

Azathioprine for Autoimmune Liver Disease

What is the leaflet about and who is it for?

Use of Azathioprine for autoimmune liver conditions

What is the treatment?

Azathioprine (also known under the brand names Imuran and Azapress) is a treatment that aims to treat inflammation within your liver and reduce your need for steroids. Azathioprine is an immunosuppressant. This means it makes your immune system weaker. The immune system protects us by fighting infections, but in autoimmune liver diseases, the immune system goes wrong, and starts fighting the liver instead. This causes inflammation and can lead to scarring (fibrosis) and possible cirrhosis. Azathioprine makes the immune system weaker so it can't fight the liver anymore. This reduces the inflammation; however, a weak immune system can mean you're more likely to get infections.

How long does it take to work?

This medication takes some time to work, usually between three to six months. This is why you may be treated with other immunosuppressants, such as steroids, until the Azathioprine starts working.

How do I take it?

Azathioprine is taken by mouth, usually once a day, and comes as 25mg and 50mg tablets. You can take it with a glass of water, with or soon after food – whatever feels better for you. If you find that Azathioprine makes you feel

sick, or gives you a tummy upset, try taking the medicine after food or at bedtime. It may also help to divide your dose and take it twice a day. It is important to take your medicine in the same way every day to avoid big changes in how it is absorbed.

How much should I take?

The amount you take (the dose) depends on your age, body weight and how active your disease is. You may be started on a low dose which is then increased gradually. The usual dose is between 1mg and 2mg per kilogram of body weight a day.

Doses are based on the levels of certain enzymes in your body that break down the medicines. We may alter your dose at a later date.

How long will I be taking it?

If Azathioprine works for you and keeps your liver disease under control, you should be able to keep taking the medicine for some years. You'll have regular blood tests to make sure this is still right for you.

Do I need checks before I start treatment?

Before you start treatment your medical team will check that this treatment is right for you. This includes:

- Levels of the TPMT (thiopurine methyl transferase). This makes sure the Azathioprine doesn't stay in your body for too long. Low levels may mean the Azathioprine is building

up because it isn't being taken out of your body. This can cause serious side effects such as suppressed bone marrow function. If you have low TPMT levels the dose of Azathioprine can be reduced.

- Screening to check that you are immune to specific infections. Your medical team may want to check if you've been exposed to a variety of viral infections including HIV, Hepatitis B and C. Having had these infections won't stop you from taking Azathioprine, but more monitoring may be needed. If you haven't been exposed to chickenpox, you'll be advised to be vaccinated before starting treatment. You may be screened for previous exposure to Epstein Barr virus which causes glandular fever, as people who have never had this virus are at an increased risk of lymphoma.

You should have all the vaccinations you need before you start treatment. If these are "live" vaccines such as the varicella zoster vaccination for shingles, you'll have this at least two weeks and ideally four weeks before you start Azathioprine.

Do I need ongoing checks?

When you first start treatment with Azathioprine you'll need to have regular blood tests. This medicine can reduce normal bone marrow function causing changes in the blood. This may happen over time, so regular tests are important.

When you first start treatment you'll have blood tests done every two weeks. Eventually tests are likely to be every three months.

Will I need to take any special precautions?

Because Azathioprine affects the way your immune system works, you may be more likely to get infections. Even a mild infection such as a cold or sore throat could develop into a more serious illness. If you're worried about an infection or an infection is being slow to improve, tell your GP or contact your medical team.

Reducing risk of infection:

- **Have the annual flu vaccination.** You may also be advised to have a pneumonia vaccination. If left untreated pneumococcal infections can lead to pneumonia, septicaemia and meningitis.
- **Try to avoid close contact with people who have infections.** This includes viruses and bacteria that cause chickenpox, shingles, measles and pneumococcal disease.

Reducing risk of other problems:

- **Take care in the sun.** There is a small increased risk of skin cancers for people who take Azathioprine. So take precautions in the sun including using a sunblock, wearing a hat and covering your skin when you are out in strong sunshine. Don't use sunbeds.
- **Avoid driving and hazardous work until you learn how your medicines affect you.** Azathioprine can sometimes cause dizziness.
- **Women should have regular screening for cervical cancer** (previously known as the smear test). There is a small increased risk of contracting the HPV virus in people with autoimmune disease taking this medicine. But there is no need to be tested more frequently than other women and you'll be invited by your doctor to attend a screening.

Can I take other medicines?

Before you take any new medicines, check with your doctor, pharmacist or specialist team, because they may interact with Azathioprine and cause unexpected side effects. This also applies to over-the-counter medicines and herbal, complementary or alternative medicines and treatments.

Some medicines interact with Azathioprine including:

- Allopurinol (used to treat gout)
- Warfarin (used to prevent blood clots)
- Some antibiotics
- Febuxat (used to treat gout)

You should always tell anyone else treating you that you are taking Azathioprine.

Can I have Immunisations?

It's not safe to have "live" vaccines while taking this medicine and for three to six months after you stop treatment. Live vaccines contain viruses that have been weakened, but not destroyed. People who are taking medicines which affect the immune system may not be able to produce antibodies quickly enough and risk becoming infected by the disease.

Live vaccines include oral polio, yellow fever, rubella (German measles), BCG (tuberculosis), chickenpox, MMR (measles, mumps and rubella) and shingles. However, you may be able to have the inactivated polio vaccine.

Flu vaccines given by injection are safe. But the children's nasal flu vaccine shouldn't be given as this is live.

Can I drink alcohol?

