



## **CICLOSPORIN**

### **What are the aims of this leaflet?**

This leaflet has been written to help you understand more about ciclosporin and explains what it is, how it works, how it is used to treat skin conditions, and where more information can be found about it.

### **What is ciclosporin and how does it work?**

Like penicillin, ciclosporin is a substance produced by a fungus. Ciclosporin suppresses the immune system and was initially developed for transplant patients to prevent them rejecting their kidneys and other organs. It was later found to benefit some patients with diseases caused by immune reactions.

### **Why suppress the immune system?**

There are several reasons:

- In auto-immune diseases, the immune system attacks the body. These diseases can affect just one organ - such as the heart, liver, skin or a number of organs.
- There are also diseases in which the body's immune system becomes overactive, letting a disease persist or even get worse. Suppressing the immune system can then be helpful.
- After transplant surgery, the immune system has to be suppressed to stop the transplanted organ being rejected.

### **Which skin conditions are treated with ciclosporin?**

Ciclosporin is prescribed for conditions in which the immune system is playing a role in maintaining the disease. It is licensed in dermatology to treat psoriasis and atopic eczema. This means that enough research has been focussed on these conditions to allow the drug to be marketed for treating

them. However, drugs are also sometimes used 'off-license', i.e. for other conditions, if they are considered beneficial, providing this is under medical supervision. In the case of ciclosporin, these include other types of [eczema](#), [hidradenitis suppurativa](#), [lichen planus](#), [pyoderma gangrenosum](#), [urticaria](#) and [vasculitis](#) (see related BAD Patient Information Leaflets).

### **Will ciclosporin cure my skin conditions?**

As far as we know, none of the skin conditions for which ciclosporin is used are 'cured' by this treatment. However, it can be very effective in keeping skin conditions under control. If ciclosporin is going to be effective, an improvement is usually seen within the first few days or weeks of treatment, and then the drug will be continued, if necessary, to keep the skin problem under control.

### **What dose should be taken?**

The dose prescribed depends on body weight and the skin condition being treated. The total dose is usually within the range of 2-5 mg for every kg of body weight per day.

*Grapefruit or grapefruit juice is best avoided by patients taking ciclosporin as it may alter the metabolism of the drug.*

Please note that different brands of ciclosporin might be absorbed by the body differently, so it is recommended to always use the same brand. If the brand is changed, then it is possible that a slightly different dose will be needed. Blood tests are occasionally performed to measure the level of the drug in the blood system.

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

The main long-term (over several months or years) side effects of ciclosporin include reduced function of the kidneys and raised blood pressure. Kidney function can be measured using a blood test. The dose of ciclosporin has to be reduced or stopped if there is a rise in blood pressure or undesirable effects on the kidneys. Provided the treatment is monitored and appropriate adjustments are made, these side effects are largely reversible. Ciclosporin can also cause increased levels of lipids (for example cholesterol) in the blood.

The functions of the immune system include protection from infections and cancers. Taking ciclosporin may therefore reduce your resistance to serious

infections (e.g. tuberculosis or hepatitis). Minor infections, such as colds, are probably not increased. If you have not had chickenpox and come into contact with someone who has chickenpox or shingles (which is also caused by the chickenpox virus), the doctor should be informed promptly as it may be necessary for preventative treatment to be given (see Patient Information Leaflet on [immunisation](#) for recommendations on adult patients taking immune-suppressing medicines). Your doctor may take blood tests and a chest X-ray prior to starting ciclosporin to look for evidence of infections and antibodies to previous infections.

In transplant patients who have taken ciclosporin with other drugs which also suppress the immune system, there is an increased risk of many types of cancer. If cancer develops while taking ciclosporin it might grow faster as a result of the immunosuppression. As this includes skin cancer, patients taking ciclosporin should limit exposing their skin to the sun, and apply a sunscreen to all exposed skin when out of doors, especially in the summer (see PILs on [Skin Cancers](#) and Sun Protection). Skin cancer is a risk in patients who have received a lot of treatment with ultraviolet light, particularly those with psoriasis or who have exposed their skin to a lot of sun over the years. You should talk to your doctor about this if you have any concerns, if you find any new growths on your skin, or if any mole or area of skin changes colour or texture.

