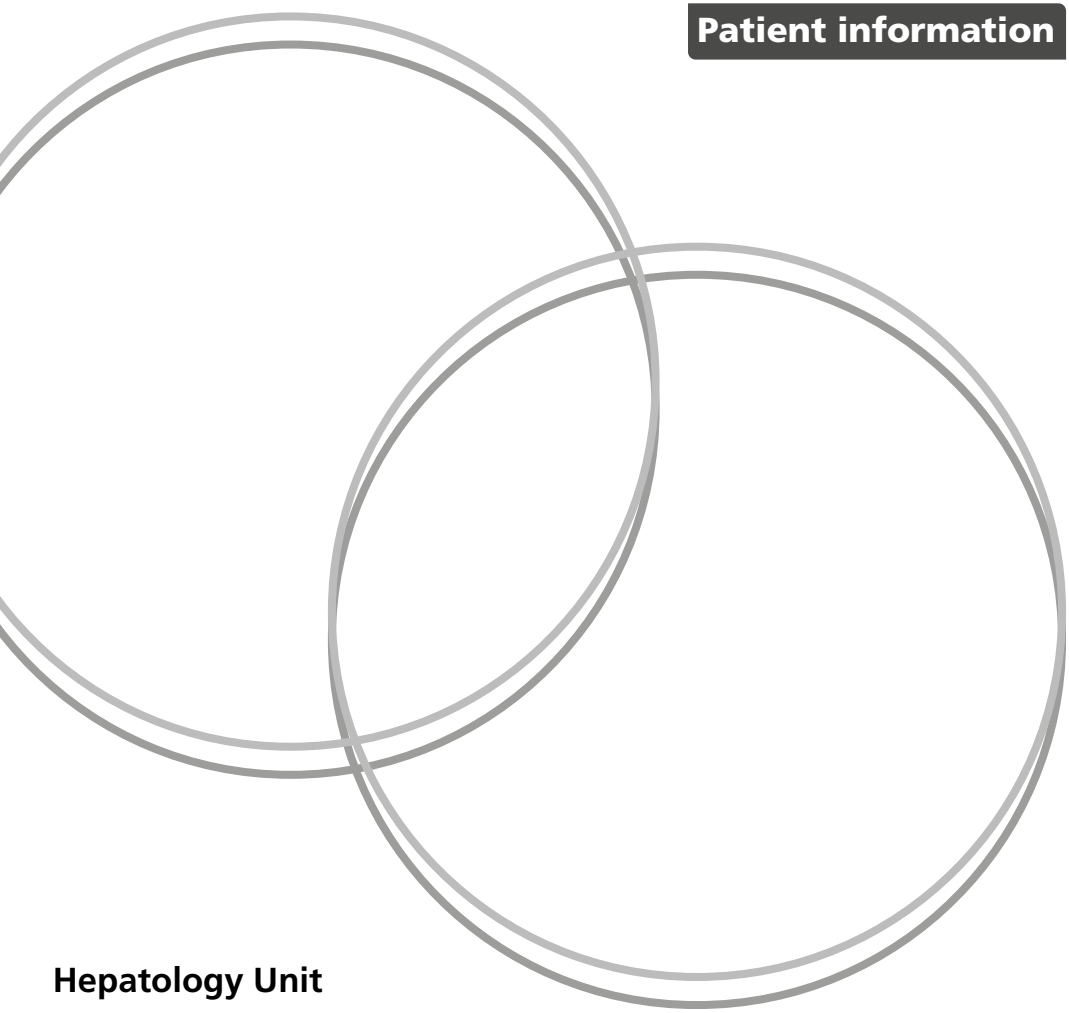
Oxford University Hospitals
NHS Foundation Trust

# Prednisolone in autoimmune liver disorders

**Patient information**



**Hepatology Unit**

# Prednisolone in autoimmune liver disorders

This leaflet answers some common questions patients ask about prednisolone.

Further information can be found in the information leaflet supplied by the manufacturer or from your pharmacist, liver nurse specialist or doctor.

# Why have I been started on this medicine?

Prednisolone is a corticosteroid prescribed for patients diagnosed with AIH (autoimmune hepatitis) and IgG4-related disease affecting the liver/bile ducts and pancreas. These conditions are examples of an immune mediated (autoimmune) liver disorder.

Autoimmune liver disorders can develop when your body's own immune system mistakenly attacks the cells in your liver causes damage. No one knows why this happens. If left untreated it can lead to cirrhosis (scarring of the liver), which has a higher risk of liver cancer.

