



Methotrexate for uveitis

What is Methotrexate?

In the eye clinic, methotrexate (MTX) is prescribed to reduce inflammation and maintain vision. MTX is what is known as an immunomodulatory drug. It is used to treat autoimmune conditions like scleritis, uveitis, psoriasis, ankylosing spondylitis, rheumatoid arthritis and inflammatory bowel disease. It is used in higher doses to treat certain types of cancers.

Methotrexate and uveitis

Uveitis is an inflammation of the uvea, the middle layer of the eye, which can lead to vision loss if untreated. MTX works by interfering with the production of certain cells in the body that mediate inflammation. Though it takes a few weeks to months to have an effect, it has found to be effective in controlling inflammation in the eyes.

How to take Methotrexate?

Always read the patient information leaflet (PIL) that comes with the medication.

- **Dosage:** Take MTX exactly as prescribed by your doctor, which is once a week. Please take the medication on the same day each week. Your doctor may start you on a low dose to monitor for side effects and adjust it as needed or on a higher dose if there is an active flare of uveitis or scleritis and then taper to achieve quiescence and maintenance of stable vision. The maximum dose you will be prescribed is 25mg per week though most patients with uveitis are on a much lower dose than this.
MTX is available in tablet and injection form. The injection is a pre-filled pen and is self-administered into the fat layer beneath the skin.
MTX can cause folate (vitamin B9) deficiency. You will be prescribed folic acid tablets as supplements. Please take folic acid as prescribed and never on the same day as MTX.
- **Administration:** Swallow the tablets whole with a glass of water. You can take your tablets before or after food. Do not crush or chew them. If injecting, please rotate the site of injection every week. There is a link to the video on how to self-administer at the end of this leaflet (under available resources and support).
- **Consistency:** Take your dose at the same day every week to maintain a steady level of the medication in your body. If you have taken an overdose of MTX or more tablets than prescribed, you should get medical help immediately either by calling your doctor or by going to the nearest emergency department (A&E).
- **Missed Dose:** If you forget to take a dose, take it as soon as you remember if this is within two days. However, if you have missed a dose by more than two days, please contact your doctor for advice. **Do not take a double dose to make up for a forgotten dose.**
- **Storage:** Keep this medicine out of the sight and reach of children. Do not use this medicine after the expiry date which is stated on the carton and blister pack after "EXP". The expiry date refers to the last day of that month. Do not store above 25°C. Store in the original container to protect from light. If using injections, you will be dispensed a sharp box by the pharmacy to safely dispose of the injection pen after use.

How long will it take for it to start working?

MTX can take up to 12 weeks to have an effect and improve uveitis symptoms. To help control inflammation while waiting for MTX to take effect, your doctor may also prescribe steroids, which work quickly. Once MTX has had enough time to start working, your doctor will gradually reduce the steroid dose. It is important to keep taking MTX as prescribed and attend all follow-up appointments with your eye specialist.

What are the possible side effects?

Like all medications, MTX can cause side effects, but these vary from person to person. Side effects are more likely during the first six weeks as your doctor gradually increases the dose. Side effects may vary depending on whether you take the medication as a tablet or an injection.

Common side effects

- **Stomach and gut issues:** You may experience nausea, diarrhoea, vomiting, stomach pain or loss of appetite. If these symptoms are bothersome, your doctor may adjust your dose. Taking the folic acid supplements regularly will help to reduce these symptoms. If needed, you may be prescribed anti-sickness tablets for symptoms of nausea and vomiting.
- **Swelling or soreness** of the mouth, throat and lips. Taking the folic acid supplements helps prevent these symptoms.
- **Headache, dizziness, fatigue:** Rest and drink plenty of water. Do not drink excessive alcohol. Do not take non-steroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen. You can try a painkiller such as paracetamol. Inform your doctor if headaches last longer than a week or are severe.
- **Sensitivity to light:** Your skin may become very sensitive to sunlight while you are taking MTX. This can cause a reaction that looks and feels like sunburn. To reduce the chance of this side effect, stay out of bright sunlight, use a high factor sunscreen (SPF 30 or above) and wear clothes that protect you from the sun. Do not use a sun lamp or sun beds.
- **Hair loss:** this is not a long-term effect. However, if it bothers you, please inform us so that the MTX dose can be adjusted if needed.

Less common side effects

- Weakness, breathlessness
- Bleeding (e.g. nosebleeds) and bruising
- Itching
- Blistering and peeling of the top layer of the skin all over the body
- Vaginal ulcers
- Sunburn-like reactions due to increased sensitivity of the skin to sunlight.

