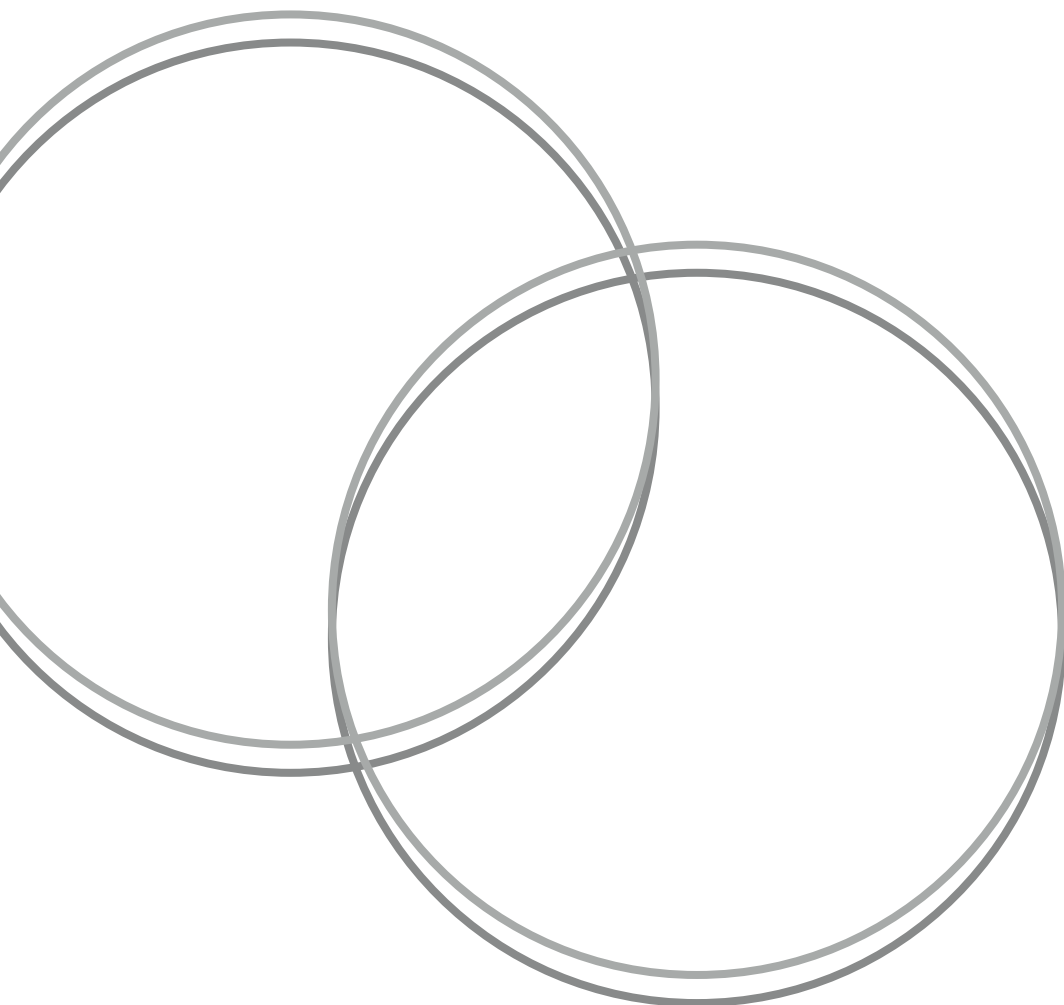


Azathioprine for Interstitial Lung Disease

Information for patients



This leaflet has been written to provide you (or your carer) with important information about how to use your medicine safely and effectively.

Why have I been prescribed this medication?

Azathioprine is an immunosuppressant medication. Immunosuppressant drugs are used to dampen down your body's immune system in conditions where the immune system is overactive and reacts against your own body.

With interstitial lung disease (ILD), azathioprine is used to reduce inflammation in the lungs, which can contribute to your symptoms of breathlessness and reduce your ability to exercise. It can also help prevent flare-ups. Please note that it may take up to three months for you to experience any benefit from taking azathioprine.

Although azathioprine is not licensed for use for ILD, there is good evidence to support that it can help to treat it or keep it at bay. Please ask for our leaflet 'Unlicensed and 'off-label' medicines', for more information.

How does it work?