AIH may have an inherited predisposition to the disease, which is finally triggered by something in the environment. We do not, however, know what the environmental trigger is (or triggers may be). 30-50% of people diagnosed with AIH have another autoimmune condition, such as thyroid disease, rheumatoid arthritis, ulcerative colitis or type 1 diabetes. It is estimated that 15 to 25 per 100,000 people in Europe have AIH.

IgG4 related disease is a chronic-fibroinflammatory disorder affecting a wide range of organs. These are commonly the salivary glands, pancreas, bile duct and liver, aorta and retroperitoneum. It is a rare disease affecting an estimated 10 per 100,000 people.

Common symptoms associated with autoimmune liver disorders include fatigue, weight loss, nausea, abdominal pain, jaundice, dark urine. Because of related conditions, some people may have joint pains, diarrhoea and feel generally unwell. Most patients with well-controlled disease have no symptoms at all.

There is no cure for autoimmune liver disorders but there are effective treatments to control the disease and reduce the risk of progression. The main goal of treatment is to stop the liver inflammation by getting your immune system back under control. We can assess this with blood tests and imaging of the liver. Around 70% of patients will relapse within 12 months if treatment is withdrawn.

# How does it work?

Prednisolone is a manufactured steroid compound which suppresses inflammation.

Patients with AIH or igG4-related disease are initially treated with steroids. The most appropriate corticosteroid option and dose will be discussed with you. Once inflammation in the liver is controlled, a longer-term immunosuppression tablet, such as azathioprine, mercaptopurine or mycophenolate is added, and the dose of steroid is reduced depending on your liver blood tests.

Reducing inflammation in the liver will improve your symptoms, improve your liver blood tests, reduce the degree of scarring, and help prevent long-term liver damage and liver failure.

# How long does it take to work?

Prednisolone works quickly and inflammation is usually controlled within a few weeks.

# What dose do I take?

**AIH:** The recommended dose of prednisolone is initially 0.5-1mg/kg/day (typically 30-40mg/day) reducing to 10mg/day over 8-12 weeks based on liver blood tests. Occasionally higher doses are used if there is a lower-than-expected response or if a 'steroid sparing' medicine like azathioprine cannot be tolerated in combination with prednisolone.

**IgG4-related disease:** The recommended dose of prednisolone is initially 0.5-1mg/kg/day (typically 30-40mg/day) for 4 weeks, reducing by 5mg every 2 weeks, based on symptoms/signs and blood tests. This dose is gradually tapered to a maintenance dose of 2.5-5 mg/day over a period of 2-3 months. The decision to add a 'steroid sparing' medicine depends on the organs involved in this disease, the chance of disease relapse and any drug-related side effects.

# How do I take it?

Prednisolone comes in tablet form and is available in several different strengths (1mg, 2.5mg, 5mg, 10mg, 20mg, 25mg). It is important that you take the correct combination if more than one strength of tablet is supplied to make up a dose. The dose should be taken once a day in the morning (as it can affect sleeping) and with, or soon after food as it can cause stomach irritation if taken on an empty stomach.

# How long will I be taking it?

In patients with mild disease and/orintolerant to 'steroid sparing' medications, prednisolone will be continued at the lowest dose possible e.g., 5-10mg/day. In other patients, steroid-free monotherapy with azathioprine, mercaptopurine or mycophenolate is the goal of maintenance therapy.

**AIH:** Steroid treatment is usually continued for at least 12 months, and sometimes longer to control inflammation. Normalization of blood tests (liver transaminases and IgG) and improvement of symptoms is the goal with minimum of side effects.

**IgG4-related disease:** Corticosteroid treatment is usually given for 3-6 months for mild/single organ disease, and for longer combined with a steroid-sparing medicine for multiple organ disease. Normalization of blood tests (liver transaminases and IgG4) and improvement of symptoms is the goal but not achieved in all patients.

Prednisolone should not be stopped abruptly. Do not stop taking your prednisolone unless your doctor tells you to, however well you may feel.

For one year after you stop treatment, you must mention to anyone who treats you that you have taken steroids.

# What happens if I forget to take a dose?

If you remember within 12 hours, take your dose as normal. If more than 12 hours has elapsed, then forget that day's dose and take your next dose at the normal time. Do not double the dose.

# What are the common side effects?

Corticosteroids are hormones that are naturally produced by all if us to control such things as blood pressure and preparing our body for stress. To control inflammation within the liver, higher doses than those naturally produced are required. When the body is supplied with 'artificial' steroids, natural production decreases or stops (known as adrenal suppression). Most patients will experience some side effects while taking steroids.

