NHS TAYSIDE

RHEUMATOLOGY CLINICAL POLICY

PARENTERAL METHOTREXATE

PREPARATION, HANDLING, ADMINISTRATION AND PATIENT EDUCATION

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1. PURPOSE AND SCOPE

The purpose of this document is:

1.1 To ensure the safe handling and administration of parenteral methotrexate by healthcare professionals.

1.2 To ensure the safe handling and administration of parenteral methotrexate by non-healthcare professionals such as patients or their carers.

2. BACKGROUND

Methotrexate is one of the most effective Disease Modifying Anti-Rheumatic Drugs (DMARD) for rheumatoid arthritis available today, excluding Biological therapy, (Hamilton and Kremer 1997). Parenteral methotrexate can be given by either intramuscular or subcutaneous injection.
The use of intramuscular and subcutaneous injections has been studied and results have shown comparable rates of absorption and efficacy, (Bannwarth et al 1996). Subcutaneous injecting is usually less painful and allows patients to self administer this weekly therapy, therefore unless otherwise indicated this is the recommended mode of administration.

2.1 **Action of Methotrexate:**

Methotrexate is an anti-metabolite cytotoxic agent that competitively restricts/inhibits the action of an enzyme necessary for the synthesis of DNA and thus cell replication. The mode of action of methotrexate is immunosuppressive, the precise action is unclear but it is believed that the production of lymphocytes is inhibited thus restricting the amount of inflammation the body can produce.
A number of drugs have the potential to interact with and enhance the action of methotrexate or reduce its excretion and thus increase toxicity. Drugs known to do this for example are salicylates, hypoglycaemics, sulphonamides, co-trimoxazole, probenecid, some diuretics, phenytoin and trimethoprim (full and comprehensive list of interactions available in the BNF). NSAIDs and corticosteroids are often used concomitantly and can potentially increase the risk of toxicity, so extra vigilance with blood monitoring is essential.
Please note however sulfasalazine is commonly used in combination with methotrexate with no evidence of increased toxicity despite its components. Methotrexate is fertility impairing and embryotoxic (causing abortion and foetal defects), therefore it is essential that men and women of childbearing age use an effective contraceptive during treatment and for at least 3-6 months after treatment cessation.

2.2 **Why change to parenteral methotrexate:**

The commonest route for methotrexate is that of tablets taken orally, however the escalation of the dose can be restricted due to the occurrence of gastrointestinal symptoms. Parenteral methotrexate has been shown to reduce the occurrence and severity of these undesirable effects whilst allowing patients to take a higher dose, (Brooks et al 1990). Methotrexate absorption is saturable with absorption being erratic with oral doses in excess of 20mg, thus bioavailability is improved with parenteral methotrexate at doses over 20mg. Additionally it is thought that parenteral administration allows for a higher plasma concentration and bioavailability of the drug thus increasing efficacy (Bingham et al 2003).

2.3 **Dosage:**

Methotrexate must only be taken in the exact dose as prescribed by the Rheumatologist, (7.5mg to 25mg). It is taken as a single injection **once a week on the same day each week.** A regular folic acid 5mg tablet, usually 3 days after the injection is recommended to reduce the risk of or severity of any mucosal or gastrointestinal side effects. When converting from oral to parenteral methotrexate the oral methotrexate must be stopped for 7 full days prior to the first injection. Dose can be escalated at between one weekly and 4 weekly intervals by either 2.5mg or 5mg increments.

2.4 **Monitoring:**

As with other DMARDs within Tayside, General Practitioners provide a DMARD monitoring service for patients receiving these drugs. Current recommendations are weekly or fortnightly blood tests whilst dose escalation is in progress and for 6 weeks after the last dose alteration, thereafter blood tests monthly. Tests required are the same as those for oral methotrexate i.e. FBC and LFT's each visit and U&E's 6 monthly. Please note the change from oral to parenteral methotrexate is classed as a dose increase due to increased bioavailability.

