

# Medicines Optimisation

## Best Practice Guidance for Care Homes

### Methotrexate

Methotrexate is a type of medication called an immunosuppressant and works by slowing down the body's immune system. It is a cytotoxic medication which means it is toxic to the cells in the body, and so it can cause significant risk to people who handle it. Methotrexate is prescribed to treat inflammatory conditions including rheumatoid arthritis, psoriasis and Crohn's disease; it can also be prescribed for cancer.

It is a safe and effective medication if taken at the right dose and with appropriate monitoring. It is very important all care home staff involved in the administration of this medicine, or who may come into contact with bodily fluids of people who are taking it, have appropriate training and are aware of the associated risks. Care homes must have robust procedures in place to minimise the potential for harm to its residents and staff.

Methotrexate is given as a **once weekly dose** and should **never** be administered on a daily basis as this could result in severely reduced immunity or serious infection. Care home staff should ensure appropriate safety measures are in place to prevent this from occurring.

### Dosage

- Methotrexate should be administered as a **single dose, once a week, on the same day each week**. If you receive a prescription for a more frequent dose, it is **vital** to query this with the GP or pharmacist.
- It comes as tablets or liquids which are taken orally or prefilled pens or syringes which are injected.
- Folic acid will be prescribed to help to reduce the risk of toxicity of methotrexate and reduce some side effects. This may be prescribed from once a week up to six days a week. Folic acid can reduce the effectiveness of methotrexate so **folic acid should not be taken on the same day as methotrexate**.
- If a resident refuses to take their methotrexate or folic acid, the GP must be informed.

### Methotrexate tablets

- Locally, only 2.5mg tablets should be prescribed. This is to avoid confusion between different strengths and possible overdose.
- Tablets should be swallowed whole with water while sitting upright or standing.
- Never crush or break tablets. If the person has difficulty swallowing the tablets, seek medical advice.

### Methotrexate injections

- Local guidance recommends the device the patient has been initially trained on should not be changed without adequate retraining. Confirm with the person which product is being used to ensure continuity of care.
- Methotrexate is available in prefilled syringes (Zlatal® and methotrexate 25mg/ml) and prefilled pens (Metoject® 50mg/ml and Nordimet® 25mg/ml). Both prefilled syringes and prefilled pens are available in various volumes to allow the correct prescribed dose to be administered.

## Administration and recording

- The pharmacy should clearly label the methotrexate box with appropriate warnings so care home staff are aware of the risks.
- On delivery of the MAR / eMAR chart, the care home must clearly highlight on the chart the day of the week methotrexate is to be given
- People may administer their own methotrexate if they are competent to do so safely and without risk of harm to themselves or others. For those people using the injections, they must have been trained on how to administer.
- All methotrexate doses should be double checked by another member of staff trained in medication administration **before** giving the dose.
- If a dose has been forgotten or delayed, it can be administered as soon as the missed dose is identified provided the dose is no longer than 2 days late. If the missed dose is more than 2 days later clinical advice must be obtained. **Never administer 2 doses together.**
- If too much methotrexate has been given, contact 111 immediately. Taking too much methotrexate can cause serious side effects and, in some cases, can be fatal.
- Women of childbearing age who administering methotrexate must be informed that methotrexate exposure may cause harm to an unborn baby. It is recommended that **staff or carers who are pregnant or breastfeeding should not handle cytotoxic drugs.**
- Care staff must always wear appropriate personal protective equipment when handling any cytotoxic medications.

### Administering oral methotrexate

- Methotrexate should never be dispensed in a compliance aid or monitored dosage system (MDS).
- Tablets should be dispensed into a medicine pot without touching tablet. When administering to people with poor manual dexterity or impaired vision, the dose can be 'popped' onto their hand or spoon.
- Medicine pots, spoons or oral syringes used for administration of methotrexate must clearly be labelled for 'methotrexate use only'. These should not be used to administer any other medication. They must be washed thoroughly between doses and safely disposed of at the end of treatment. Appropriate personal protection equipment, e.g. gloves must be worn when washing equipment.

### Administering injectable methotrexate

- Care staff may be trained to administer methotrexate injections. This is a delegated task and care staff would require written confirmation by a district nurse stating they are competent to undertake this task.
- The used syringe or pen must be disposed of immediately in cytotoxic waste disposal bin (Purple sharps bin).