### Temporary side effects

- An increase in appetite, which can lead to weight gain
- Some rounding ('mooning') of the face
- Stomach irritation (so always take with food)
- Growth of facial hair
- Development or worsening of acne
- An increase in blood sugar
- Retention of salt – which can lead to swelling of legs or raised blood pressure
- Mood changes (both euphoria and depression)
- Difficulty in sleeping (so best to take dose in morning)
- Weakening of body's resistance to infection
- ''buffalo' hump of fat in middle of upper back
- Upper abdominal pain or burning -type discomfort below the breastbone

**Long term side effects:**

- Thinning of bone, muscles, and skin
- A tendency to bruise easily
- Diabetes due to increased blood sugar
- The natural production of steroid by the adrenal glands failing to start again when the external source is stopped. This may occur only after many months, or years, of treatment with corticosteroids
- Glaucoma
- Cataracts
- Increased risk of skin cancer

# What do I do if I experience side effects?

If you become unwell or feverish, or meet anyone who has an infectious disease, consult your doctor promptly.

# Do I need any special checks while on prednsiolone?

You will be under the specialist care of a hepatology consultant. When you are first diagnosed, you may require weekly or similarly frequent outpatient appointments so that we can adjust your medication and monitor your disease closely. In particular, we need to monitor your blood sugars carefully on prednisolone.

Once your disease is well-controlled, your outpatient appointments and blood tests will become less frequent. It is important that you attend your appointments and have any tests that are recommended because they are vital to your care.

If you develop scarring of the liver (cirrhosis), you will have an ultrasound scan of the liver every six months. These ultrasound scans are important because people with cirrhosis have increased risk of liver cancer, and regular scans can help to detect liver cancer at an early and treatable stage.

Long term prednisolone use can increase the risk of osteopenia and osteoporosis. To minimize this, you should take a calcium and vitamin D supplement and have regular bone DEXA scans every 1-2 years which your hepatology doctor will arrange.

You should be offered hepatitis A and B vaccination if not protected and at risk.

If you have never had chickenpox, you should avoid close personal contact with people who have chickenpox or shingles. If you come into personal contact with chickenpox or shingles, see a doctor urgently. If you are in an accident or need emergency treatment you may need a larger dose of steroids.

We will do our best to keep the monitoring of your condition up to date. We strongly encourage you to become familiar with the tests you need, however, to ensure these tests happen when they should.

Prednisolone can increase the risk of skin cancer. You should avoid excessive exposure to sunlight and UV light, apply high factor

sunscreen and wear protective clothing when outside. The use of sunbeds should be avoided.

**You will be given a blue steroid treatment card with prednisolone. It is important that you always carry this with you and show it to anyone treating you. Make sure the information on the card is kept up to date.**

# Does prednisolone interfere with other medicines?

Prednisolone can interact with other medicines. Always check with your doctor or pharmacist first.

It is safe to drink alcohol in moderation whilst on prednisolone. You will be advised not to drink alcohol if you have advanced fibrosis or liver cirrhosis.

You should avoid having 'live' vaccines whilst taking mercaptopurine e,g, Mumps, measles and rubella (MMR), yellow fever, BCG, some Typhoid vaccines, Varicella vaccines. If you require travel vaccines or your doctor, nurse or pharmacist advise that you need a vaccine always tell the healthcare professional that you are taking prednisolone. Seasonal vaccination against influenza, Pneumococcal and COVID vaccines are also recommended for adults taking prednisolone.

# Is prednisolone OK in pregnancy and breastfeeding?

Prednisolone is considered safe. Corticosteroids can cross the placenta to the foetus but are rapidly inactivated by enzymes in the placenta. This means that the baby would only be exposed to very low levels of these medicines.

Prednisolone appears in low concentrations in human breast milk. To minimise exposure, you should ideally wait for 4 hours after taking this medication before breastfeeding. The benefit of breastfeeding outweighs any exposure.

You should not stop treatment if become pregnant or are planning a pregnancy without discussing with your doctor first. Sudden withdrawal of treatment can result in a flare of the condition.

# Where can I receive more information and support?

**Hepatology pharmacist:**

Tel: **01865 221 523**

**Hepatology Nurse advice line:**

Tel: **01865 222 057**

**AIH Support:**

Help for those affected by Autoimmune Hepatitis: AIH Support

**British Liver Trust:**

British Liver Trust Helpline: **0800 652 7330**
(10:00 to 15:00 Monday to Friday)

**UK-AIH:**

UK-AIH

**Keep all medicines out of the reach of children.**

**Never give any medication prescribed for you to anyone else.**

**It may harm them even if their symptoms are the same as yours.**

## Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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