



FUMARIC ACID ESTERS

What are the aims of this leaflet?

This leaflet has been written to help you understand more about fumaric acid esters (FAE). It tells you what they are, how they work, how they are used to treat skin conditions, and where you can find out more about this drug.

What are Fumaric acid esters?

Fumaric acid esters (FAE) are chemical compounds that have been used as a treatment of psoriasis for over 30 years. They are a popular medication in some European countries, but are not licensed as a treatment of psoriasis in the UK. A fixed combination of FAEs called Fumaderm® is approved for treatment of psoriasis in Germany. This contains dimethyl fumarate (DMF) which is thought to be the main active ingredient.

What is an unlicensed drug?

An unlicensed drug is one that has not been awarded a Market Authorisation from the UK Medicines Healthcare Products Regulatory Agency (MHRA). Drug licenses are awarded following a rigorous process of evaluation by the MHRA following an application by a pharmaceutical company. Once awarded, the licensed drug can then be marketed and sold in the UK. In the absence of a license, the drug may still be prescribed in the UK, provided there is funding available locally to pay for it. Additionally, there must be a clear body of evidence to confirm that the drug is effective for the condition in question and that safety concerns have been adequately addressed. Even after such evidence has been supplied it is still a matter for the local formulary group (a multidisciplinary group who make decisions on the prescribing of medicinal drugs at a local level) to make a final decision on a case-by-case basis.

Which conditions are treated with Fumaric acid esters?

Fumaric acid esters are used to treat adults with moderate to severe psoriasis (unlicensed treatment – see above). DMF has recently been licensed in the UK as an oral treatment for multiple sclerosis and is also being investigated as a treatment for psoriasis.

How do Fumaric acid esters work?

FAE act on cells of the immune system. Their effects include normalising the balance of chemicals called cytokines which is upset in psoriasis.

Why have I been offered treatment with fumaric acid esters?

FAE may be offered to adult patients with moderate to severe psoriasis if other licensed drug treatments do not work, are not tolerated or if they are considered unsuitable because of health problems.

Do Fumaric acid esters cure psoriasis?

No, psoriasis is a chronic skin disease and there is no known cure. Taking FAE will often improve psoriasis and may sometimes clear the skin, but the psoriasis will return when the medication is stopped.

How long will I need to take fumaric acid esters before it has an effect?

FAE works over several weeks and it may take several months before someone's psoriasis really improves, depending on the dose of medication that they have been able to take. If there has not been a considerable improvement after 6 months treatment should be stopped.

How do I take Fumaric acid esters?

FAE are taken by mouth as tablets once, twice or three times a day. The German preparation, Fumaderm,[®] comes in two strengths, a lower strength preparation called Fumaderm Initial[®] and the standard strength preparation called Fumaderm.[®]

Treatment is usually started with the lower strength Fumaderm Initial tablets and the dosage is gradually increased week by week before switching to standard strength tablets. Side effects can limit the rate at which the dosage is increased. Once the psoriasis has improved, it may be possible to reduce the daily dosage without losing effectiveness.

What are the possible side effects of fumaric acid esters?

All medicines can cause side effects. Detailed information about side effects is found in the package insert leaflet. Please read this carefully before starting treatment.

Most side effects from FAE harmless, but because this medication affects the immune system there is a small chance of serious side effects.

Common side effects include:

- **Nausea, stomach cramps, flatulence and diarrhoea**
- **Flushing, feeling hot, skin redness and irritation**
- **Headaches**

These side effects are very commonest at the start of treatment and usually become less frequent over time.

Rare side effects include:

- **Liver inflammation**
- **Kidney abnormalities** with loss of protein loss in the urine
- **Nervous system viral infection (encephalopathy)** has been reported extremely rarely. The risk seems to be increased in people taking FAE who had persistently low levels of lymphocyte white blood cells, so it is important that the blood count is checked regularly.

How will I be monitored for the side effects of fumaric acid esters?

Before treatment is started, routine blood tests are carried out to check the full blood count, kidney function and liver function. Additional test may include HIV and hepatitis virus infection in people who are at risk of these infections. A urine sample is also dip-tested for sugar and protein. Blood tests and urine are usually checked frequently for the first 3 months' treatment then every month or so when the dose of medication is stabilised.

It can be helpful to measure the psoriasis activity and severity index (PASI score) to monitor progress during treatment.

Advice your doctor or nurse about any new symptoms or problems with your general health during FAE treatment as these may need further investigation.

The BAD Biologic Interventions Register (BADBIR)

If you have been prescribed fumaric acid esters 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.

Do Fumaric acid esters affect fertility or pregnancy?

FAE do not affect fertility. Pregnancy should be avoided during treatment with FAE as there is a possibility of harm to an unborn baby. They should not be taken during breast feeding.

FAE do not interfere with the effectiveness of the oral contraceptive pill or other hormonal contraception.

Can I drink alcohol if I take fumaric acid esters?

Yes, as there is no known interaction between alcohol and FAE. However, strong alcoholic drinks increase the risk of stomach irritation with FAE and should be avoided. Aim to keep your drinking within the recommended limits.

Can I take other medicines if I take fumaric acid esters?

Most medicines are safe to take with FAE but they are usually avoided in people who are taking immune suppressing drugs such as Ciclosporin and are not usually given in combination with other psoriasis treatment such as phototherapy (UV therapy), retinoids or Methotrexate. Drugs which can cause kidney injury (nephrotoxic) should be avoided with FAE.

Tell your doctors and pharmacist if you take any new medication including over-the-counter treatment, herbal medicine and supplements.

Where can I find out more about fumaric acid esters?

If you would like any further information about FAE, 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.

Web links to detailed leaflets:

www.dermnetnz.org/treatments/fumaric-acid-esters.html

For details of source materials used please contact the Clinical Standards Unit (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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