Dipyrone contains active substance called metamizole (analgesic from the pyrazolone group). It depresses central nervous system and causes a pain relief. It also acts as an antipyretic, although it is much less used for lowering high body temperature than for pain treatment.

Dipyrone is used in the treatment of moderate to severe pain, such as:

- Pain that accompanies neuritis
- Pain that accompanies herpes zoster
- Pain that accompanies malignant tumors
- Pain that accompanies spondylitis
- Post-operative pain

**Precautions**

There are numerous controversies surrounding this drug. Some claim that it can cause agranulocytosis, which can cause extreme weakening of the immune system, while others claim that it is completely safe if used for short-term analgesia. Although there are many clinical studies conducted to investigate the safety of this drug, there is still no unified position in whether this drug causes or does not cause the agranulocytosis. Even the Ministry of Health of many countries are divided on this issue, and in some countries you will find that the use of this drug is completely banned (e.g. USA and the UK), while in other countries this drug has wide spectrum of applications (e.g. Netherlands, Sweden and Serbia).
If you notice any symptoms of agranulocytosis (fever, sore throat, fatigue and other symptoms flu-like symptoms) you should visit your physician immediately.

There have been reports of Dipyrone-induced allergic cholestatic hepatitis.² If you notice symptoms of a cholestatic hepatitis (fatigue, nausea, itching and dark-colored urine), you should visit your physician immediately.

Cases of Dipyrone-induced acute kidney injury have also been reported.³ If you notice that you have problems urinating, stop using the medicine and go to see your doctor.

Use of this drug can lead to a sudden drop in blood pressure ⁴, and it is not recommended for use in hypotensive patients.

**Dipyrone, pregnancy and breastfeeding**

In a clinical study that included 108 women who used this drug during the first three months of pregnancy, it was concluded that there is no increased risk of malformations in a fetus.⁵ The second study included 555 pregnant women who used this drug during pregnancy and it was concluded that there is no increased risk of congenital malformations, low birth weight and premature birth.⁶ However, the number of patients included in these studies (only several hundred pregnant women) is not enough to confirm the safety of Dipyrone use during pregnancy. Consult your doctor if you are pregnant or breastfeeding. Nursing mothers are advised not to use this drug.

**Dosage**

The recommended dosage in the treatment of pain and fever: 500 mg 3-4 times a day.

This drug can be taken regardless of food.

The maximum daily dose is 5 g.

**Interactions**

Dipyrone should not be administered concurrently with the following drugs:

- Aspirin (especially if it is used in patients after heart attack, for its anti-platelet properties). Dipyrone nullify anti-aggregation effects of Aspirin ⁷
- Methotrexate (a drug used in the treatment of cancer and autoimmune diseases)

Dipyrone act as an inducer of the enzyme CYP2B6, and this enzyme metabolizes following drugs:

- Selegiline (a drug used in the treatment of depression and Parkinson's disease)
- Bupropion (a drug used to treat major depression)
- Cyclophosphamide (a drug used to treat cancer)
- Efavirenz (a drug used for HIV treatment)
- Phenothiazine antipsychotics (e.g. chlorpromazine)

Dipyrone decreases the efficiency of the above-listed drugs.

Other possible interactions include:
Drugs used for hypertension treatment
- Selective serotonin reuptake inhibitors
- Drugs used for diabetes mellitus treatment (*sulfonylureas derivatives*)
- Quinolone antibiotics (*ciprofloxacin, ofloxacin and levofloxacin*)

## Side effects

Dipyrrone may cause the following side effects:

- Liver injury (*nausea, vomiting, pruritus, dark urine, pain in the right upper abdomen and jaundice*)
- Acute renal injury
- Agranulocytosis with a consequential weakening of immune system
- Other blood's idiosyncrasies (*anemia*)
- Hypotension
- Dry mouth
- Allergy

## 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