

Immunosuppressives:

Imuran (azathioprine), Purinethol (6-mercaptopurine)

What are immunosuppressives? These drugs suppress the immune system. They can be useful to avoid rejection of transplanted organs by the immune system. They also can decrease tissue damage that occurs with autoimmune disorders in which the immune system attacks a part of one's body.

What is it used for? In gastroenterology, these drugs are very useful in Crohn's disease, autoimmune hepatitis and even ulcerative colitis. They can allow reduction or removal of steroids as a treatment. They are useful in closing draining fistulas around the anus in Crohn's disease.

How do I take it? Follow your physician's instructions carefully. These drugs should be taken with food to reduce stomach irritation. If nausea or vomiting develops, try eating small meals of dry foods such as toast or crackers, soups or unsweetened juices. You should drink two quarts of fluid each day to maintain good urine flow. The tablets may be crushed and sprinkled on food. Store in a tightly closed container at room temperature away from light. Keep all medications away from children. Never share your medications with anyone else.

What do I do for a missed dose? If you miss a dose of this medicine, take it as soon as possible. If it is almost time for your next dose, skip the missed dose and return to your regular schedule. Do not double up on this medication.

Are there interactions with food or beverages? There are no known interactions with these medicines and any food or beverage.

Are there interactions with other drugs? An interaction generally means that one drug may increase or decrease the effect of another drug. Also, the more medications a person takes, the more likely there will be a drug interaction. Interactions with these drugs may occur with the following:

- Certain blood pressure medications known as ACE inhibitors (Capoten, Zestril, Prinivil, Vasotec)
- allopurinol (Zyloprim)
- methotrexate
- blood thinners (Coumadin)
- cyclosporine (Sandimmune, Neoral)]
- Sulfa drugs (Bactrin, Septra)

Is there a problem if I have another disorder or disease? At times, a drug may have a different or enhanced effect when other diseases are present. At other times, the drug may worsen or affect another disease. The physician generally will test the red and white blood cells to be sure the proper amount of the drug is being taken. If anemia, a low white cell count, or bone marrow problems are already present, be sure to notify your physician. Also, alert your physician if you have a tendency to infections, have any liver condition or have had pancreatitis.

What about allergies? People who have known allergies or asthma may be at an increased risk for a reaction from any new medication. Signs of an allergic reaction may include fever, skin rash, joint pain, hives, itching, difficulty breathing and swelling of the lips, tongue and face. Of course, you should inform your physician there has been a previous reaction to these or other chemotherapy drugs.

What if I'm pregnant, considering pregnancy or breast-feeding? Any drug taken during pregnancy is potentially dangerous to a fetus. The FDA has a grading system for each drug which reflects what is known medically. These immunosuppressives are ranked D. These drugs can cause miscarriage and harm an unborn baby. They should be used only if the benefit outweighs the risk to the fetus. Women of child bearing potential should use effective contraception. It is not known if these drugs pass into breast milk. Because of their potential for serious harm to nursing infants, discontinuation of nursing or the drug must occur. Always consult the physician before taking any drug during or when planning pregnancy or during breast feeding.

What are the effects on sexual function? These drugs can suppress sperm production and reduce sperm viability. They may cause absence of menstruation in women.

Are there other precautions? Inform your physician if you develop any signs of infection (fever, chills) or abnormal bleeding or bruising, or if you have been exposed to chicken pox or shingles. Avoid immunizations with live virus vaccines and people who have recently taken oral polio virus vaccine.

How long is it safe to take azathioprine? These drugs can be taken long-term. There was an initial concern about developing a tumor called lymphoma. In the early kidney transplant reports, there was an increased incidence of this tumor. However, in gastroenterology, the dose is only 1/3 to 1/2 that used in renal transplants. There have been no reports of increased malignancies above that seen in the general population. Long-term use requires periodic blood work and evaluation by a physician. It may take several months before the full effect of these drugs occurs.

How about side effects? Adverse reactions can occur with any drug, even over-the-counter medications. Some of these are mild such as a stomach upset, which may be avoided by taking the medication with food. Minor reactions may go away on their own but if they persist, contact the physician. For major reactions, the patient should contact the physician immediately. For these drugs, the following are the observed side effects:

Minor:

Loss of appetite, abdominal pain, lip and mouth sores, loss of hair, rash, unusual fatigue, weakness, nausea, vomiting, diarrhea, itching, rash, darkening of the skin

Major:

Severe joint pain, severe abdominal pain (pancreatitis), low white blood cell count, fever, unusual fatigue, weakness, sore throat, abnormal bleeding or bruising, cough, difficult breathing, yellow color to skin or eyes