

## Imuran

Imuran is an immunosuppressant, a medication that reduces the immune system's ability to fight infections. It was first developed for patients who received organ transplants and later used to treat autoimmune diseases. Myasthenia Gravis is an autoimmune disease. The generic form of Imuran is called azathioprine.

In MG, Imuran works by decreasing the number of antibodies in the blood. These specific antibodies destroy the receptor sites on the muscles. When there are fewer antibodies to destroy the receptor sites, the muscles are stronger. Myasthenia gravis specialists believe that many patients require lower steroid doses while on Imuran, lowering the risks of long-term steroid exposure.

Imuran comes in 50 mg scored tablets. The prescribed dose is based on the patient's weight. The dose may be taken all at once in the morning, or divide the dose for half in the morning and half later in the day. The divided dose may be helpful if Imuran causes stomach upset.

The improvement from Imuran is not immediate. In MG, it takes 3 to 12 months before the medication starts to show improvement in muscle strength. Likewise, when the medicine is stopped, any gain in muscle strength usually continues for a few months.

There are three categories of side effects for Imuran. Starting the first week, and anytime thereafter, fever, nausea, vomiting, joint pain, rash, stomach upset and inflammation of the pancreas may develop. These symptoms will disappear if the medication is stopped.

The second group of side effects may occur anytime after the first week of treatment. These include a decrease in white blood cells (WBC), liver inflammation and hair thinning. These problems will disappear when the medication is stopped.

In order to follow the condition of the liver, blood and pancreas, blood tests will have to be done every four to six weeks the entire time Imuran is taken.

The long term side effects are an increased chance of infection and, possibly, an increased risk of cancer. Since the dose for treating non transplant patients is lower, the increased risk of cancer is questionable.

Imuran may cause birth defects. If pregnancy is being considered, discuss with your doctor the benefits from Imuran compared to the risks to the fetus. It is recommended that pregnancy be avoided while taking Imuran, and for 4 to 6 months after stopping Imuran. A discussion with the physician concerning pregnancy and breast feeding should occur before starting Imuran.

If a dose is missed in the morning, take it later in the day. If a previous day's dose is missed, skip the dose and continue the regular schedule.

While taking Imuran:

- Notify all physicians, dentists and nurses that you are taking Imuran.

- Talk with the neurologist before becoming pregnant.
- Check with the neurologist before taking any vaccination.
- Remember with MG it may take months before an increase in muscle strength will be felt. Increased strength may continue for months after the medication is stopped.
- Blood tests should be done every 4 to 6 weeks to check for side effects the entire time Imuran is taken.
- Inflammation of the pancreas may cause abdominal pain that can be aggravated by fatty foods, alcohol, and lying down.
- Inflammation of the liver may cause clay-colored stools, dark urine and itchy, yellow skin and eyes.
- The ability to fight infection may be impaired. Mild infections such as colds, sore throats, etc. may be more difficult to treat and need to be reported to a physician.
- Carry a list of all medications and dosages at all times.
- Wear a MEDIC ALERT bracelet or necklace.
- On vacation, carry a prescription in case medicine is lost or stolen.
- If traveling outside the United States, carry a sufficient quantity of medicine in two separate areas in case one is stolen or lost. It may be impossible to have a prescription filled in some places.