Rare but serious side effects. Please inform your doctor or call 111 if you experience the following:

- Yellowing of the whites of your eyes or yellowing of your skin although this may be less obvious on brown or black skin – these may be signs of liver problems.
- Persistent cough, chest pain, difficulty breathing, or breathlessness – these may be signs of inflammation of your lungs.
- Swollen hands, ankles or feet, changes to how often you urinate – these may be signs of kidney problems.
- High temperature, chills, muscle aches, sore throat – these may be signs of an infection.

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- Bleeding gums, blood in your pee, vomiting blood or unexplained bruising – these may be signs of a blood disorder.

As with any medication taken for the first time, you may develop a severe allergic reaction (anaphylaxis) to MTX. This is very rare. However, if you experience the following, please call 999 as this requires urgent hospital treatment:

- Your lips, mouth, throat or tongue suddenly become swollen.
- You are breathing very fast or struggling to breathe (you may become very wheezy or feel like you are choking or gasping for air)
- Your throat feels tight or you are struggling to swallow.
- Your skin, tongue or lips turn blue, grey or pale (if you have black or brown skin, this may be easier to see on the palms of your hands or soles of your feet)
- You suddenly become very confused, drowsy or dizzy.
- You may also have a rash that is swollen, raised, itchy, blistered or peeling.

To help monitor for these side effects, your doctor will arrange regular blood tests. If you experience any new or worrying symptoms, speak to your doctor or pharmacist.

Interactions with other treatments

Some medications and supplements can interfere with MTX, so it is important to let your doctor know about everything you are taking.

Painkillers: You can usually carry on taking painkillers like paracetamol if needed. Avoid taking non-steroidal anti-inflammatory drugs (NSAIDs), including aspirin or ibuprofen, or medicines containing NSAIDs, such as over-the-counter cold medication, without first speaking to your doctor.

New drugs: Check with your doctor before taking any new drugs and remember to mention you are on MTX if you are treated by anyone other than your usual doctor or nurse specialist.

Other drugs: There are several types of drugs that react with MTX and should be avoided if possible. These include:

- some antibiotics such as those containing trimethoprim, co-trimoxazole, tetracyclines, ciprofloxacin, and some forms of penicillin.
- some asthma medications including theophylline.
- some epilepsy medicines such as phenytoin and levetiracetam
- some medicines used to treat indigestion, known as proton pump inhibitors (PPI), such as omeprazole.
- diuretics, used to help you urinate more, such as indapamide and bendroflumethiazide.
- over-the-counter preparations or herbal remedies

You can also use the following link to check if any drug that you are currently taking interacts with MTX to produce an adverse effect.

<https://bit.ly/3EWkhnX>

Alcohol and smoking

Alcohol and MTX can both affect your liver, so it is important that you do not drink more alcohol than the government's recommended limits. This is no more than 14 units of alcohol a week, and that you should spread these through the week with at least 3 drink free days. A link to **drinkaware** (guide to alcohol units) is included at the end of this leaflet under 'available support and resources'.

If you smoke, it is advisable to cut down or give up, as smoking increases your risk of complications with your condition and its treatments.

Fertility, pregnancy and breastfeeding

- **Pregnancy:** MTX is contraindicated during pregnancy because it is known to cause birth defects and premature birth. Women of childbearing potential must use effective contraception during treatment and for 12 weeks after discontinuing. Men are advised to use contraception during treatment and for at least 90 days after stopping MTX.
- **Breastfeeding:** It is not recommended to breastfeed while taking MTX, as the drug can pass into breast milk and may harm the infant.

Your doctor will usually recommend going back onto MTX once you have finished breastfeeding. This is because the sooner you can get back onto your medication, the lower the risk of developing a flare (wherein the inflammation in your eyes returns).

Vaccinations

While taking MTX, your immune system is weaker, which means some vaccines may not work as well, and **live vaccines** should be avoided. Live vaccines contain weakened viruses that could cause infection in people with weakened immune systems. **Live vaccines to avoid include:**

- Measles, Mumps, and Rubella (MMR)
- Varicella (Chickenpox)
- Shingles (Zoster)
- Yellow Fever
- Oral Polio Vaccine
- Bacillus Calmette-Guérin (BCG) for tuberculosis
- Live Influenza (nasal spray)
- Rotavirus

Before getting any vaccine, speak with your doctor to ensure it is safe for you. Inactivated (non-live) vaccines such as the flu, COVID-19, pneumonia and Shingrix (non-live Shingles vaccine) are usually safe and recommended.

