

AZATHIOPRINE

Information sheet for patients with autoimmune neurological disorders

Why am I being prescribed azathioprine?

Azathioprine reduces the activity of the immune system and is therefore effective in conditions in which the body's immunity is thought to be overactive. These conditions include myasthenia gravis, Lambert-Eaton myasthenic syndrome (LEMS), muscle inflammation (myositis), certain types of brain, spine, and nerve disorders as well as others such as rheumatoid arthritis, eczema, and patients undergoing organ transplantation.

Azathioprine is most often prescribed with corticosteroids (e.g., prednisolone) which also suppress the activity of the immune system but in a slightly different way. Overall, steroids cause more troublesome side effects than azathioprine. Using both together allows the steroid dose to be reduced in many patients, and thus reduce its side-effects. However, azathioprine takes longer to take effect than steroids, possibly up to 12 months.

When do I take azathioprine?

Azathioprine should be taken with, or after food once or twice a day. Store the tablets in a cool, dry area, protected from light, and out of reach of children.

What dose should I take?

Your hospital doctor and GP will adjust the dose to suit you. The initial dose is small and is increased gradually, usually over a few weeks, to a maintenance level that is based on your weight. You must always check with your doctor first before changing the dose. If you miss a dose, simply carry on as normal. Do not take an extra dose the following day.

Do I need any special checks whilst on azathioprine?

Yes: your doctor will arrange blood tests every 2 weeks until your dose has been stable for 6 weeks. After this the blood tests are performed once every month for three months. Once you are stable on a fixed dose of azathioprine you will require blood tests every 3 months. These tests are very important as they will warn your doctor if the azathioprine is affecting the production of blood cells in the bone marrow, and the function of the liver. If these blood tests become progressively abnormal, your doctor may wish you to temporarily stop the azathioprine until the blood test results return to normal.

What are the possible side-effects?

About 10% of patients cannot tolerate azathioprine. These patients may develop sickness, diarrhoea, skin rashes, loss of appetite, changes in liver function, or reducing the immune system's blood cells too much in the bone marrow.

Part of the Shared Care Protocol: **Management of neuroinflammatory diseases in adults with the steroid sparing agent azathioprine.** For authors and contact details see the overarching protocol.

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Nottinghamshire Area Prescribing Committee

If you develop a sore throat, fever, or any other infection, you should alert your doctor without delay. Additionally, you must seek advice from your doctor if you become jaundiced, or develop unexplained bruising or bleeding, sickness, diarrhoea, skin rash or loss of appetite.

There *may* be a slightly increased risk of cancer after long-term use of azathioprine, in particular a type of cancer called lymphoma, but as far as we can tell, this risk is extremely low.

Can azathioprine be taken with other medicines?

As azathioprine *may* interact with other medications, it is important to tell your doctor about all the other medicines you are taking, including 'over the counter' preparations.

Specific interactions include:

- Allopurinol: dosage of azathioprine needs to be reduced
- Warfarin: azathioprine may inhibit the effect of warfarin and would need to be more closely monitored while azathioprine was initiated
- Trimethoprim: may increase the risk of blood problems if taken with azathioprine
- Vaccines: The 'live' vaccines such as MMR (measles, mumps, rubella), polio, chicken pox/shingles and yellow fever are no longer considered inappropriate 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 doctor on an individual basis.

Other INACTIVATED vaccines such as flu, tetanus and pneumovax are safe, and in some cases specifically recommended (e.g. annual flu vaccination).

We would highly recommend you have your pneumonia vaccine and flu vaccine. It's very important to have these to reduce your risk of infection.

Pregnancy and azathioprine

Azathioprine doesn't seem to be harmful when taken in pregnancy, but this medication will only be continued during pregnancy if your doctor thinks this is absolutely necessary. If you are planning a family, please discuss this with your doctor. As the information available to doctors on azathioprine and breast feeding is very limited, you should discuss the possibility of breast feeding whilst taking azathioprine with your hospital doctor in advance.

Where can I obtain further information?

If you have any concerns about taking azathioprine, please contact your doctor. Information on all medicines can be found on the internet at: <https://www.medicines.org.uk/emc#gref>

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