hippo-reflex-hammer
Hyporeflexia is a neurological manifestation that can occur due to hypermagnesemia caused by magnesium hydroxide. Hypermagnesemia causes inhibition of acetylcholine release and voltage-dependent calcium channels in the presynaptic nerve. This inhibition decreases peripheral neuromuscular transmission. Hyporeflexia, seen as the consequence of this mechanism, is one of the earliest symptoms of hypermagnesemia.

Hypotension
Hippo-BP
Due to its calcium-antagonizing mechanism, the increased magnesium from magnesium hydroxide may reduce blood pressure. Hypermagnesemia also suppresses sympathetic ganglia and the effects of aldosterone, resulting in hypotension.

Cardiac Arrest
Heart Arrested
Cardiac arrest has been reported in patients with magnesium serum concentrations between 15–16 mEq/L. Respiratory depression and coma occur in adult patients with plasma magnesium concentrations of 10–14 mEq/L.

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Consideration

Chelating Agent

Cleats-on Agent

Magnesium is a divalent metal cation that can bind or chelate certain drugs, resulting in decreased absorption.

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