

PATIENT INFORMATION ON AZATHIOPRINE

[aza-thio-prin]

(**Brand names:** Azapin, Imazan, Imuran, Thioprine®)

This information sheet was written by the Australian Rheumatology Association to help you understand the medicine that has been prescribed for you. It includes important information about:

- **how you should take your medicine**
- **the possible side effects**
- **what tests you must have to monitor your condition and to detect unwanted effects**
- **other precautions you should take while you are taking azathioprine.**

Please read it carefully and discuss it with your doctor.

IMPORTANT THINGS TO REMEMBER

- While taking azathioprine you should see your rheumatologist regularly to make sure the treatment is working and to minimise any possible side effects.
- You should have regular blood tests as directed by your rheumatologist.
- If you are concerned about any side effects, you should contact your rheumatologist as soon as possible.

For more information about **RHEUMATOID ARTHRITIS** and other inflammatory conditions see Arthritis Australia's website: www.arthritisaustralia.com.au

What is azathioprine?

Azathioprine (brand names: Azapin®, Imazan®, Imuran®, Thioprine®) is a medicine used to treat immune and inflammatory diseases such as vasculitis, systemic lupus erythematosus (SLE/lupus), polymyositis (muscle inflammation), rheumatoid arthritis and other rheumatic and autoimmune conditions.

Azathioprine is also used to prevent the rejection of transplanted organs and to treat inflammatory bowel disease such as Crohn's Disease or Ulcerative Colitis.

Azathioprine is an immunosuppressive medicine, which means that it works by reducing the activity of the immune system. In conditions like rheumatoid arthritis and lupus, it helps reduce inflammation, pain and swelling. It also limits damage to the joints and helps to prevent long term disability.

Because azathioprine acts to reduce the damage to the joints, rather than just relieve the pain, it belongs to the group of medicines called **disease modifying antirheumatic drugs (DMARDs)**.

What benefit can you expect from your treatment?

Azathioprine does not work straight away. It usually takes 6 to 8 weeks for symptoms such as swelling and stiffness to start to improve. The effects to delay or prevent joint damage will take several months to be noticed. Other medicines may be given to improve your symptoms while waiting for azathioprine to work.

If you stop your azathioprine treatment for more than a few weeks there is a risk that your condition may worsen. It is important to continue taking azathioprine even if you feel well.

You can keep taking azathioprine as long as it works and doesn't cause serious side effects.

How is azathioprine taken?

Azathioprine is taken by mouth in 25mg or 50mg tablets which should be swallowed whole. It is best to not break or crush the tablets.

What is the dosage?

The dose will depend on your specific immune or inflammatory condition and will be adjusted



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based on your body weight. It is usually started at 50mg to 100mg per day. The dose can be increased every 1 to 2 months. The maximum dose can be up to 250mg per day.

Azathioprine can be taken once or twice a day.

Can other medicines be taken with azathioprine?

Azathioprine may be used with most other arthritis medicines including:

- other DMARDs
- steroid medicines such as prednisolone or cortisone injections into the joint
- anti-inflammatory medicines (NSAIDs) such as naproxen (Naprosyn) or ibuprofen (Brufen, Nurofen) as long as your kidney function is normal
- pain medicines such as paracetamol.

There are separate information sheets for the medicines mentioned above.

Are there any side effects?

You might experience side effects with your treatment. Tell your doctor if you are concerned about possible side effects.

Reducing the dose may lessen the side effects, allowing you to keep taking this treatment. Your doctor will let you know if any dose changes are needed.

Most common side effects

- 10-15% of people taking azathioprine experience stomach or bowel side effects, which might include *nausea (feeling sick)*, *vomiting*, *abdominal pain* or *diarrhoea*. Taking azathioprine twice a day instead of all at once, or taking it after eating, may help avoid these problems. Antinausea tablets can be used if needed.
- About 5% of people have side effects such as *skin rashes* and *increased sensitivity to the sun*. It is a good idea to use sunscreen and to wear a hat when out in the sun.

Less common or rare side effects

- Azathioprine can affect your *liver and pancreas*. It can cause liver test abnormalities or hepatitis (liver inflammation) in less than 1% of people taking the medicine. This usually doesn't cause symptoms unless it becomes severe, so regular blood tests are important.