Preventing Infections

Since MTX weakens the immune system, it is important to take extra precautions to reduce your risk of infections:

- **Avoid close contact with sick people**, especially those with colds, flu, or other contagious illnesses.
- **Wash your hands regularly** with soap and water or use hand sanitizer when soap is not available.
- **Keep your environment clean**, including frequently touched surfaces like phones, keyboards, and door handles. Keep your bathroom, toilet and kitchen surfaces clean.
- **Practise food hygiene** - avoid undercooked meat, unpasteurised milk and raw seafood. If you eat out at restaurants and use takeaways, ensure that they practise meticulous hygiene.
- **Wear a mask in crowded places** if there is a high risk of infection.

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- **Viral infections** - If you come into contact with anyone who has a viral infection, such as chicken pox, please see your GP. You will be prescribed anti-viral treatment as a precaution. Please pause the MTX while you are taking the anti-viral medication.
 - **COVID-19** - If you test positive for COVID-19, then you are eligible for COVID-19 antibody treatment. This treatment is only effective when given within five days of testing positive. The best way to access treatment is to contact 111 and follow their advice. Please pause the MTX while you are receiving the antibody treatment.
 - **Antibiotics** – If you are prescribed antibiotics by your GP or other health care professionals to treat infections, you may have to pause the MTX for the duration of the antibiotic course. Please seek advice from the health care professional prescribing the medication or contact us for advice. Pausing the MTX can give your immune system a chance to fight the infection and for the antibiotics to take effect.
 - **Seek medical advice if you develop a fever, persistent cough, or any signs of infection.**

Screening, monitoring and follow-up

Before starting treatment with MTX, you will have blood tests to check if the drug is suitable for you and that you do not have an active infection. This will ensure safety of your health and effectiveness of the drug. You will have had most of the tests done at your initial appointment.

Regular follow-up appointments are essential to monitor your body's response to MTX and adjust dosages if necessary. Blood tests will be performed periodically to check for side effects and ensure the medication is working effectively.

Blood tests will generally include a full blood count, kidney and liver function tests. The frequency of the tests is fortnightly for the first six weeks, then monthly for the next three months and then every three months. These tests can be arranged at the eye clinic or with your local GP surgery or hospital.

Generally, you will be prescribed three month's supply of MTX. Please inform us via the contact details provided at the end of this leaflet when you have two weeks of medication left so we can prescribe the medication without any delay. We cannot prescribe MTX without a recent blood test. So please ensure you have regular blood tests for your safety.

You will be on treatment for a minimum of two years and more depending on how stable the inflammation in your eyes is. If you have surgery or infections, then based on the type of surgery or severity of the infection, the medication may be paused temporarily. So please inform us if you have any planned surgery or catch an infection.

Available support and resources:

<https://versusarthritis.org/about-arthritis/treatments/drugs/methotrexate>

<https://www.nhs.uk/medicines/methotrexate/>

<https://metoject.co.uk/patients/>

<https://www.drinkaware.co.uk/>

<https://www.rnib.org.uk/your-eyes/eye-conditions-az/uveitis/>

<https://www.rnib.org.uk/sightline-directory/organisations/queen-elizabeth-hospital-birmingham-eclo-service-c616b0ec-4bec-4784-a65a-74898751d700/>

Department contact information: weekdays excluding bank holidays

Uveitis email address: uveitis@uhb.nhs.uk (08:00 – 17:00)

Jacqui Orpe, secretary: 0121 371 6905 (Monday, Tuesday, Friday)

Carolyn Rivera, specialist nurse: 07823 827040 (08:00 – 17:00, Monday, Tuesday, Thursday, Friday)

Hermy Skew, specialist nurse: 07388 711893 (08:00 – 17:00, Tuesday, Wednesday, Thursday, Friday)

Main ophthalmology outpatient clinic: 0121 371 6476, 0121 371 6477 (08:00 – 18:00, Monday to Friday)

Appointments Team: 0121 371 6925, 0121 371 6787 (08:00 – 16:00, Monday to Friday)

Hospital pharmacy: 0121 371 5479, 0121 371 5480

Homecare pharmacy (deliveries): 0121 371 3933

Out of hours: we do not provide an out of hours service.

In cases of emergency such as:

- sudden drop in vision
- sudden appearance of or increase in floaters (dots floating across your field of vision)
- flashing lights
- redness in the eye with severe pain and sensitivity to light
- appearance of a shadow or curtain across your vision with a drop in vision

please contact or visit your local eye casualty department.

If you are a Birmingham resident, your local eye casualty is BMEC (Birmingham Midland Eye Centre). Please note that the average wait time can range from two hours to six hours.

Address: City Hospital, Dudley Rd, Birmingham B18 7QH.

Phone number: 0121 5076779

Opening hours:

8:30am – 7pm, Monday to Friday

9am – 7pm – Saturday

9am – 6pm – Sunday

Accessibility

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