

Azathioprine

What is azathioprine?

Azathioprine is an anti-inflammatory and immunosuppressant medication. It can be used to treat inflammatory conditions such as severe eczema. Azathioprine is a “steroid-sparing agent” which means it is used instead of corticosteroid tablets to avoid their long-term side effects.

How does it work?

The function of white blood cells is to fight infection. In some conditions, the body’s white blood cells work abnormally and cause inflammation.

Azathioprine is converted in the body to a form called 6-thioguanine which becomes incorporated into the DNA of white blood cells. This disrupts the function of the white blood cells and helps to reduce the inflammation.

The full effect of azathioprine may take 8 to 12 weeks to become apparent.

What is it used for?

Azathioprine has many uses in dermatology including (but not limited to) the following conditions:

- Dermatitis, e.g. atopic dermatitis (eczema), contact dermatitis, lichen planus
- Autoimmune conditions, e.g. systemic lupus erythematosus (SLE), discoid lupus, dermatomyositis, relapsing polychondritis
- Various types of vasculitis
- Neutrophilic dermatoses, e.g. pyoderma gangrenosum, Behcet’s syndrome
- Immunobullous conditions, e.g. bullous pemphigoid, pemphigus vulgaris, cicatricial pemphigoid
- Photosensitive conditions, e.g. chronic actinic dermatitis, persistent light eruption, polymorphic light eruption
- Other conditions, e.g. persistent erythema multiforme, chronic graft-versus-host disease, sarcoidosis

How is azathioprine taken?

Azathioprine tablets are usually taken once a day with food.

What precautions should you take while taking azathioprine?

Before starting azathioprine your doctor will order a number of blood tests which may include testing for:

- Full blood count (red blood cells, white blood cells and platelets)
- Renal function
- Liver function
- An enzyme called thiopurine methyltransferase (TPMT) which breaks down azathioprine to check it is working properly

- Infectious diseases such as hepatitis viruses, tuberculosis (TB) and human immunodeficiency virus (HIV) before you start an immunosuppressing medication.

It is important that all health professionals involved in your care (e.g. GP, pharmacist, dentist, specialist) know that you are taking azathioprine.

Azathioprine interacts with a common medication for gout called allopurinol. Do not take allopurinol while you are taking azathioprine.

Azathioprine interacts with warfarin and some blood pressure medications.

Do not take azathioprine if you are pregnant or considering pregnancy. Females of child-bearing age should use a reliable form of contraception while taking azathioprine. Azathioprine is not recommended during breastfeeding as it crosses into breast milk.

You should see your general practitioner to make sure your routine vaccinations are up-to-date before starting azathioprine. Do not have live vaccinations while taking azathioprine.

What monitoring is required?

You will need a blood test before starting azathioprine. After starting azathioprine, regular blood tests will be needed to check full blood count, renal function and liver function. Annual skin checks will be necessary to check for skin cancer.

What are the potential side effects?

In most cases, side effects will subside when the treatment is stopped.

The most common side effects are nausea, vomiting and diarrhoea. These side effects are more common in the first 10 days of treatment. Taking azathioprine with food often reduces these symptoms.

People taking azathioprine are at greater risk of infections such as herpes simplex (cold sores), human papillomavirus (warts), chickenpox and other viral infections. You should tell your dermatologist if you develop an infection while taking azathioprine.

In rare cases, azathioprine can cause bone marrow suppression (myelosuppression). This results in decreased numbers of red and white blood cells and platelets. Regular blood tests are performed to check the blood levels. The level of bone marrow suppression is usually connected to the dose of azathioprine. Higher doses of azathioprine pose a greater chance of bone marrow suppression. If you experience severe illness, fevers, easy bruising or bleeding, racing heartbeat or breathlessness you should tell your dermatologist, as these can be signs of bone marrow suppression.

Many medications, including azathioprine, can cause a drug allergy. In rare cases, this may manifest as a drug hypersensitivity syndrome. Symptoms can include a new rash, swelling, abdominal pain, nausea, headaches, muscle pains, joint pains and fever. If you experience these symptoms, especially in the first 2 to 8 weeks of starting azathioprine, you should inform your dermatologist.

Azathioprine can affect liver function. Regular liver function tests are needed.

Azathioprine is harmful to the developing fetus during pregnancy. You should not take azathioprine during pregnancy.

An uncommon adverse effect of azathioprine is skin cancer (squamous cell carcinoma) and lymphoma. The risk of developing these adverse events is higher in people who take azathioprine for rheumatoid arthritis and organ transplant, partly because higher doses of azathioprine are used

causing greater immune suppression.

Before taking this medication and for more information, please ensure you have read and understood the product information provided with the medication.