

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 is a type of medicine called an immunosuppressant. This means it lowers the body's immune system and overall immunity. The immune system is important for fighting infections, but sometimes it overreacts, and immune system cells mistakenly attack the body's own healthy tissues. This can trigger long-term inflammation. Azathioprine reduces the inflammation caused by your condition, by dampening down the activity of these cells in the immune system. In this way it helps control the inflammation.
- Azathioprine was originally developed to stop the body from rejecting transplanted organs, such as kidneys. It is now also used to treat a wide range of conditions.
- Azathioprine can work on its own or in combination with other drugs.
- It is not a steroid and is considered a safer alternative for long-term use than high doses of [steroid](#) tablets.

WHICH SKIN CONDITIONS ARE TREATED WITH AZATHIOPRINE?

Azathioprine is used to treat various inflammatory skin conditions as mentioned below. It is licensed in the UK as an oral treatment for [pemphigus vulgaris](#), systemic lupus erythematosus and [dermatomyositis](#).

Azathioprine is not licenced to treat some conditions but it is commonly used **off-licence** to treat conditions including [atopic eczema](#), [bullous pemphigoid](#), [pyoderma gangrenosum](#), [chronic actinic dermatitis](#) and cutaneous vasculitis. For further information on licensed, unlicensed, and off-licence use of medicines, visit our Jargon Buster webpage: www.skinhealthinfo.org.uk/support-resources/jargon-buster/.

HOW LONG WILL I NEED TO TAKE AZATHIOPRINE?

- Azathioprine is usually taken for many months or years.
- After starting treatment, a gradual improvement will be seen, but this can take up to 2 to 3 months.
- If there is no improvement after several months, then your doctor may consider an alternative treatment.

HOW AND WHEN TO TAKE AZATHIOPRINE?

Azathioprine is usually taken by mouth as a tablet (pill). It is taken either once or twice a day, with or after food. However:

- Do not take azathioprine with milk or other dairy products, such as cheese or yoghurt.
- Dairy products can lower the levels of the medicine in the body.
- Because of this, take azathioprine at least 1 hour before, or 2 hours after milk or other dairy products.

WHAT DOSE SHOULD BE TAKEN?

- Before starting azathioprine, the specialist will carry out a blood test to check for an enzyme called TPMT (thiopurine methyltransferase). TPMT is

important because it helps break down the medicine. The test will show if your body has enough TPMT to take the medicine safely.

- The prescribed dose will depend on your weight and on the results of the blood test.
- At first, your healthcare professional may prescribe a smaller dose. The dose will be adjusted at review appointments according to how your rash responds to treatment and any unwanted effects that might be experienced.

WHAT ARE THE POSSIBLE SIDE EFFECTS OF AZATHIOPRINE?

- For most people, azathioprine will not cause unwanted effects.
- The most common side effect is nausea. Sometimes this happens when starting azathioprine or following an increase in dose. This usually goes away after a few weeks. Occasionally, some people experience severe nausea, which may be difficult to manage. In this case, the prescribing healthcare professional may lower the dose or prescribe anti-sickness medications.
- Azathioprine can affect your liver and bone marrow. To monitor this, your doctor may request regular blood tests.
- Rarely, azathioprine may cause an allergic reaction. This can cause severe flu-like symptoms, a rash, muscle or joint pains. If at any point you develop these symptoms, stop the drug and contact your healthcare professional as soon as possible.
- Taking azathioprine may slightly increase your risk of infections. If you become unwell you should see your healthcare professional who may check your blood tests and treat the infection as appropriate. Your healthcare professional may advise stopping azathioprine for a short period until the infection has cleared.

- Taking azathioprine for a number of years may possibly increase your risk of getting skin cancer and a type of blood cancer called lymphoma. You should protect yourself from excessive sunlight exposure by not sunbathing, wearing suitable clothing (long sleeves and sunhat) and using sunscreen when you are outside.
- Apply a high sun protection factor (SPF) sunscreen of at least 30. However, if you have an organ transplant, it is recommended to use SPF 50, which has both UVB and UVA protection all-year round. Look for the UVA circle logo and choose a sunscreen with 5 UVA stars as well as a high SPF, like this:
- If you detect any new swellings or lumps, or changes in your skin, which last more than two weeks, you should inform your doctor to arrange a review.

