Azathioprine and Multiple Sclerosis

What is azathioprine?
Azathioprine (Imuran®) is an immunosuppressive medicine used to treat a variety of immune diseases to reduce the activity of the specific disease. The drug has been used in some patients with multiple sclerosis (MS), usually if they have problems with standard FDA-approved medications for their MS, or if they are unable to tolerate injections.

Studies have shown that azathioprine can reduce the number of exacerbations in patients with relapsing MS. It also can reduce new MRI lesion formation in patients with MS. It is not FDA approved specifically for MS. Azathioprine might also be used with other disease-modifying therapies to boost their effect when necessary.

How is azathioprine taken?
Azathioprine is generally taken orally (by mouth), in the form of tablets.

Your white blood cell count and your weight determine the dosage of azathioprine that is prescribed. The starting dose is low and is slowly increased. Azathioprine is generally taken twice a day. It is available in 50 mg tablets, which may be easily broken in half if necessary. You may take this medication with food to reduce nausea and abdominal symptoms.

Your prescription label tells you how much to take at each dose and how often to take it. Follow these instructions carefully, and ask your pharmacist or health care provider to explain anything you do not understand.

It is important that you take this medicine regularly as prescribed. Do not stop taking it unless you are directed to do so. Do not take more or less of the medicine than is prescribed.

Special instructions
- Some mild nausea often occurs when you start taking azathioprine. This discomfort is expected and will go away as your body gets used to the medicine. If you have extreme nausea with vomiting, contact your health care provider.
- Azathioprine is contraindicated during pregnancy and breast feeding.
- While you are taking this medicine, you might be asked to have regular blood tests (blood cell counts and liver function tests) to evaluate the medicine’s effectiveness and to monitor your response to the medicine. Keep all appointments with your health care provider and the laboratory.
- Your health care provider might reduce or even stop azathioprine when you are being treated for certain infections. This allows your body to effectively fight the infection.
- Be sure you always have enough medicine on hand. Check your supply before holidays or other occasions when you might be unable to fill your prescription.
Do not have any vaccinations without your health care provider’s approval.
Take precautions to avoid infection while taking this medicine. Avoid anyone who might have an infection and report any signs of infection to your health care provider.
Check to make sure there are no interactions with other medicines you take. A pharmacist can usually assist with this. ACE inhibitors are specifically contraindicated with azathioprine as they might reduce the white blood cell count.

What are the possible side effects of azathioprine?
This medicine is generally well-tolerated. It is important to remember that not everyone experiences all of these side effects. Even though some of the side effects could be serious, remember that precautions will be taken to detect these side effects and treat them before they become harmful. You should call your health care provider if any of the following reactions occur:
- Increased stomach irritation, abdominal pain.
- Nausea and vomiting
- Changes in hair color and texture, along with hair loss. (These changes are usually temporary.)
- Loss of appetite
- Blood in the urine or stool
- Unusual bruising
- Fatigue
- Development of mouth sores and ulcers
- Decreased resistance to infection. (Because azathioprine is an immuno-suppressive medicine, it can lower the number of white blood cells in your blood, increasing the chance of getting an infection.)
- Long-term use may increase the risk of developing some types of tumors. This generally occurs after 10 years of continuous use or with a life time dose of 600 grams.

What should I do if I forget to take a dose?
If you forget to take a dose, take it as soon as you remember and then continue to follow your regular dosing schedule.

What storage conditions are necessary for this drug?
- Store this medicine at room temperature.
- Do not store this medicine in direct heat or light.
- Do not store this medicine in the bathroom, near the kitchen sink, or in other damp places. Heat or moisture might cause it to break down.
- Keep this medicine in the container it came in, tightly sealed.
- Do not keep outdated medicine.
- Keep this and other medicines out of the reach of children.

When should I call my health care provider?
Call your health care provider right away if you have any of these warning signs of infection:
- Fever over 100°F (38°C)
- Sweats or chills
- Skin rash
- Pain, tenderness, redness, or swelling
- Wound or cut that won’t heal
- Red, warm, or draining sore
- Sore throat, scratchy throat, or pain when swallowing
- Sinus drainage, nasal congestion, headaches, or tenderness along your upper cheekbones
- Persistent dry or moist cough that lasts more than two days
- White patches in your mouth or on your tongue
- Nausea, vomiting, or diarrhea
- Flu-like symptoms (chills, aches, headache, or fatigue) or generally feeling “lousy”
- Trouble urinating: pain, burning, constant urge, or frequent urination
- Bloody, cloudy, or foul-smelling urine, or black, tarry stools
- Also call your health care provider if you have any other symptoms that cause concern.