Action to be taken if -

WBC <4.0x10^9/l	withhold *until discussed* with Rheumatologist or on call Rheumatology /Medical Registrar on call
Neutrophils<2.0x10^9 /l	"
Platelets<150x10^9 /l	"
ALT> x2 upper limit of normal	"
Unexplained fall in albumin	"
Rash or oral ulceration	"
New or increasing dyspnoea or cough	"
MCV>105fl	check B_{12} & folate and treat appropriately
Significant deterioration in renal function	reduce dose or discuss with rheumatologist
Abnormal bruising or sore throat	withhold until FBC available

2.5. **What benefit can be expected?**

Like oral methotrexate there is usually a delay of at least 6 weeks before the joint symptoms start to improve. Further benefit may occur up to 6 months after starting treatment. Treatment with non-steroidal anti-inflammatory drugs (NSAIDs) and painkillers is usually continued.

2.6 **What are the possible side effects?**

The side effects of parenteral methotrexate are similar to that of oral formulation;

Nausea, diarrhoea or occasionally abdominal pain may occur initially but these often settle after adjustment of dosage and are not usually serious. Nausea may be treated by the use of anti-emetics or increasing folic acid supplements always ensuring it is not taken on the same day methotrexate is injected.

Mouth ulcers may occur and may necessitate an adjustment of dose or increasing the frequency of folic acid 5mg tablets to 6 days out of 7 days (omitting on the day methotrexate is administered).

Methotrexate may reduce the number of white cells or platelets in the blood and the dose must, therefore, be individually adjusted. In rare severe cases these abnormalities might lead to severe infection or bleeding. Regular blood checks are essential (refer to monitoring).

Severe adverse effects on the lungs or liver have rarely occurred which will require stopping Methotrexate treatment altogether. Chest X-ray and sometimes pulmonary function tests will be arranged at the time of starting therapy (usually the physician initiating treatment), but this is not generally required if oral methotrexate has preceded parenteral therapy.

Methotrexate can reduce fertility and may harm an unborn baby; it should NOT be taken during pregnancy. Whilst taking Methotrexate, and for 3 - 6 months after Methotrexate is stopped, both women and men must take contraceptive precautions. **Patients should not breast feed when taking Methotrexate.**

Methotrexate is immunosuppressant and increases the risk of infections, even with a normal blood count. Therefore it is recommended **pneumococcal (pneumovax) and annual flu vaccines should be given whilst on this treatment**. Patients commencing parenteral methotrexate normally will have been taking oral methotrexate so vaccinations should be up to date, however vaccination status should always be confirmed prior to therapy commencing by the physician initiating this therapy.

Due to the immunosuppressive action of methotrexate, **"Live" vaccines should be avoided.**

Loss of hair has been reported on very rare occasions.

2.7 **Information for patients regarding side effects and interactions:**

The following information must be discussed with patients by a healthcare professional during completion of the education competencies programs (appendix 2), and the importance stressed and highlighted.

Patients **must be advised** to **stop methotrexate and contact their G.P.** if any of the following develop;

1 • Severe sore throat or mouth.

2 • Abnormal bleeding tendency (excessive bruising, blood spots or blisters on the skin or in the mouth).

3 • Rash

4 • Mouth ulcers.

5 • Breathlessness or dry cough

6 • Symptoms of shingles or chicken pox

7 • If they develop an infection which is not improving

Patients must be advised not to take **any new** medication without checking with their G.P. or pharmacist first. A full list of drugs interacting with methotrexate is available in the BNF.

Alcohol should only be taken in **strict** moderation due to the potential combined liver toxicity. Recommendation is no more than 2 units daily.

Patients must be encouraged to contact their G.P. urgently if they have contact with someone with either chicken pox or shingles. Unless the patient has **definitely** had chicken pox/shingles or is known to be immune from prior immunology they need urgent (same day) varicella zoster serology carried out. If not immune contact the Rheumatologist, the on call Rheumatology/Medical Registrar or the Infectious Diseases Team, as immunoglobulin should be administered urgently.