Alcohol isn't known to have any interaction with Azathioprine.

Does Azathioprine affect fertility or pregnancy?

Tell your doctor if you become or are thinking of becoming pregnant while you or your partner are taking Azathioprine. For both men and women, it's important to talk to your specialist team about the risks and benefits, so that you can make decisions that are right for you.

Mothers

The companies that make Azathioprine say it should only be taken when necessary during pregnancy or when trying to conceive, just to be safe. But because the risk is small, many doctors recommend continuing these medicines while you are pregnant. Large studies have shown no link between Azathioprine use during pregnancy and adverse outcomes, and there is a higher risk of your disease flaring if treatment is stopped.

Studies have however shown increased rates

of anaemia in babies born to mothers on this medication, so a haemoglobin check for the baby may be considered.

Fathers

For fathers, taking Azathioprine hadn't been found to impact the health of the baby and quality of sperm isn't affected.

What about breastfeeding?

The companies that make Azathioprine say the medicines should only be taken when necessary during breastfeeding. However, Azathioprine is generally considered safe for use by breastfeeding mothers. A low dose of the drug has been found in breast milk for four hours after taking the medication, so you could consider expressing and discarding milk during this time.

What are the possible side effects?

All medicines can cause unwanted side effects, although not everyone will get them. Side effects occur in around 1 in 3 people taking Azathioprine, and this can be at any time during treatment. When considering the risks of side effects, also consider the risks of leaving your autoimmune liver disease untreated and becoming more unwell.

Immediate reactions

Any medication can cause an allergic reaction. Tell your doctor immediately if you develop any of the following symptoms:

- Difficulty breathing or swallowing
- Rash, hives (swollen red patches of skin) or other signs of allergic reaction
- Swollen face including lips and mouth or hands and feet

Common side effects (experienced by around 1 in 10)

- Feeling sick (nausea), being sick (vomiting) and loss of appetite. These reactions can be especially strong during the first few weeks of treatment. Taking your medication after eating or in two smaller doses each day instead may help reduce these side effects.
- Flu-like symptoms with fever and general aches and pains a few days or weeks after starting treatment. Tell your doctor if you begin to feel unwell in this way. It's not usually serious but may mean the treatment needs to be stopped.
- Diarrhoea.

Other side effects

Because Azathioprine acts on the immune system it can have some more serious side effects. Let your specialist team know if you:

- Think you have an infection including having a fever, sore throat and achiness
- Have a bump or open sore which isn't healing
- Have yellowing of your skin, feel sick or are sick
- Have new warts

Suppression of normal bone marrow function.

This can cause a reduction of red blood cells (anaemia), white blood cells (leucopenia) and platelets (thrombocytopenia). This can lead to weakness, breathlessness and fatigue, being more likely to get infections, and a tendency to bruise or bleed easily. Regular monitoring should pick up reduced blood count.

Liver inflammation. Although this treatment is being given to treat liver inflammation caused by autoimmune disease, a small number of patients develop liver inflammation in response to Azathioprine. Your treatment monitoring will include regular liver function tests (LFTs), but you should contact your specialist team or go to Accident and Emergency if you notice yellowing of your skin or eyes which may be a sign of jaundice.

Pancreatitis. This is inflammation of the pancreas, a digestive gland in the tummy. This can cause severe pain in the centre of the tummy that steadily gets worse then moves to the back. People often also feel very unwell. Usually this occurs within three weeks of starting treatment. Go to Accident and emergency if you experience this type of symptom.

Shingles. There is an increased risk of shingles (herpes zoster reactivation). If you develop blister-like skin eruptions, you should stop the medication immediately and contact your specialist team. You can normally restart the drug once the rash has healed.

Uncommon side effects (experienced by around 1 in 1000) may include sensitivity to sunlight, hair loss (which in many cases settles even with continuing treatment) and skin rashes.

Does taking this medication increase the risk of cancer?

There is a slightly increased risk of some cancers for people treated with Azathioprine.

Skin cancers

The risk is greatest for non-melanoma skin cancers (which are usually not life-threatening). The skin cancer risk may continue after treatment has stopped so you will need to use sun protection.

Lymphoma (cancer of the lymph glands)

There is a slightly increased risk of lymphoma for people taking Azathioprine, but this risk is still very small.

Stopping or changing treatment

There are a few reasons why your specialist team might think the time is right for you to stop or change treatment.

Side effects

If side effects develop as they do for around 1 in 3 people, there are a few options. You could try splitting or reducing your dose. If these aren't effective you may need to stop treatment and start on a different type of therapy. For people who have previously stopped treatment due to side effects, it may be possible to restart after a break. Research suggests that around 1 in 3 people can restart treatment.

Long term remission

Most liver specialists will recommend treatment for a minimum of three years or for at least two years with your liver blood tests being entirely normal. Often, even when your liver blood tests are completely normal, there can be ongoing inflammation within your liver. For this reason, your specialist is likely to want a liver biopsy to ensure the inflammation is fully under control before stopping Azathioprine. Only a small minority of patients manage to stay off medication, and a relapse of disease occurs most commonly within 12 months after treatment withdrawal. For this reason, many specialists will recommend remaining on Azathioprine life-long.

Who should I talk to if I have questions?

If you're worried about your treatment or have any questions, you can talk to the liver specialist nurse team by phoning 01392 406108.

The Trust cannot accept any responsibility for the accuracy of the information given if the leaflet is not used by RD&E staff undertaking procedures at the RD&E hospitals.

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