Azathioprine reduces the activity of the immune system. It is often used along with or instead of steroids, such as prednisolone, which can have long-term side effects.

If you are already taking prednisolone, taking azathioprine will usually mean that your dose of prednisolone can be reduced and possibly stopped.

Azathioprine usually takes longer to work than steroids. It can take up to 8 to 12 weeks before you have any benefit. It is important to continue taking azathioprine during this time.

How do I take it?

Azathioprine comes as either tablets or capsules and is available in three strengths- 10mg, 25mg and 50mg.

You should take the required dose with a glass of water, with or soon after food. The tablets or capsules should be swallowed whole; do not break or crush them, as it is not safe to breathe in the powder.

Do not stop taking azathioprine unless instructed by your doctor, as you need to continue on this medication to keep control of your lung condition.

Recommended dose of azathioprine

Your hospital doctor will decide the best dose for you to take, depending on your body weight.

The dose will usually start off low, to make sure you do not suffer from too many side effects.

If you have no adverse effects from the initial dosing, this will be further increased by your hospital doctor.

Your recommended dose:

Initial dose: mg ONCE a day for weeks	Start date:
Then increase to: mg ONCE a day for weeks	Start date:
Then increase to: (delete if not relevant) mg ONCE a day for weeks	Start date:
Then increase dose and stay on: mg ONCE a day	Start date:

What happens if I forget to take a dose?

If more than 12 hours have passed from the usual time you take your dose, then miss that dose and take the next dose at the normal time. Do not double up the dose.

If you are unsure as to what to do or accidentally take too much azathioprine, please speak to your GP or contact the Oxford ILD helpline.

What are the possible side effects?

Before starting azathioprine, your ILD specialist team will ask you to do a blood test to check your activity level of a natural chemical called TPMT (thiopurine methyltransferase) which is made in the body. Knowing your TPMT activity levels before starting azathioprine treatment will guide the dose you will be prescribed.

Although this is not the full list of side effects of azathioprine, the most common are:

- Nausea (feeling sick).
- Vomiting.
- Reduced appetite.
- Diarrhoea.

Taking your total daily dose at the same time every day with food can reduce these symptoms (please do not split tablets/capsules in half).

Occasionally abdominal pain may occur, which rarely is due to pancreatitis. This usually comes along with an increase in blood marker levels. We will ask you to have regular blood tests while titrating your azathioprine dose in order to review your liver and pancreas function. Adverse signs and symptoms of inflamed liver or pancreas can also include

- Jaundice (yellowing of the skin and sclera (white part of the eye)).
- Itching of the skin.
- Back ache.
- Darkening of the urine.

As azathioprine suppresses the immune system, this may cause you to develop anaemia, and it is more likely for you to develop infections and to bruise more easily.

For the same reason, azathioprine also comes with a very small increased risk of developing lymphoma (cancer of the lymphatic system) or skin cancer. You will need to limit your exposure to sunlight and UV light, by wearing clothing that covers exposed skin and using a high factor sunscreen. No sunscreen will provide 100% protection from the sun and should not be used as an alternative to shade and protective clothing.

Azathioprine may cause hair loss or thinning. Hair growth usually returns to normal, even if treatment continues, but you should avoid hair dyes or perms for the first 2 to 3 months of treatment as your hair will be weaker than normal.

Please refer to the patient information leaflet within the medicine packet for the complete list of possible side effects.

What should I do if I experience any side effects?

If you experience any signs of infection, such as a high temperature above 37.5°C, a sore throat, cough or mouth ulcers, you should contact your GP or the Oxford ILD helpline immediately. Please tell them that you are taking azathioprine.

If any of the following symptoms develop, stop taking the azathioprine and inform your GP and the Oxford ILD team immediately:

- Unexplained bruising.
- Bleeding.
- Shortness of breath.
- Excessive tiredness.
- Jaundice (yellowing of the skin and sclera (white part of the eye)).
- Itching of the skin.
- Back ache.
- Darkening of the urine.
- Redness of your skin or skin rash.
- Fever, shivering or chills.
- Feeling dizzy, confused, light-hearted, weak or generally tired.
- Muscle and/or bone pain.
- Kidney problems, such as changes in the colour or amount of urine passed.
- Bad diarrhoea and/or abdominal pain.
- Blistering and/or peeling of the skin, lumps on the body or patches of dry skin.
- Loss of appetite, nausea, vomiting.