3 PROCEDURES

3.1 Delivery to Primary Care:

Delivery will be in the form of a pre-filled syringe from the hospital pharmacy department every 4 weeks to the practice/unit. A new licensed preparation of subcutaneous methotrexate called metoject is available and will be phased in by the pharmacy department during 2010. Metoject is a pre-filled syringe with the needle already attached.

On receipt of the subcutaneous methotrexate please check the following:

1 The outer packaging is sealed prior to opening.
2 The drug and dosage are correct
3 The patient name is correct
4 Expiry date/time
5 There has been no leakage/spillage

If there are discrepancies or indication of spillage or damage to the syringe, please contact the aseptic pharmacy department at the hospital.

Please remember that if there is to be a break in treatment e.g. patient on holiday etc the pharmacy department must be informed to suspend delivery during this time, as the methotrexate syringes cannot be transported without specific transport arrangements being in place as it is a hazardous chemical. It is recommended either the patient misses the doses whilst away or if appropriate change to oral formulation at a dose previously tolerated for the holiday duration.

3.2 Storage:

Metoject is sealed in plastic packaging within an outer cardboard box and should remain in this box until used. If the metoject preparation of methotrexate is not being used the methotrexate syringe will be within outer packaging which should be removed (leave sealed in the inner packaging). Storage should be in an identified compartment, such as a sealed plastic box, in a drug storage cabinet. Store at room temperature (below 25ºC), there is no need for refrigeration.

3.3 Injecting (subcutaneously):

Ensure all the equipment you will need is ready and available and the procedure can be carried out with no interruptions or distractions. Please remember healthcare professionals or non-patient injectors must wear gloves and an apron but patients injecting themselves don't. If intramuscular injection is required the procedure is the same, but technique is for intramuscular and needle size will usually be a 21 Gauge (green BD). It is not possible to administer Metoject by intramuscular injection.

Please note that pregnant healthcare professionals or non-healthcare professionals, (e.g. relative), are not advised to administer parenteral methotrexate.

3.4 **Equipment:**

Cytotoxic sharps bin

Disposable gloves and apron (gloves are nitrile powder free exam gloves) as per NHS Tayside July (2004) "Policy for the Administration if Intravenous Cytotoxic/Non Cytotoxic Chemotherapy"

Gauze swabs or tissues

25 Gauge needle (orange BD), if Metoject preparation not being used

3.5 **Giving the Injection:**

Wash and dry hands thoroughly.

1) Put on the gloves and apron

2) Check the methotrexate syringe for the following: patients name, drug name, dose, expiry date and the colour, (it should be yellow but clear). If there is a discrepancy, please do not proceed; contact the pharmacy department at the hospital. Open the inner bag/ cardboard box and plastic packaging of metoject and dispose of into the sharps bin. The cardboard outer box for metoject does not need to be disposed of in the sharps bin and is suitable for disposal in the normal waste bin.

3) Identify the site you are to inject remembering to ensure site rotation each week. Appropriate sites to use are the standard subcutaneous sites although patients injecting themselves would find the upper arm very difficult so generally this would be avoided during teaching a patient but a relative can use this site if they are to administer the methotrexate if there is a sufficient subcutaneous layer.

4) Remove protective cap from metoject syringe by gently pinching the grey plastic cap and turning the syringe. If not using Metoject preparation of methotrexate: attach the needle to the syringe – remember it is a luer lock syringe.

5) Ensure the skin is clean and dry at the site you are about to inject, (alcohol swabbing is not essential if skin is socially clean), and inject using a 90 degree angle although a 45 degree angle may be useful in patients who don't not have a deep/thick enough subcutaneous layer RCN (2004).

6) Once the syringe is empty remove the needle from the skin, leaving attached to the to the syringe and put directly into the cytotoxic sharps bin.

7) If there is some leakage of fluid at the site injected press lightly with a swab until the seepage stops and dispose of the swab into the cytotoxic sharps bin.

8) Gloves and apron worn during the procedure should be disposed of in the sharps bin.

9) Wash and dry hands thoroughly.

3.6 **Disposal:**

All materials used during the administration, i.e. inner bag/plastic packaging surrounding metojet, syringe and needle, gloves, apron and any swabs or tissues, should be disposed of in the cytotoxic sharps bin.

