Metformin hcl 500 mg tablets side effects
Mechanism of action Metformin hydrochloride is a biguanide with antihyperglycaemic effects, lowering both basal and postprandial hyperglycaemia, improving peripheral and hepatic glucose utilization, reducing hepatic glucose production and delaying absorption of intestinal glucose. Metformin hydrochloride stimulates insulin-like growth factor 1 (IGF-1), which inhibits cellular proliferation, and stimulates the IGF-1 receptor, which plays a role in cell growth and survival. Metformin has also been shown to reduce the expression of insulin-like growth factor (IGF)-1 receptor (IGF-1R) in human hepatocellular carcinoma cells, which may explain its antiproliferative effect.

Pharmacological effects In clinical studies, the use of metformin has been shown to improve glycaemic control and reduce the risk of diabetes-related complications. Metformin has been shown to significantly reduce the absolute risk of any diabetes-related complications in the metformin group compared to the control group. The risk of cardiovascular disease was also significantly reduced in the metformin group compared to the control group. Metformin has also been shown to improve lipid profiles, reduce body weight, and improve insulin sensitivity.

Adverse reactions In clinical trials, the most common adverse reactions reported with metformin were gastrointestinal in nature, such as nausea, vomiting, and diarrhea. These adverse reactions were usually mild to moderate in severity and did not require discontinuation of therapy. Other adverse reactions reported included hypoglycaemia, lactic acidosis, hepatobiliary disorders, and skin disorders.

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