If you have not had chickenpox or shingles and come into contact with someone who has chickenpox or shingles, or you develop chickenpox or shingles, you should stop taking azathioprine and see your GP immediately. You may need antiviral treatment, because chicken pox and shingles can have severe symptoms in people taking immunosuppressive medications such as azathioprine.

Rarely, people are allergic to azathioprine. If you have an allergic reaction to azathioprine, this medication will have to be stopped. Symptoms of an allergic reaction usually include a skin rash and itch. If wheezing, shortness of breath or swelling of the face, lips, tongue or throat occur, stop azathioprine immediately and call 999.

What monitoring is required while taking azathioprine?

As azathioprine can sometimes cause blood, liver or kidney problems, your hospital doctor will arrange for you to have a blood test before you start treatment. This is so we have a 'baseline' set of blood, liver and kidney results and can see if any changes occur once treatment starts.

It is important to have your blood tested regularly, to check for early signs of changes. These blood tests show if azathioprine is working and if or why you are developing any side effects.

The blood tests should be carried out at your GP surgery and will need to include:

- Full blood count.
- Urea and electrolytes.
- Liver function tests.
- CRP (C-reactive protein).

You will need to have a blood test every 2 weeks for the first 12 weeks of treatment then every 3 months thereafter.

You will need to book your blood tests at your GP surgery. If you live within Oxfordshire, the Oxford ILD service will also send out your blood cards to take along to the surgery when you have your blood test appointment.

Transfer of blood monitoring and prescribing of your azathioprine to your GP will happen around 12 weeks after initiation once you are on a stable dose and your blood test results have been stable for at least 4 weeks.

Will azathioprine interfere with my other medicines?

Before you start any new medicines, you must check with your doctor or pharmacist whether they might interact with azathioprine, especially those which are not prescribed by a doctor (such as over the counter medications or herbal remedies).

The following drugs must not be co-prescribed alongside your azathioprine without consultation with your hospital doctor:

- Allopurinol.
- Febuxostat.
- Warfarin.
- Co-trimoxazole/trimethoprim.
- Clozapine.
- Ribavirin.
- Aminosalicylates such as sulfasalazine, mesalazine or olsalazine.

The following drugs may be prescribed with caution:

- ACE inhibitors such as enalapril or lisinopril.
- Cimetidine.
- Indomethacin.

It is safe to drink alcohol in moderation whilst on azathioprine, but this may make any existing diarrhoea, upset stomach or nausea worse. It may also cause liver problems or make existing liver problems worse.

Vaccinations

Seasonal vaccination against influenza and Covid-19 are recommended for people of any age while they are taking azathioprine, as well as vaccination with pneumococcal polysaccharide vaccine against pneumonia.

Azathioprine does not appear to increase the risk of catching influenza specifically, but the illness can be much more severe if you catch it whilst taking this medication.

You should avoid having 'live vaccinations', such as polio and MMR.

If you are to have vaccination against shingles, you will require the 'non-live' version of this vaccine called Shingrix (recombinant zoster vaccine) which is given in two doses 4 to 8 weeks apart.

Contraception and pregnancy

If you're planning a family or become pregnant while taking azathioprine, you should discuss this with your specialist doctor as soon as possible.

If you become pregnant whilst taking azathioprine, do not stop taking the medication. Contact your GP or the Oxford ILD helpline to make them aware.

Current guidelines state that azathioprine can be taken if trying for a baby and when pregnant or breastfeeding. Sometimes, closer monitoring during pregnancy is advised; this is to ensure that the pregnant woman remains well throughout and that their baby is growing and developing as expected.

Men are also fine to continue taking azathioprine when trying for a baby.

Azathioprine and breastfeeding

Azathioprine could pass into the breast milk but the risk to the baby is probably low. Daily azathioprine dose should be taken immediately after a feed and not at the same time as breastfeeding.

What happens if I need an operation?

Before your operation or procedure, let the doctor or nurse know you are taking azathioprine. You might be prescribed a course of antibiotics before or after the procedure, as your immune system is less able to prevent or fight off a possible infection.

Where can I find more information?

For further information, please speak to your GP or contact the Oxford ILD team.

Oxford ILD Team:

Telephone: **01865 225 252**

9am to 5pm, Monday to Friday)

E.mail: **OxfordILD@ouh.nhs.uk**

Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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