The cytotoxic sharps bin should be disposed of when full. Patient will return their used cytotoxic sharps bin to the practice for disposal.

Various sizes of cytotoxic sharps bins can be ordered from normal supplies route, but it should be noted these are non-stock items and thus allow up to 1 month for delivery.

3.7 **Spillages:**

In the event of a spillage put on gloves and apron before dealing with the spillage as follows;

Clothes/surfaces – Mop up any spillage with the absorbent disposable towels. Wash the clothes or the surface with tap water thoroughly and then remove moisture by squeezing or blotting with disposable absorbent towels. Clothes should then be washed separately from other washing in the hottest possible washing cycle twice. Note do not use carpet cleaner on the spillage, as chemical reactions may be a further potential hazard. NHS Tayside (Jan 2004) “Policy for spillage of cytotoxic chemotherapy” and RCN (April 2004) “Administering subcutaneous methotrexate for inflammatory arthritis”.

Skin - Methotrexate can be potentially irritant to the skin. In the event of spillage on to the skin, the skin should be washed with copious amounts of tap water then washed with soap and water before drying thoroughly, note do not rub the skin. Monitor the affected area for 1 week and if area is not improving/healing or deteriorating seek further medical advice. NHS Tayside “Guidelines for the safe handling of cytotoxic chemotherapy” and RCN (April 2004).

Eye – Methotrexate can potentially irritate the eye. In the event of eye contamination the eye should be flushed thoroughly with 0.9% sodium chloride or cold tap water for at least 15 minutes if irritation persists seek urgent medical attention. NHS Tayside “Guidelines for the safe handling of cytotoxic chemotherapy”.

Inhalation – Methotrexate can potentially cause irritation of the airways. In the event of inhalation occurring move to an area of fresh air, if irritation or breathing difficulties seek medical attention. NHS Tayside “Guidelines for the safe handling of cytotoxic chemotherapy”.

Ingestion– Methotrexate is classified as toxic or harmful if ingested. In the event of this happening seek urgent medical attention, as a gastric lavage with the appropriate antidote is required. NHS Tayside “Guidelines for the safe handling of cytotoxic chemotherapy”.

Please remember to dispose of all paper towels, gloves and other materials used to deal with the spillage in the cytotoxic sharps bin.

Finally wash your hands thoroughly after you have dealt with the spillage

Note it is essential that an entry on the AIM system is completed and referral to the occupational health department for staff members as required.

The Rheumatology Specialist Nurse will supply patients with a small spillage kit for home use containing absorbent paper towels, gloves and an apron.

3.8 **Needlestick Injury:**

If during the procedure within a healthcare setting, a Needlestick injury is sustained, action as follows:

Healthcare Professional - make the wound bleed under running water for at least 5 minutes and then seek medical attention. An IR1 form should be completed and a referral to the occupational health department made.

Carer - make the wound bleed under running water for at least 5 minutes and then seek medical attention. An IR1 form should be completed.

Patient - make the wound bled for at least 5 minutes under running water then dry the skin and use an elastoplast as necessary. Advice them to monitor the affected area for 1 week and if area is not improving/healing or deteriorating seek further medical advice. An IR1 form should be completed.

4 RESPONSIBILITIES AND ORGANISATIONAL ARRANGEMENTS

4.1 Any healthcare professional handling or administering parenteral methotrexate will be accountable and responsible for adhering to the policy.

4.2 The healthcare professional educating the patient or carer regarding injecting methotrexate will be accountable and responsible for adhering to the policy with regards to patient education/training. (refer to Appendix 2 and 3).

4.3 The Rheumatology Specialist Nurse will be responsible for providing on-going support and information for healthcare professionals and patients.

4.4 The patient, (if self administering), must accept responsibility for the safe storage, handling, administration and disposal of the methotrexate following successful completion of the training program.

4.5 The healthcare professional administering in the practice, or the patient (if home deliver) must inform the pharmacy department re any periods of treatment suspension e.g. holidays or hospitalisation.