- If you notice *yellowing of your eyes or skin*, tell your doctor right away. Azathioprine can also cause *pancreatitis* (inflammation of the pancreas), which can lead to abdominal pain.
- **Blood counts:** azathioprine can cause a drop in the number of white blood cells, which are needed to fight infection. It can also cause a drop in the number of platelets, which help to stop bleeding. Regular blood tests aim to pick these problems up early when they occur. However, if you develop a sore mouth, mouth ulcers, easy bruising, nosebleeds, bleeding gums, breathlessness, infection or fever tell your doctor straight away.
- **Hypersensitivity:** A small number of people have a hypersensitivity reaction one to two weeks after starting azathioprine. This causes sudden onset muscle aches and pains and fever. If you develop any of these symptoms tell your doctor straight away.
- **Infections:** There is an increased risk of developing some infections, especially herpes zoster (chicken pox and shingles). You should try to avoid contact with people who have these infections. If you have an infection or persistent fever, tell your doctor straight away.
- **Cancer:** Studies of transplant patients taking azathioprine have found it may increase risk of skin cancers. There may be a similar risk in people with rheumatic conditions who take azathioprine for a long time. You should talk to your rheumatologist about this before starting the medicine (see *Precautions*). There are also higher risks of other types of cancers, like solid organ cancers or blood cancers, depending on how much and how long the immune system is suppressed.

What precautions are necessary?

Blood tests

- Before starting azathioprine, you may be asked to have a blood test to look at an enzyme (TPMT). This will check whether your body can effectively process the medicine. The result will decide whether this treatment is suitable for you and whether you should use a lower dose.

- Since the liver and blood cells may be affected by azathioprine, you **must** have regular blood tests during your treatment. This is very important as you may not show symptoms.
- Blood tests are particularly important during the first few months of treatment.
- As well as monitoring for side effects, blood tests help to monitor your condition to make sure the medicine is working for you.
- You will need to have full blood counts and liver function tests every 2 to 4 weeks for the first few months of treatment and then every 1 to 3 months after that.
- If no problems are found after 3 months of treatment at a specific dose of azathioprine, blood tests may be done less often.
- Your general practitioner (GP) will be informed about the monitoring schedule. It is important to see your GP when asked, as they have an important role to play in monitoring your condition.

Use with other medicines

- Azathioprine can interact with other medicines. You should tell your doctor (including your general practitioner, rheumatologist and others) about all medicines you are taking or plan to take. This includes over the counter or herbal/naturopathic medicines.
- Allopurinol (Allohexal, Allosig, Pro gout, Zyloprim), used in the treatment of gout, will increase the level of azathioprine in the blood. Taking allopurinol with azathioprine can therefore be very dangerous. You must tell your doctor if you are taking or are advised to take allopurinol. If azathioprine is taken with allopurinol, the dose needs to be very carefully reviewed.
- Febuxostat (Adenuric) is also used to treat gout and will increase the level of azathioprine in the blood. You must tell your doctor if you are taking or are advised to take febuxostat. If azathioprine is taken with febuxostat its dose needs to be very carefully reviewed.
- Blood thinners, like warfarin (Coumadin, Marevan), can be affected by azathioprine. Blood clotting should be closely watched. You must tell your doctor if you are taking blood thinners.

Vaccines

If you are on azathioprine, it is recommended you should not be immunised with 'live' vaccines such as MMR (measles, mumps and rubella), varicella (chickenpox), OPV (oral polio vaccine), BCG (Bacillus Calmette Guerin) or yellow fever. Talk to your doctor before receiving any vaccines.

For more information on vaccination including the COVID-19 vaccination go to the ARA website; <https://rheumatology.org.au/> patients, medication information, vaccinations.

Use with alcohol

- Since azathioprine can affect your liver, you should avoid heavy alcohol use while taking it.
- It is not exactly known how much alcohol is safe to drink when on azathioprine. However, having 1 to 2 standard drinks once or twice a week is probably okay.
- Drinking more than 4 standard drinks at one time, even if it's not often, is strongly discouraged.

Use in pregnancy and when breastfeeding

- Azathioprine has been used safely in pregnancy and breastfeeding. It is excreted in breastmilk in small amounts but may be safe to use while breastfeeding.
- If you want to become pregnant or would like to breastfeed, you should discuss this with your doctor.
- More detailed information is available [here](#).

Skin cancer prevention

- When taking azathioprine, it is important to use sunscreen and avoid prolonged sun exposure. A yearly skin check is recommended.

How to store azathioprine

- Store azathioprine in a cool, dry place, away from direct heat and light (e.g. not in the bathroom).
- Keep all medicines out of reach of children.

Questions?

If you have any questions or concerns write them down and discuss them with your doctor.

Your doctor's contact details:

You should see your rheumatologist regularly to make sure the treatment is working and to minimise any possible side effects.

This Information Sheet has been prepared using materials obtained from various sources which have been reviewed by the Australian Rheumatology Association (ARA). It contains general information only and does not contain a complete or definitive statement of all possible uses, actions, precautions, side effects or interactions of the medicines referenced. This information is not intended as medical advice for individual conditions nor for making an individual assessment of the risks and benefits of taking a particular medicine. Decisions regarding the assessment and treatment of patients are the sole responsibility of the treating medical professional, exercising their own clinical judgment and taking into account all of the circumstances and the medical history of the individual patient.

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