## Monitoring

People taking methotrexate will require regular blood tests to check the treatment is working and not causing any toxicity. Before starting treatment, some people may have a chest x-ray and breathing tests to check how well the lungs are working. Blood tests will also be needed before treatment is started and then usually repeated every 1 to 2 weeks. This may be increased to every 2 to 3 months after a few weeks. The patient-held monitoring and dosage record must be kept up to date throughout treatment.

## Side Effects

Carers and people taking methotrexate should be aware of common side effects that can occur at any time during treatment including:

- Loss of appetite
- Feeling sick or being sick
- Stomach pain or indigestion
- Diarrhoea
- Headaches
- Tiredness or drowsiness
- Hair loss – this is reversible on stopping treatment

Immediate medical advice should be sought if a person suffers from severe or continued diarrhoea and/or vomiting. This can cause the person to become dehydrated, reduce how well the kidneys are working and can slow the removal from methotrexate from the body. If methotrexate is not removed as quickly it can build to toxic levels and lead to serious side effects.

Serious side effects are rare but can occur in some people. If a person displays any of the following, treatment should be withheld immediately, and urgent medical advice sought:

- Yellowing of the whites of the eyes or skin – this could be a sign of a liver problem.
- A persistent cough, chest pain, difficulty breathing or breathlessness – these could be signs of inflammation in the lungs.
- Swollen hands, ankles or feet, changes to the frequency of passing urine or not passing urine at all – these could be signs of kidney problems.
- A fever, chills, muscle aches and sore throat – these could indicate the person has an infection.
- Bleeding gums, blood in urine or poo, vomiting blood or anything unexplained bleeding or bruising – this could suggest there is a blood disorder which may be due to the methotrexate.
- Mouth ulcers, severe sore throat or a sore mouth.
- New skin rash which can sometimes cause blistering, or severe itching.

**Anaphylactic reaction** - although very rare, a person taking methotrexate may suddenly experience itchy skin (hives), swelling of the hands, feet, ankles, face, lips, mouth or throat (which may cause difficulty in swallowing or breathing), wheeze and feeling faint. If this occurs, seek medical attention immediately.

## Interactions and other important information

Some medications can affect the way methotrexate works. Before any new medication is started, always make sure the prescriber is aware the person is taking methotrexate as some medications can affect the way methotrexate works. This includes buying over the counter medication or herbal remedies for minor ailments which should be discussed with the pharmacist or GP. This is especially important for the following medications:

- Trimethoprim or co-trimoxazole – antibiotics used to treat UTIs
- Anti-inflammatory medications – such as ibuprofen

As well as medications, there are a number of other important things to be aware of whilst a person is taking methotrexate.

- Alcohol may increase the risk of liver damage and people should limit alcohol consumption throughout the whole treatment. If methotrexate is being used to treat psoriasis alcohol should be avoided altogether.
- A person's skin may become more sensitive to sunlight whilst taking methotrexate. To protect against this make sure the person stays out of bright sun and uses a high factor sun cream (SPF 30 or higher) even on cloudy days.
- As the body's immune system is reduced, a person taking methotrexate is more likely to get infections. Urgent clinical advice should be sought if a person develops COVID-19, or if they have been in contact with anybody with chickenpox or shingles.

- People taking methotrexate should have any vaccinations when invited. However, the person giving the vaccine must be told the person is taking methotrexate as some vaccines may not be suitable.
- As methotrexate reduces a person's immunity, some foods should be avoided. These include unpasteurised milk and cheeses (such as soft cream cheese) and uncooked meats including pâté. These foods may be a source of bacteria which could cause an infection.

### **Safe disposal of methotrexate**

Methotrexate must always be disposed of safely. This includes refused oral doses and used prefilled pens and syringes. Medication which is no longer required and remains in the original box must be returned to pharmacy for safe disposal. This should be separated from any other returns as the pharmacy will need to dispose of this separately.

**Nursing homes** will need to obtain a cytotoxic waste disposal bin (purple sharps bin) from their waste contractor to dispose of methotrexate syringes and pens safely to avoid potential harm to others.

**Residential homes** will need to obtain a cytotoxic waste disposal bin (purple sharps bin) from the GP surgery. Once full this should be returned to the GP practice for correct disposal.

## References

- NHS. [About methotrexate](#). March 2023. Accessed 29/11/24

## Version Control (To be completed by policy owner)

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4.3	Dec 2024	Medicines Optimisation Team – HH	Draft	Best practice guidance on methotrexate tablets and injections combined to avoid duplication of documents. Monitoring advice expanded. More details on side effects given. Interaction and other information added based on advice from NHS website. Reference updated