4.6 The General Practitioner under the local enhanced agreement will provide DMARD monitoring as per guidelines and take the necessary action when blood results are abnormal.

4.7 The General Practitioner will supply cytotoxic sharps bins if required.

4.8 The physician initiating treatment should ensure necessary pre treatment checks are carried out (Chest X-ray and pulmonary function tests as required and check vaccination status re pneumovax or flu)

The commencement and on-going treatment with subcutaneous methotrexate will follow the pathway laid out in Appendix 1.

5 CONTACT NUMBERS

Pharmacy – Perth - 01738 623311 ext 12024
Ninewells - 01382 660111 ext 32489

Rheumatology Specialist Nurse - Perth - 01738 623311 bleep 5142
Ninewells - 01382 660111 bleep 5142

REFERENCES AND BIBLIOGRAPHY

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Hamilton R A and Kremer (1997) Why intramuscular methotrexate may be more efficacious than oral dosing in patients with rheumatoid arthritis. British Journal of Rheumatology: 36 pg 86-90

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NHS Tayside (July 2004) Policy for the Administration of Intravenous Cytotoxic/Non Cytotoxic Chemotherapy.

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Mallent J and Docherty L (2004) The Royal Marsden Manual of Clinical Nursing Procedures. 6th Edition. Blackwell Publishing.

1 APPENDIX 1

Parenteral Methotrexate Pathway

Rheumatologist writes to G.P. re commencement of parenteral methotrexate, copy of Letter to Rheumatology Specialist Nurse (RSN)

↓

Rheumatology Specialist Nurse contacts practice to discuss practicalities/commencement

↓

<u>Practice Agreeable</u>

Patients can choose to self administer
or to continue to attend Practice for weekly
Script to pharmacy
Pharmacy to contact RSN with a start date for delivery
Parenteral Methotrexate Policy to be sent to Practice
with details of start and letter re sundries,
equipment required and monitoring requirements.

RSN to send letter to patient re stopping oral Methotrexate and
request them to make an appointment with Practice Nurse on start date

↓

Patient attends Practice for DMARD monitoring

<u>Practice not Agreeable</u>

Patients must self administer
RSN to arrange attendance for training at hospital
Script to pharmacy
Pharmacy to contact RSN with a start date for delivery
Parenteral Methotrexate Policy to be sent to hospital dept
the patient will be attending with details of start date
and letter re sundries and equipment.
Letter GP re monitoring and supply of sundries
RSN to send letter to patient with information
re stopping oral Methotrexate patient and arrangements re
attending for teaching and administration

↓

Patient attends Practice for DMARD monitoring

↓

When patient is deemed competent to self administer either hospital dept or Practice will contact RSN to change delivery details and to send out patient spillage
kit

↓

Thereafter scripts will be requested by pharmacy directly to the prescribing Rheumatologist via the RSN on a monthly basis

The default position is for the patient to self-administer, the general practice will only be approached if the patient is unable to self-administer.

N.B. Sundries patients require for home administration are supplied by the General Practitioner i.e. cytotoxic sharps bins when required

APPENDIX 2 - Patient Education/Competencies Program

(This training program is used with reference to NHS Tayside Parenteral Methotrexate Clinical Rheumatology Policy)

Name and CHI of Patient: ……..

Name of Person being trained: ……

Name of Practitioner/Trainer: ……Date oral methotrexate was stopped:…….

Element of Competence	**Date Shown**	**Dates Supervised**	**Date Completed**	**Practitioners Signature**	**Patient/Carers Signature**
Explain the reason for using s.c. methotrexate					
Know that s.c. methotrexate is an unlicensed drug unless using the metoject preparation which is licensed					
Describe and recognise the potential complications or side effects of methotrexate					
Describe the circumstances when they would not give the methotrexate injection					
Describe the circumstances when they need to contact their G.P. or Rheumatology Specialist Nurse					
Can accurately check injection details – drug name, dose, expiry, name of patient and colour of liquid					
Describe the following • How it should be stored • Checking the equipment • Environment for injecting • Protection of others • Avoiding needle contamination • Deal with needlestick injury • Need for hand washing • Deal with spillage • Disposal of sharps and waste • Use of gloves/apron (non-patient injectors only)					
Can describe delivery details					
Can identify sites on the body to give s.c. injection					
Can discuss rationale and arrangements for blood monitoring					
Patient/carer can give the s.c. injection using a safe injection technique (the number of supervised sessions will vary for each patient)					

