

## AZATHIOPRINE

### What are the aims of this leaflet?

This leaflet has been written to help you understand more about azathioprine. It tells you what it is, how it works, how it is used to treat skin conditions, and where you can find out more information about it.

### What is azathioprine and how does it work?

Azathioprine has been available for more than forty years. It was developed initially to stop rejection of transplanted organs, such as kidneys, although it is now used to treat a wide range of illnesses. It works by suppressing the body's own defence system (the immune system), either by itself or in combination with other drugs. Azathioprine is not a steroid and is considered to be safer in the long-term than steroid tablets.

### Why suppress the immune system?

There are several reasons:

- In *auto-immune* diseases, one or more of the body's organs are attacked by its own immune system.
- There are also conditions in which the body's immune system becomes 'overactive' resulting in inflammation, such as atopic eczema.
- After transplant surgery, the immune system has to be suppressed to stop the transplanted organ being rejected.

### Which skin conditions are treated with azathioprine?

Azathioprine is used for conditions in which the immune system is too active or is directed against the body's own organs. It is licensed to treat pemphigus vulgaris, systemic lupus erythematosus and dermatomyositis. However, sometimes drugs are used for conditions not included in the original licence application. In the case of azathioprine, these are atopic eczema, bullous pemphigoid, pyoderma gangrenosum, chronic actinic dermatitis and cutaneous vasculitis.

### Will azathioprine cure my skin condition?

None of the skin conditions for which azathioprine is used are "cured" by this treatment. Usually a gradual improvement is followed by resolution. However, this may take many years.

## **How long will I need to take azathioprine?**

Azathioprine is usually taken for many months or even years. It is not usually given for short periods as the benefits of treatment are slow to start and may not be apparent for 2-3 months.

## **When should I take azathioprine?**

Azathioprine is taken either once or twice a day, with or after food.

## **What dose should I take?**

Your doctor will advise you. Azathioprine is usually taken as a tablet, and doses fall within the range of 25-250 mg per day. The dose prescribed for you will depend on your weight and on the results of blood tests carried out before you start treatment and as part of the regular monitoring of your blood during treatment.

## **What are the possible side effects of azathioprine?**

- Most patients experience no problems with azathioprine.
- Rarely, patients may be allergic to azathioprine. This causes severe 'flu'-like symptoms (severe aches and pains, high fever and shaking). If at any point you develop these stop the drug and contact your doctor as soon as possible.
- Mild sickness and headaches are quite common on starting azathioprine (or after an increase in dose). These settle in most people after a few weeks. Some people develop more severe sickness and vomiting with azathioprine. These symptoms may disappear on a lower dose, but occasionally azathioprine will have to be stopped completely.
- Patients taking azathioprine treatment may have a slightly increased number of common infections such as coughs, colds and cold sores. Patients with all but the mildest of infections should consider seeing their doctor who may wish to check monitoring blood tests and treat the infection if appropriate. They may also advise coming off the azathioprine for a short while until the infection has cleared.
- Taking azathioprine for a number of years may possibly increase your risk of getting some types of cancer, including skin cancer and lymphoma. All people should protect themselves from too much sunlight exposure. This includes not sunbathing, wearing suitable clothing (e.g. long sleeves and sunhat) and using sunscreens with a sun protection factor (SPF) of at least 30 and a star rating of at least 4. Also if you detect any new swellings or lumps, or changes in your skin, which last more than two weeks anywhere in your body you should inform your doctor immediately.

## **Can I have immunisations (vaccinations) whilst on azathioprine?**

You should avoid immunisation injections with any of the 'live' vaccines such as polio (oral drops only, the injections are safe), German measles (rubella) and yellow fever. Other members of your household should be given inactive (rather than live) polio vaccine.

If you require immunisation with a live vaccine, azathioprine should be stopped 6 months before and until 2 weeks after the vaccination.

If you have never had chicken pox your doctor may recommend vaccination against this before starting azathioprine. If this was not possible and you come into contact with a person with chicken pox or shingles whilst you are taking azathioprine, then you should go to your doctor straight away as you may need special preventative treatment.

Yearly 'flu' (influenza) and 5 yearly pneumococcal vaccines are safe and should ideally be given to everybody on azathioprine.

### **What monitoring will be required?**

- Azathioprine can affect the function of the liver or bone marrow and all patients taking the drug will require regular blood tests to check on this.
- There is a way of predicting severe bone marrow problems with a blood test. This is usually checked in everyone before starting azathioprine. Those few people at high risk will not be given the drug.
- Consult your doctor urgently if you develop unexplained bruising, severe sore throat or fever as these can be an early sign of bone marrow suppression, but these are very unlikely to happen if you are having regular blood tests.

### **How frequently will blood tests be needed?**

Blood tests will usually be checked weekly for the first 4-8 weeks of treatment. After this tests will be taken every 1-3 months.

### **Is azathioprine safe in pregnancy, during breastfeeding or if my partner and I are trying for a child?**

Azathioprine is probably safe in all of these situations. However, you should always discuss azathioprine use with your doctor in advance of planning any pregnancy. This is because the evidence for safety is not absolutely watertight. Therefore, azathioprine would be best avoided unless there is no alternative treatment.

### **Can alcohol be drunk with azathioprine?**

Yes. However, it is probably better to drink in moderation (if at all), as both alcohol and occasionally azathioprine can affect the liver.

### **Can I take other medicines at the same time as azathioprine?**

- Some medicines can interact with azathioprine.
- Allopurinol and febuxostat (for gout) should generally **never** be taken together with azathioprine.
- Care should be taken if certain other drugs are used together with azathioprine. These include warfarin, ribavirin, co-trimoxazole, ACE inhibitors (angiotensin-converting enzyme inhibitors) and trimethoprim.
- Before you can be given azathioprine your doctor will ask you to list all medicines that you are taking.

- Always tell any doctor treating you that you are taking azathioprine.

### **Where can I find out more about azathioprine?**

If you want to know more about azathioprine, or if you are worried about your treatment, you should speak to your doctor or pharmacist. This information sheet does not list all of the side effects of azathioprine. For full details, look at the drug information sheet which comes as an insert with your prescription for azathioprine.

#### *References:*

British Association of Dermatologists' guidelines for the safe and effective prescribing of azathioprine 2011 (NICE accredited)

#### *Web link to detailed leaflet:*

<http://www.medicines.org.uk/EMC/searchresults.aspx?term=Azathioprine&searchtype=QuickSearch>