Metoclopramide is a drug from the group of prokinetic drugs used in the treatment of functional gastrointestinal diseases. Studies have shown that Metoclopramide is effective in treating the following conditions:

- Vomiting that occurs after surgery
- Radiation sickness
- Drug-induced nausea (e.g. anti-neoplastic drugs often cause nausea)

The exact mechanism of action is unknown, but it is believed that it works by antagonizing the effects of dopamine which prevents the inhibition of stomach smooth muscles. Pinder Rm. et al suggest that Metoclopramide relieves symptoms in the following conditions:

- Vertigo
- Hiccups
- Dyspepsia
- Gastroesophageal reflux

**Precautions**

The main limiting factor for the use of this drug is the possible occurrence of extrapyramidal syndrome, which is manifested by following symptoms:

- Dystonia (involuntary muscle contractions)
- Akathisia (psychomotor restlessness, nervous movements and inability to sit still)
• Tardive dyskinesia (involuntary movements of the facial muscles)

If you notice any of abovementioned symptoms, immediately contact your doctor. Fortunately, clinical studies have shown that this side effect occurs very rarely.\(^1\),\(^2\)

Given that it acts as a dopamine antagonist, Metoclopramide is contraindicated for use in patients who suffer from pheochromocytoma, because its use in such patients may lead to the occurrence of hypertension crisis.\(^3\)

Metoclopramide is contraindicated in patients who have active bleeding in the digestive tract.

It should not be used in nursing mothers and in children under the age of 15.

It must be used cautiously in the following conditions:

- In patients with liver damage. Clinical trials have shown that Metoclopramide has a low risk of causing liver damage.\(^4\)
- In patients with renal impairment.
- In patients suffering from Parkinsonism
- In patients suffering from epilepsy
- In patients with hypertension
- In patients who have heart problems. Case of cardiac arrest due to the intravenous administration of Metoclopramide has been reported.\(^5\)
- In patients with head injuries. Case of increased intracranial pressure in a patient who received an intravenous Metoclopramide has been reported.\(^6\)
- In patients with asthma
- In patients who are taking drugs called neuroleptics

**Metoclopramide, pregnancy and breastfeeding**

Berkovitch M.et all studied 175 women who took Metoclopramide during pregnancy and they found that Metoclopramide does not increase the risk of malformations, miscarriages, and low birth weight. The only adverse effect that was observed is that Metoclopramide increases the risk of premature birth.\(^7\) Another study, which included about 29 000 pregnant women who were using Metoclopramide during pregnancy, showed that this medication does not increase the risk of malformations, spontaneous abortions and stillbirth.\(^8\) However, the Patient Information Leaflet (PIL) states that Metoclopramide should be used during pregnancy only if necessary.

Since it is excreted into breast milk, you should not breastfeed your baby while you're taking Metoclopramide.

**Dosage**

The dose for adults is 10 mg of Metoclopramide three times a day. If you have not noticed improvements after two days of taking this drug, you should contact your doctor.

Drink a tablet whole, with a 200 ml of water, regardless of the meal.

**Interactions**

Metoclopramide may interact with the following medications:
Neuroleptics (antipsychotic drugs used to treat schizophrenia and psychosis), such as:

- aripiprazole
- brexiprazole
- fluphenazine
- haloperidol
- droperidol
- clozapine
- olanzapine
- quetiapine
- asenapine
- loxapine
- amoxapine

Concomitant use with these drugs increases the risk of extrapyramidal syndrome.

- Tramadol (an opioid analgesic). Co-administration of these two drugs increases the risk of seizures.
- Antidepressants (e.g. bupropion). Co-administration of these two drugs increases the risk of extrapyramidal syndrome.
- Promethazine (antihistaminic agent used in the treatment of pruritus). Co-administration of these two drugs increases the risk of extrapyramidal syndrome.
- Drugs used to treat Parkinson's diseases (e.g. levodopa and pergolide).

Side effects

Side effects of the Metoclopramide are:

- Methaemoglobinemia
- Sulfhemoglobinemia
- Galactorrhea
- Gynecomastia
- Irregular menstrual cycles
- Dystonia
- Akathisia
- Pseudoparkinsonism
- Dyskinesia
- Slow heartbeat
- Drowsiness
- Diarrhea
- Allergic reaction

References

1. NCBI link 1
2. NCBI link 2
3. NCBI link 3
4. NCBI link 4
5. NCBI link 5
6. NCBI link 6
7. NCBI link 7
8. NCBI link 8