NHS Tayside Parenteral Methotrexate Leaflet given to the patient YES/NO

This program was adapted from Royal College of Nursing (2004) Administering subcutaneous methotrexate for inflammatory arthritis. Publication code 002-269, by Diane Crake, Rheumatology specialist Nurse, NHS Tayside methotrexate for inflammatory arthritis. Publication code 002-269, by Diane Crake, Rheumatology Specialist Nurse, NHS Tayside.

APPENDIX 3

Patient Information re Parenteral Methotrexate

Your Rheumatologist has recommended you to start injecting your methotrexate, this leaflet will explain why, about the drug and the procedures regarding delivery, handling, administering and disposing of equipment safely.

Who needs treatment with Methotrexate?

Types of conditions for which it is used include rheumatoid arthritis and psoriatic arthritis. Although injections of methotrexate for rheumatological conditions are currently unlicensed, it is used widely throughout the United Kingdom with great success in improving disease control.

What does it do?

It interferes with growth of inflammatory cells. These cells are what cause inflammation in your joints and/or other tissues.

Why use injections instead of tablets?

There are several reasons why injecting methotrexate may be of increased benefit compared to tablets. Firstly by injecting methotrexate more of the drug is absorbed in your body to act upon the inflammation. Secondly often patients can tolerate a higher dose via injection compared to tablets. Finally, some patients suffering from side effects whilst taking the tablets of methotrexate find a reduction in these side effects if they convert to injecting the drug. Normally it is a subcutaneous injection (similar to diabetic injection) as this is easier to administer and less painful, but it can be given intramuscularly, (deep into the muscle like some vaccinations).

Dosage:

Methotrexate must only be taken in the exact dose as prescribed by your rheumatologist. It is taken as a single injection **once a week on the same day each week.** Your G.P. will prescribe a regular folic acid tablet, (a B group vitamin) usually 3 days after your injection is to minimise the risk/severity of any side effects.

What benefit can be expected?

Like oral methotrexate there is usually a delay of at least 6 weeks before the joint symptoms start to improve. Further benefit may occur up to 6 months after starting treatment. Treatment with non-steroidal anti-inflammatory drugs (NSAIDs) and painkillers is usually continued.

What are the possible side effects?

The side effects of subcutaneous methotrexate are similar to that of tablets;

Nausea, diarrhoea or occasionally abdominal pain may occur initially but these often settle after adjustment of dosage and are not usually serious. There are various ways of treating nausea if this occurs – you will get advice from your GP on this.

Mouth ulcers may occur and may necessitate an adjustment of dose.

The drug may reduce the number of white cells or platelets in the blood and the dose must, therefore, be individually adjusted. In rare severe cases these abnormalities might lead to severe infection or bleeding. Regular blood checks are therefore essential (weekly at start of therapy then when stable monthly)

Severe adverse effects on the lungs or liver can rarely occur which will require stopping Methotrexate treatment altogether. Chest X-ray and breathing tests will be arranged at the time of starting therapy but this is not generally required if you have been taking methotrexate tablets.

Methotrexate may make you more likely to develop infections, even with a normal blood count.

Methotrexate can reduce fertility and may harm an unborn baby; it should NOT be taken during pregnancy. Whilst taking Methotrexate, and for 3 - 6 months after Methotrexate is stopped, both women and men must take contraceptive precautions. If you are planning a family, or if you become pregnant while taking Methotrexate, you should discuss this with your doctor as soon as possible. **You should not breast feed if you are taking Methotrexate.**

Loss of hair has been reported on very rare occasions.

