



AZATHIOPRINE

What are the aims of this leaflet?

This leaflet has been written to help you understand more about azathioprine. It tells you what it is, how it works, how it is used to treat skin conditions, and where you can find out more information about it.

What is azathioprine and how does it work?

Azathioprine has been available since the 1960s. It was developed initially to stop rejection of transplanted organs, such as kidneys. It is now used to treat a wide range of illnesses. It works by suppressing the body's own defence system (the immune system), either by itself or in combination with other drugs. Azathioprine is not a steroid and is considered to be safer in the long-term than steroid tablets.

Why suppress the immune system?

There are several reasons:

- In *auto-immune* diseases, one or more of the body's organs are attacked by its own immune system.
- There are also conditions in which the body's immune system becomes 'overactive' resulting in inflammation, such as atopic eczema.
- After transplant surgery, the immune system has to be suppressed to stop the transplanted organ being rejected.

Which skin conditions are treated with azathioprine?

Azathioprine is used for conditions in which the immune system is too active or is directed against the body's own organs. It is licensed to treat [pemphigus vulgaris](#), systemic lupus erythematosus and dermatomyositis. However, sometimes drugs are used for conditions not included in the original licence

application. In the case of azathioprine, these are [atopic eczema](#), [bullous pemphigoid](#), [pyoderma gangrenosum](#), [chronic actinic dermatitis](#) and cutaneous vasculitis.

Will azathioprine cure my skin condition?

None of the skin conditions for which azathioprine is used are “cured” by this treatment. Usually a gradual improvement is seen. However, this may take many years.

How long will I need to take azathioprine?

Azathioprine is usually taken for many months or even years. It is not usually given for short periods as the benefits of treatment are slow to start and may not be apparent for 2-3 months.

When should I take azathioprine?

Azathioprine is taken either once or twice a day, with or after food.

What dose should I take?

Azathioprine is usually taken as a tablet. Before starting azathioprine, your specialist will need to carry out a blood test to determine whether an enzyme in your body called thiopurine methyltransferase (TPMT) will be able to process the drug. The dose prescribed for you will depend on your weight and on the results of blood tests carried out before you start treatment and might be changed as your body responds to treatment.

What are the possible side effects of azathioprine?

- Most patients experience no problems with azathioprine.
- Rarely, patients may be allergic to azathioprine. This causes severe ‘flu’-like symptoms (severe aches and pains, high fever and shaking). If at any point you develop these stop the drug and contact your doctor as soon as possible.
- Mild sickness and headaches are quite common on starting azathioprine (or after an increase in dose). These settle in most people after a few weeks. Some people develop more severe sickness and vomiting with azathioprine. These symptoms may disappear on a lower dose, but occasionally azathioprine will have to be stopped completely.

- Patients taking azathioprine treatment may have a slightly increased number of common infections such as coughs, colds and cold sores. Patients with all but the mildest of infections should consider seeing their doctor who may wish to check monitoring blood tests and treat the infection if appropriate. They may also advise coming off the azathioprine for a short while until the infection has cleared.
- Taking azathioprine for a number of years may possibly increase your risk of getting some types of cancer, including skin cancer and lymphoma. Everyone should protect themselves from too much sunlight exposure. This includes not sunbathing, wearing suitable clothing (e.g. long sleeves and sunhat) and using sunscreens with a sun protection factor (SPF) of at least 30 and a star rating of at least 4. Please visit www.bad.org.uk for further advice on skin care and the sun. If you detect any new swellings or lumps, or changes in your skin, which last more than two weeks anywhere on your body you should inform your doctor immediately.

Azathioprine and vaccinations

'Live' vaccines are not recommended whilst taking azathioprine. These include:

- polio (oral drops only, the injections are safe)
- mumps
- measles
- German measles (rubella)
- oral typhoid
- BCG
- varicella zoster (chickenpox)
- yellow fever
- Other members of your household should be given inactive (rather than live) polio vaccine.
- If you have never had chicken pox your doctor may recommend vaccination against this before starting azathioprine. If this was not possible and you come into contact with a person with chicken pox or shingles whilst you are taking azathioprine, then you should go to your doctor straight away as you may need special preventative treatment.
- Yearly 'flu' (influenza) and 5 yearly pneumococcal vaccines are safe and should ideally be given to everybody on azathioprine; however, the new nasal flu vaccination is live and should not be given with azathioprine (see Patient Information Leaflet on [Immunisations](#)).

What monitoring will be required?

- Azathioprine can affect the function of the liver or bone marrow. All patients taking azathioprine require regular blood tests to check on this.
- There is a way of predicting severe bone marrow problems with a blood test. This is usually checked in everyone before starting azathioprine. Those few people at high risk will not be given the drug.
- See your doctor urgently if you develop unexplained bruising, severe sore throat or fever as these can be an early sign of bone marrow suppression, but these are very unlikely to happen if you are having regular blood tests.

How frequently will blood tests be needed?

Blood tests will usually be checked weekly for the first 4-8 weeks of treatment. After this tests will be taken every 1-3 months.

Is azathioprine safe in pregnancy, during breastfeeding or if my partner and I are trying for a child?

While azathioprine is probably safe in all of these situations, you must always discuss azathioprine use with your doctor before planning a pregnancy. This is because the evidence for safety is not absolutely watertight. Therefore, azathioprine would be best avoided unless there is no alternative treatment.

Male fertility does not appear to be affected by azathioprine.

Can alcohol be drunk with azathioprine?

Yes. However, it is probably better to drink in moderation (if at all), as both alcohol and occasionally azathioprine can affect the liver.

Can I take other medicines at the same time as azathioprine?

- Some medicines can interact with azathioprine.
- Allopurinol and febuxostat (for gout) should not be taken together with azathioprine.
- Care should be taken if certain other drugs are used together with azathioprine. These include warfarin, ribavirin, co-trimoxazole, ACE inhibitors (angiotensin-converting enzyme inhibitors) and trimethoprim.
- Before you can be given azathioprine your doctor will ask you to list all medicines that you are taking.

- Always tell any doctor treating you that you are taking azathioprine.

Where can I find out more about azathioprine?

If you want to know more about azathioprine, or if you are worried about your treatment, you should speak to your prescribing doctor or pharmacist. This information sheet does not list all of the side effects of azathioprine. For full details, look at the drug information sheet which comes as an insert with your prescription for azathioprine.

References:

[British Association of Dermatologists' guidelines for the safe and effective prescribing of azathioprine 2011](#) (NICE accredited)

Web link to detailed leaflet:

<http://www.medicines.org.uk/emc/medicine/29120>

For details of source materials used please contact the Clinical Standards Unit (clinicalstandards@bad.org.uk).

This leaflet aims to provide accurate information about the subject and is a consensus of the views held by representatives of the British Association of Dermatologists: individual patient circumstances may differ, which might alter both the advice and course of therapy given to you by your doctor.

This leaflet has been assessed for readability by the British Association of Dermatologists' Patient Information Lay Review Panel

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