If you have any concerns regarding your treatment, please contact:

NMO Nurse Specialist
Tel 0151 529 8357
nmo.advice@thewaltoncentre.nhs.uk
Walton Centre, Liverpool

Or

NMO Nurse Specialist
Tel 01865 231 905
nmo.advice@ouh.nhs.uk
John Radcliffe Oxford

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What is Azathioprine?
Azathioprine (Imuran) is an immunosuppressant drug, it reduces the activity of the body's immune system (the defence system) dampening down the underlying disease process with the aim of preventing further relapses rather than treating symptoms. Azathioprine is used in many other conditions apart from NMO such as rheumatoid arthritis, systemic lupus erythematos (SLE), psoriasis and organ transplants.

How long does it take to work?
Before starting Azathioprine you may have a blood test for Thiopurine Methyl Transferase (TPMT) to establish if you have adequate levels of this enzyme. TPMT is used to breakdown Azathioprine and low levels may mean you are at more risk of side effects.

Azathioprine does not work immediately, it can take up to 8 - 12 weeks to take effect. Azathioprine cannot cure the condition and you may need to take it for several years to keep your relapses under control.

Alcohol
It is safe to drink alcohol in moderation whilst on Azathioprine, however, it may aggravate nausea.

What happens if I need an operation?
Let the doctor or nurse know so they can advise you what to do about your Azathioprine therapy. If you do need an operation, in most cases you will be advised to continue taking the Azathioprine.

Is Azathioprine OK in pregnancy and breastfeeding?
You should discuss with your doctor if you are planning to become pregnant whilst on Azathioprine. There are rare reports of premature birth and low birth weight following maternal exposure, particularly in combination with corticosteroids. Low white cell count have been reported in a proportion of neonates, extra blood monitoring is advised during pregnancy.
Azathioprine may pass into breast milk in small amounts, there is no evidence of harm in small studies.
Do I need any special checks whilst on Azathioprine?
Azathioprine can affect the white cell count, and may cause liver or kidney problems. It is important to have your blood regularly checked for early signs of changes. These blood tests show if the medication is working to control the inflammation or if you are developing any side effects.
We recommend the following blood tests;
- full blood count including platelets
- urea and electrolytes
- liver function tests
Initially bloods are taken weekly for 6 weeks, fortnightly for 6 weeks, monthly for 6 months and then 2 monthly, unless problems occur and then bloods will be monitored more frequently.

The blood tests can be done at the clinic or, with agreement of your GP at your local surgery.
You may be asked to keep a record booklet with your blood test results. Bring this with you when you visit your GP, hospital or dentist.

What dose do I take?
Azathioprine is taken in tablet form once or twice per day. It is taken with or after food (it can cause stomach irritation if taken on an empty stomach).
The dose starts at 25mg per day, increased in increments of 25mg every 3 days up to 100-250mg depending on your body weight (2-3mg/kg). Your doctor will advise you about the correct dose and this may be changed depending on your response to the medication.

What do I do if I miss a dose?
Take your next dose at the normal time. Do not double the dose. If you take too much Azathioprine, tell your doctor

Can I take other medicines along with Azathioprine?
Azathioprine may be prescribed along with other drugs in treating your condition. Some drugs interact with Azathioprine, such as Allopurinol (used for treatment of gout) antibiotics e.g. Trimethoprim and Co-trimoxole (often used in urine infections) and the antiviral medication Rivavirin, so you should always tell any doctor treating you that you are taking Azathioprine.

Do not take over-the-counter preparations or herbal remedies without discussing this first with your doctor, nurse or pharmacist.
What are the possible side effects?
The most common side-effects of Azathioprine are sickness, diarrhoea, vomiting or abdominal (stomach) pain, dizziness and hair loss (however, hair often re-grows even if you carry on taking it). These side effects often occur at the beginning of treatment but settle as you become used to the medication.

Azathioprine can affect the production of some of the cells in the bone marrow. This can make you more prone to infections, or cause problems with clotting of your blood or wound healing.

There is a slightly increased risk of certain types of cancer with Azathioprine. Discuss this with your doctor. Because of the small increase in risk of skin cancer, you should avoid exposure to strong sunlight and protect your skin with sun block or sunscreen.

What do I do if I experience side effects?
If you experience any signs of illness or side effects such as infection, unexplained bruising, bleeding, sore throat, mouth ulcers, fever or malaise, contact your nurse, doctor, or pharmacist. It may be necessary for you to have a blood test to check how your body is coping. If you have not had chickenpox but come into contact with someone who has chickenpox or shingles, or if you develop chickenpox or shingles, you should contact your doctor as you may need anti-viral treatment. This is because chickenpox and shingles can be severe in people on immune-suppressive medications such as Azathioprine.

Vaccinations
Pneumovax and yearly flu vaccines are safe and Recommended
It is not recommended that you be immunised with 'live' vaccines such as yellow fever. However, in certain situations a live vaccine may be necessary (for example rubella immunisation in women of childbearing age), in which case your doctor will discuss the possible risks and benefits of the immunisation with you.