Precautions:

1) Ensure that you tell your doctor about any significant side effects you have had to other
medicines

2) Stop methotrexate and report to your doctor if you develop any of the following: -

- Severe sore throat or mouth.
- Abnormal bleeding tendency (excessive bruising, blood spots or blisters on the skin or in the mouth)
- Rash
- Mouth ulcers.
- Breathlessness or dry cough (stop treatment and contact GP immediately).
- If you develop symptoms of shingles or chicken pox

3) **Do not take any other medications without discussing with your doctor or pharmacist this includes herbal remedies, food supplements and over the counter medicines**. As some medication can interact with methotrexate.

4) Alcohol should only be taken in strict moderation due to the risk of combined liver toxicity. That is no more than 2 units daily.

5) Regular blood tests must be done at intervals of between 1 and 4 weeks depending on how long you have been taking Methotrexate.

6) Pneumovax and annual flu vaccines should be given while on this treatment. **Please arrange to see your General Practitioner or Practice Nurse late October each year to discuss this.**

7) If you have not previously had chicken pox or shingles and you are in contact with someone with one of these conditions please contact your GP immediately.

8) '**Live' vaccines should be avoided.** Your Doctor or Rheumatologist will be able to advise you.

9) You should consult your GP early if you have symptoms of an infection that are not settling as in some instances methotrexate maybe stopped temporarily

PROCEDURES

Delivery:

Delivery will in the form of a pre-filled syringe from the hospital pharmacy department every 4 weeks to your home please check the following on arrival;
• The outer packaging is sealed prior to opening.
• Your name
• The drug name and dosage are correct
• Expiry date/time
• There has been no leakage/spillage

Please note if there is no one at home to accept delivery of your medication on the agreed day, it will be returned to the hospital pharmacy and you will have to arrange to come to the hospital pharmacy and collect it.

Please remember if you are going on holiday etc and will not be taking delivery for a short period please inform the pharmacy department to suspend your prescription, the methotrexate syringes require special transportation arrangements so either treatment is suspended for the duration of your holiday or you convert to a previously tolerated oral dose for the duration of your holiday.

Storage:
Metoject is sealed in plastic packaging within an outer cardboard box and should remain in this box until used. If the metoject preparation of methotrexate is not being used the methotrexate syringe will be within outer packaging which should be removed (leave sealed in the inner packaging). Storage should be in an identified compartment, such as a sealed plastic box, in a drug storage cabinet. Store at room temperature (below 25ºC), there is no need for refrigeration but please remember to ensure it is not accessible to children or pets. If there are discrepancies or indication of spillage or damage to the syringe, please contact the aseptic pharmacy department at the hospital.

Equipment:

Needle (only if not using metoject preparation of methotrexate)

Sharps bin (black or purple lidded)

Gauze swabs or tissues

Disposable plastic apron and nitrile gloves (if you are injecting someone)

Giving the Injection:

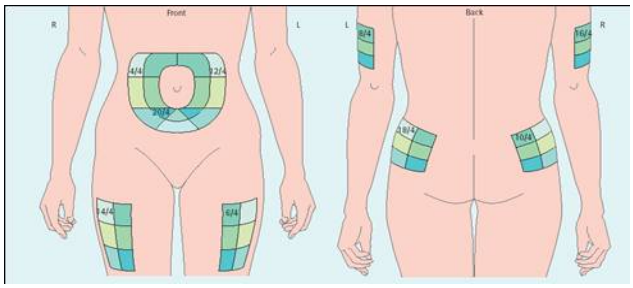
Ensure you have all the equipment you will need ready and to hand and can carryout the procedure with no interruptions or distractions (needle, sharps bin and tissues - if you are injecting someone you will need to wear nitrile gloves and a plastic apron).

1) Wash and dry your hands thoroughly.

2) If you are injecting someone put on the gloves and apron.

3) Check your methotrexate syringe for the following your name, drug name, dose, expiry date and the colour, (it should be yellow but clear). If there is a discrepancy please do not proceed, contact the pharmacy department at the hospital. Open the inner bag/cardboard box and plastic packaging of metoject and dispose of into the sharps bin. The cardboard outer box for metoject does not need to be disposed of in the sharps bin and is suitable for disposal in the normal waste bin.