Less serious side effects of ciclosporin include sickness (nausea), diarrhoea, gum overgrowth, acne, raised blood fat levels, tiredness and excessive hair growth. It can also produce a mild tremor. Sometimes a burning sensation of the hands and feet occurs early in treatment. These side effects tend to get better if the dose is reduced, and resolve if ciclosporin is stopped.

### **How will the side effects of ciclosporin treatment be monitored?**

As ciclosporin can affect the kidneys and blood pressure and blood fat levels, your doctor will arrange for you to have regular tests of your blood, and checks on your blood pressure. These tests will be carried out frequently at first and less often once the dose is stable. You may be asked to keep a record booklet with your test results. Take this with you when you visit your General Practitioner or go to hospital.

You must not take ciclosporin unless you are having regular checks.

### **Does ciclosporin affect fertility or pregnancy?**

It is preferable not to take ciclosporin during pregnancy, but your doctor will discuss your options. If you are planning a family, or if you become pregnant while taking ciclosporin, you should discuss this with your doctor as soon as possible. You should not breastfeed while taking ciclosporin.

### **Can alcohol be drunk while taking ciclosporin?**

There is no particular reason for you to avoid alcohol (within the recommended guidelines) while taking ciclosporin.

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

Ciclosporin may be prescribed in combination with other drugs. However, many other drugs interact with it and you should always tell all doctors and medical professionals treating you that you are taking ciclosporin. You should not take over-the-counter drugs or dietary supplements such as St John's wort, without discussing this first with your doctor or pharmacist.

Drugs that may interact with ciclosporin include:

- *Aspirin and non-steroidal anti-inflammatory drugs (NSAIDs):* e.g. ibuprofen and diclofenac.
- *Antibiotics:* erythromycin, clarithromycin, trimethoprim, ciprofloxacin, rifampicin and doxycycline.
- *Antifungals:* fluconazole, itraconazole, ketoconazole and amphotericin B.
- *Treatment for seizures:* phenytoin and carbamazepine.
- *Blood pressure treatments:* ACE inhibitors, beta-blockers and some calcium channel blockers.
- *High cholesterol treatments:* statins and fibrates.
- Digoxin.

Please note this is not a complete list.

### **Can I have immunisation injections while on ciclosporin?**

You should avoid immunisations containing live weakened viruses such as yellow fever injections, polio drops, chickenpox (herpes varicella) and shingles (herpes zoster) vaccines. Most flu vaccines and Pneumovax are safe and recommended. Vaccines may be less effective whilst on ciclosporin.

### **Where can I get more information about ciclosporin?**

If you would like any further information about ciclosporin, or if you have any concerns about your treatment, you should discuss this with your doctor or pharmacist. This information sheet does not list all the side effects this drug can cause. For full details, please see the drug information leaflet that comes with your medicine. Your doctor will assess your medical circumstances and draw your attention to side effects that may be relevant in your particular case.

### **The BAD Biologic Interventions Register (BADBIR)**

If you have been prescribed ciclosporin for treatment of your psoriasis, you may be asked to take part in the national biologics register. This register is to compare the safety of different treatments for psoriasis and to see how well they work. It was set up to monitor some new treatments for psoriasis called biological treatments. The register will give doctors information on how best to use the treatments available for moderate to severe psoriasis. No information will be passed to the register without your informed consent.

#### **References:**

British Association of Dermatologists' guidelines for the safe and effective prescribing of ciclosporin (in development)

BAD Patient Information Leaflet on Immunisation:

<http://www.bad.org.uk/for-the-public/patient-information-leaflets/immunisation>

A full list of Patient Support Groups is available at the BAD website:

<https://www.bad.org.uk/patient-support-groups>

For details of source materials used please contact the Clinical Standards Unit ([clinicalstandards@bad.org.uk](mailto:clinicalstandards@bad.org.uk)).

**This leaflet aims to provide accurate information about the subject and is a consensus of the views held by representatives of the British Association of Dermatologists: individual patient circumstances may differ, which might alter both the advice and course of therapy given to you by your doctor.**

*This leaflet has been assessed for readability by the British Association of Dermatologists' Patient Information Lay Review Panel*

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