



Australian
Rheumatology
Association

PATIENT INFORMATION ON AZATHIOPRINE

(Brand names: Azahexal, Azapin, Imuran, Thioprine)

This information sheet has been produced 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; and**
- **Other precautions you should take.**

Please read it carefully and discuss with your doctor.

What is azathioprine?

Azathioprine (brand names Azahexal, Azapin, Imuran, Thioprine) is a medicine used to treat rheumatoid arthritis and other rheumatic conditions such as systemic lupus erythematosus (SLE/lupus) and polymyositis (muscle inflammation).

Azathioprine is also used to prevent the rejection of transplanted organs.

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

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)**.

For more information about RHEUMATOID ARTHRITIS see the Arthritis Australia website www.arthritisaustralia.com.au/index.php/arthritis-information/information-sheets.html.

What benefit can you expect from your treatment?

Azathioprine is usually used to treat severe rheumatoid arthritis that has not responded to other treatments.

The medicine does not work straight away. It usually takes 6 to 8 weeks for symptoms such as swelling and stiffness to start to improve. The full effect on these symptoms may take up to 26 weeks. 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 azathioprine treatment is stopped for more than a few weeks there is a risk that your condition may worsen. Continue with your treatment unless advised by your doctor or unless side effects develop.

How is azathioprine taken?

Azathioprine is taken by mouth in 25mg or 50mg tablets. The dose used to treat rheumatoid arthritis depends on the person's body weight. It is usually 50mg to 100mg per day. The dose can be increased every 1 to 2 months. The maximum dose is usually 75mg to 150mg per day.

It can be taken as a single dose or twice a day.

The treatment can be continued indefinitely as long as it is effective and no serious side effects occur.

It may be used with 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); and/or
- simple pain medicines such as paracetamol.

Are there any side effects?

Below are possible side effects that you might experience with your treatment. Tell your doctor if you experience any side effects.

If you do experience side effects, a reduction in dose may minimise these so that you can continue to take the medicine. Your doctor will advise on any dose changes that are necessary.

Most common possible 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 daily 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.

Tell your doctor if you experience any possible side effects.

Less common or rare possible side effects:

- *Effects on the liver and pancreas:* azathioprine can cause liver test abnormalities or hepatitis (inflammation of the liver). This occurs in less than 1% of people taking the medicine. This does not cause symptoms unless severe so regular blood tests are important.
If you develop symptoms such as yellow discolouration of the whites of your eyes or yellow skin tell your doctor straight away. Azathioprine can also cause pancreatitis (inflammation of the pancreas), which can result in 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 long periods of time. You should discuss this issue with your rheumatologist before starting the medicine (see *Precautions* on page 3)

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 bone marrow cells are more sensitive to 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 get symptoms of these problems.
- 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 determine if the treatment is effective.
- 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 there are no abnormalities seen after three months of treatment at a specific dose of azathioprine, the blood tests may be done less frequently.
- Your general practitioner will be informed about the monitoring schedule. It is important to see your general practitioner if you have been asked to do so as they have an important role to play in monitoring your condition.

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, Progot, Zyloprim), used in the treatment of gout, will increase the level of azathioprine in the blood causing serious toxicity. **This can be very dangerous. You must tell your doctor if you are taking or advised to take allopurinol.**
- Combined pain medicines such as Panadeine and Panadeine Forte, can be used safely with azathioprine, provided you take them as directed.

- Azathioprine can also be used safely with anti-inflammatory drugs (NSAIDs) as long as your kidney function is normal.
- Most vaccines can be given safely with azathioprine. Talk with your rheumatologist before receiving any vaccines.

Alcohol:

- Because azathioprine can affect your liver, you should avoid heavy alcohol use while taking it. It is not known precisely what level of drinking is safe when on azathioprine. However, there is general agreement that 1 to 2 standard drinks taken once or twice a week is unlikely to cause a problem. Drinking more than 4 standard drinks on one occasion, even if infrequently, is strongly discouraged.

Pregnancy and breastfeeding:

- Azathioprine has been used safely in pregnancy and breastfeeding. Should you wish to become pregnant or you intend to breastfeed, you should discuss this with your doctor.

Skin cancer prevention:

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

All patients taking azathioprine should be seen regularly by a rheumatologist to optimise treatment and to minimise any potential side effects.

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

Your doctor's contact details:

REMEMBER – Keep all medicines out of reach of children

The information in this sheet has been obtained from various sources and has been reviewed by the Australian Rheumatology Association. It is intended as an educational aid and does not cover all possible uses, actions, precautions, side effects, or interactions of the medicines mentioned. This information is not intended as medical advice for individual problems nor for making an individual assessment of the risks and benefits of taking a particular medicine. It can be reproduced in its entirety but cannot be altered without permission from the ARA.

The NHMRC publication: *How to present the evidence for consumers: preparation of consumer publications* (2000) was used as a guide in developing this publication.