4) Identify the site you are to inject remembering to use a different area of skin each week on either the upper outer arms, upper thigh or stomach either side of the belly button or the fat pad at the back of the hip (see diagram below). If you are injecting yourself the arms are best avoided due to being difficult to reach.



5) Remove protective cap from metoject syringe by gently pinching the grey plastic cap and turning the syringe. If not using Metoject preparation of methotrexate attach the needle to the syringe – remember it is a screw top syringe.

6) Ensure your skin is clean and dry at the site you are about to inject, then pinch your skin into sausage shape and put the needle in at a 90-degree angle, (straight in) and slowly depress the plunger.

7) Once the syringe is empty remove the needle from your skin, leave attached to the syringe and put directly into the sharps bin.

8) If there is some leakage of fluid at the site you injected press lightly with a tissue until the seepage stops and dispose of the tissue into the sharps bin.
9) If you wore gloves and an apron to give the injection to someone else remove and place into the sharps bin.

10) Wash and dry your hands thoroughly.

Disposal:

All materials used during your injection, i.e. inner bag/plastic packaging of metoject, syringe and needle, gloves, apron, (if used) and any swabs or tissues, should be disposed of in the cytotoxic sharps bin. The cytotoxic sharps bin should be disposed of when full. Please do not fill beyond the fill line indicated on the side of the bin and order your new sharps bin 1 month before you will need it. You will return the used cytotoxic sharps bin to the practice for disposal.

Note: the outer bag/cardboard box containing the methotrexate injection can be disposed with normal household waste.

Spillages:

You will be provided with a kit to deal with spillages; it will contain absorbent paper towels, disposable gloves and a plastic apron. Replacement kits are obtained from the Rheumatology Nurse Specialist.
In the event of a spillage put on the gloves and apron before dealing with the spillage as follows;

Clothes/surfaces – Mop up any spillage with the absorbent towels provided. Wash the clothes or the surface with tap water thoroughly and then remove moisture by squeezing or blotting with the remaining absorbent towels. Clothes should then be washed separately from other washing in the hottest possible washing cycle twice. Please note do not use carpet cleaner on the spillage as this can cause a chemical reaction with the methotrexate.

Skin - Methotrexate can irritate the skin. In the event of contact with the skin, the area affected should be washed with plenty of tap water then washed with soap and water before drying thoroughly, note do not rub the skin. Monitor the area over the next week and if deterioration or no improvement, seek further medical advice.

Eye – Methotrexate can potentially irritate the eyes. In the event that methotrexate comes into contact with the eyes, the eye/eyes affected should be flushed thoroughly with cold tap water for at least 15 minutes and then seek urgent medical attention i.e. attend Accident and Emergency at your nearest hospital.

Inhalation – Methotrexate if inhaled (breathed in) can irritate the airways. If you inhale (breath in) methotrexate, move to an area of fresh air e.g. outside or by an open window, if you experience breathing difficulties seek urgent medical attention.

Ingestion – Methotrexate is toxic if ingested (swallowed). In the event of this happening attend Accident and Emergency at your nearest hospital urgently.

Please remember to dispose of all paper towels, gloves and other materials used to deal with the spillage in the sharps bin.

Finally wash your hands thoroughly after you have dealt with the spillage.

Needlestick Injury:

If during the procedure you accidentally stab yourself for example your finger, if you are injecting yourself make the wound bleed under running water for 5 minutes then dry the area and use an elastoplast if necessary, if you are injecting someone else make the wound bleed under running water for at least 5 minutes and then seek medical attention.

Additional Advice:

- **Remember to keep medication out of reach of children and pets**
- **Keep needles and sharps bins out of reach of children and pets**

Contact Numbers:

Pharmacy
Ninewells – 01382 660111 ext 32489

Perth Royal Infirmary – 01738 623311 ext 12024

(to suspend deliveries for holiday or other periods of absence)

Rheumatology Specialist Nurse Advice Line
(24 hour a day answer machine)

Ninewells - 01382 660111 ext 34534

Perth Royal Infirmary - 01738 623311 ext 34534