AZATHIOPRINE AND VACCINATIONS

- The 'live' vaccines such as MMR (measles, mumps, rubella), polio, chicken pox/shingles and yellow fever are now considered appropriate for people taking azathioprine. This means that you may be able to have these vaccines. However, the guidelines advise that your suitability for these vaccines should be decided by your healthcare professional on an individual basis.
- If you have never had chickenpox your healthcare professional may recommend vaccination against this before starting azathioprine. If vaccination is not possible for some reason, and you develop symptoms, you must seek urgent medical diagnosis and advice.
- Yearly vaccines for the flu, Covid-19 vaccines, and pneumococcus, are safe and should be given to everybody taking azathioprine.
- For more information, see the BAD Patient Information Leaflet on [immunisations](#).



WHAT MONITORING WILL BE REQUIRED?

- Your doctor will arrange for you to have regular blood tests to monitor your liver and bone marrow function whilst you are taking azathioprine.
- You should seek urgent medical attention if you develop:
 - a high fever,
 - severe flu-like illness,
 - unexplained bruising/bleeding, or
 - yellowing of the skin or yellowing of the sclera (the white part of your eye).

These symptoms may indicate a serious side effect of azathioprine.

HOW FREQUENTLY WILL BLOOD TESTS BE NEEDED?

- You will require blood tests once a week for the first month of the treatment and then once a month.
- Once your dose of azathioprine is fixed, you will require blood tests every 3 months.

IS AZATHIOPRINE SAFE DURING PREGNANCY, BREASTFEEDING OR WHEN PLANNING FOR A BABY?

- If you are pregnant, breastfeeding or planning for a baby, it is important to let your healthcare professional know before starting azathioprine.
- There is no clear evidence that azathioprine is harmful in pregnancy. However, some studies suggest a possible link to
 - premature birth and
 - babies being born smaller than expected.
- Using azathioprine in pregnancy requires careful consideration. It is usually prescribed only if you have a severe condition and a safer treatment option is not available

- Azathioprine does not affect sperm quality or male fertility.

CAN I DRINK ALCOHOL WHILE TAKING AZATHIOPRINE?

- Alcohol can safely be consumed whilst taking azathioprine. However, it is advisable to keep alcohol consumption to a minimum as both alcohol and azathioprine can affect the liver.
- The NHS guideline recommends drinking no more than 14 units a week. For more information see: <https://www.nhs.uk/better-health/drink-less/>

CAN OTHER MEDICINES BE TAKEN AT THE SAME TIME AS AZATHIOPRINE?

- Your healthcare professional will ask if you take other medicines before they prescribe azathioprine. It is important to inform them about all the medications that you take, as some medicines can interact with this medication.
- Allopurinol and febuxostat (for gout) should not be taken together with azathioprine.
- Extra care should be taken if certain other medicines are used together with azathioprine (for example, close blood monitoring, review in clinic). These include warfarin, ribavirin, co-trimoxazole, ACE inhibitors (angiotensin-converting enzyme inhibitors), trimethoprim and others.
- Always inform your healthcare professionals if you are taking azathioprine.

WHERE CAN I GET MORE INFORMATION 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 the unwanted effects of azathioprine.



- For full details, read the drug information sheet which comes as an insert in the azathioprine package.

It is important to report suspected side effects of medicines. The Medicines and Healthcare products Regulatory Agency (MHRA) manages the Yellow Card scheme. This scheme collects information and safety concerns about medicines and medical devices. Anyone can report these side effects or concerns by using:

- the Yellow Card website www.mhra.gov.uk/yellowcard or
- the Yellow Card app

Weblinks to other relevant sources:

www.nhs.uk/medicines/azathioprine/how-and-when-to-take-azathioprine/

www.medicines.org.uk/emc/medicine/29120

Jargon Buster:

www.skinhealthinfo.org.uk/support-resources/jargon-buster/

Please note that the BAD provides web links to additional resources to help people access a range of information about their treatment or skin condition. The views expressed in these external resources may not be shared by the BAD or its members. The BAD has no control of and does not endorse the content of external links.

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

BRITISH ASSOCIATION OF DERMATOLOGISTS

PATIENT INFORMATION LEAFLET

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