



**NATIONWIDE CHILDREN'S**  
*When your child needs a hospital, everything matters.™*

**Helping Hand™**

*Health Education for Patients and Families*

## **Methotrexate Injection for Non-Cancerous Conditions**

Methotrexate (meth oh TREX ate) is a medicine that may be used to treat Crohn's disease, arthritis, psoriasis, and other skin conditions. This medicine works on the immune system. It prevents the growth of the white blood cells that cause inflammation. It is usually given by injection (shot) once a week.

### **Doctor's order**

Child's Name \_\_\_\_\_

Date \_\_\_\_\_ Age \_\_\_\_\_ Weight \_\_\_\_\_

Brand Name of Methotrexate is Rheumatrex®

Dosage: \_\_\_\_\_mg which is \_\_\_\_\_mL or \_\_\_\_\_ units on an insulin syringe

### **How to give this medicine**

- Read the label carefully and make sure you are giving your child the right dose.
- **This medicine is always taken once a week. Do not give it more often.**
- It is important to keep a record of when the medication is given.
- It is very important to give the medicine as ordered, even if your child is feeling fine. Do not change doses or stop the medicine without talking to your child's doctor.
- If you forget to give your child a dose, call the child's doctor right away.
- Your child's doctor may write a prescription for folic acid (folate) to take while the child is on methotrexate.

## Warnings

- If your child is allergic to methotrexate, he or she should not take this medicine.
- If a patient thinks she might be pregnant, she should tell the doctor before she begins taking this or any medicine. Methotrexate should not be taken during pregnancy.
- Female caregivers giving the medicine should not be pregnant, either. If you are the primary caregiver, speak to your nurse, doctor, or pharmacist on safe ways to care for the patient.
- If a patient is breast-feeding her baby, she should tell her doctor before she begins taking this or any medicine. Methotrexate can pass into breast milk and cause side effects in the baby.

## Possible side effects

- Sunburns more easily
- Rash or injection site reaction (itching or redness around injection site)
- Sores in the mouth, throat, stomach or intestines. Pain in the mouth or throat.
- Low blood counts
  - Low white blood cell counts may make your child more likely to get infections.
  - Low hemoglobin (anemia) may make your child get tired more easily or look pale.
  - Low platelet count may cause your child to bleed or bruise more easily. You may also see pinpoint red spots on the skin, oozing from the gums, nosebleeds, black or tarry stools or blood in the urine (tea or cola-colored).
  - Labs will be checked routinely to look at these counts.
- Fever or chills
- Nausea and vomiting; loss of appetite
- Diarrhea
- Liver problems that may cause yellow eyes or skin, tenderness of the abdomen, abnormal lab test results. Blood tests for liver function will be checked routinely.
- Dry cough or shortness of breath.
- Thinning hair or hair loss may occur.

## What to do about side effects

- If a skin rash occurs, stop giving the medicine and call your child's doctor.
- Look for sores in your child's mouth before giving each dose of methotrexate.
- Apply a sunscreen lotion (at least SPF 30) and have your child wear a hat whenever going outdoors. Avoid long periods of sun exposure. Tanning beds and sunlamps should not be used.
- Tell the doctor if your child has nausea or vomiting. Medicine to relieve these side effects may be prescribed.

## When to call the doctor

Call your child's doctor if your child:

- Has hives, rash, or sunburn
- Becomes pregnant
- Has diarrhea
- Has urine the color of tea or cola
- Has mouth sores
- Is exposed to someone who has chickenpox
- Has pain in the mouth, throat or stomach
- Vomits
- Has blood in the stools or black, tar-like stools
- Has any other unusual or severe bleeding or bruising
- Has yellow skin and abdominal pain
- Develops fever of 101° F or higher or chills, even if the child feels well otherwise

## Preventive measures

- Blood counts will be done before the first dose is given and at routine periods after that.
- Your child may need to take medicine to help control nausea and vomiting.
- Methotrexate makes your child more sensitive to sunlight. Before going out in the sun, your child should wear a hat, protective clothing, and a sunscreen lotion with a SPF of at least 30.



**Picture 1** Call the doctor if your child has any side effects.

## Drug interactions

This medicine should not be taken with these other medicines, products, or food. Talk to your child's provider before giving any of the medicine listed below:

- Cyclosporine
- Echinacea
- Diuretics (“water pills”)
- Sulfamethoxazole-trimethoprim
- Your child should not get any live virus vaccines while taking methotrexate. Live virus vaccines may cause the infection they are meant to prevent.
- Your child may get inactivated (killed) vaccines while taking methotrexate, but the vaccines may be less effective.
- Your child should not drink alcohol (beer, wine and liquor). Combining this medicine with alcohol can cause liver damage and can be dangerous. The amount of alcohol in medicines is safe.
- If your child is taking any other medicine or herbal supplements, tell your child's doctor and pharmacist. Certain medicines should not be given with methotrexate.
- Do not give over-the-counter medicines (acetaminophen, antacids, cold medicines) without checking with your child's doctor or pharmacist first.

## Giving the injection

A “Sub-Q” (subcutaneous) injection of methotrexate can be given at home using the following steps:

**Your child's dose is \_\_\_\_\_mg which is \_\_\_\_\_mL or \_\_\_\_\_ units on an insulin syringe.**

**Methotrexate Dosing Table (25mg/mL)**

Dose of Methotrexate	Amount listed on label to be drawn up using 1 mL syringe	Amount to draw up if using 100 unit insulin syringe	Number of full doses in vial containing preservative*
7.5 mg	0.3 mL	30 units	5
10 mg	0.4 mL	40 units	5
12.5 mg	0.5 mL	50 units	4
15 mg	0.6 mL	60 units	3
17.5 mg	0.7 mL	70 units	2
20 mg	0.8 mL	80 units	2
22.5 mg	0.9 mL	90 units	2
25 mg	1 mL	100 units	2

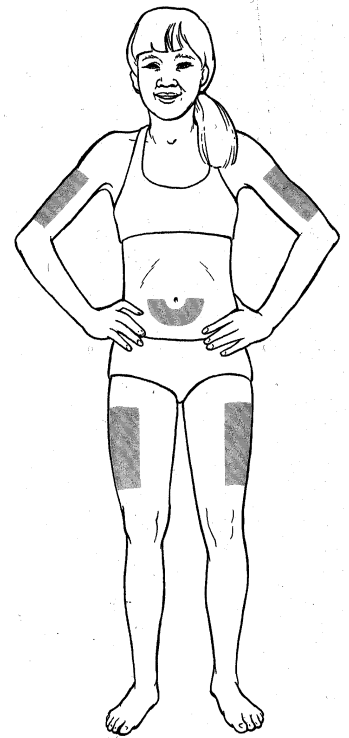
\*Do not reuse methotrexate vials that do not contain preservative (ex: “Preservative-free”)

### You will need:

- Syringe and vial of methotrexate
- Needle disposal container or ‘sharps’ container
- Alcohol swab and bandage
- Disposable gown
- Disposable gloves – you can get them from your pharmacy or Nationwide Children’s Hospital Homecare retail store.

### Choose an injection site:

1. Select a site where you can pinch 1 inch of fat, usually the abdomen (“belly”), thigh, or outer aspect of the upper arm. It is best to alternate injection locations. Avoid areas of skin that have rashes, bruises, scars, or cuts. Avoid belly button by 1 to 2 inches (Picture 2).



**Picture 2** Shaded areas where you can do an injection.

### Preparing for injection:

1. Wash and dry your hands.
2. Use disposable gloves when touching methotrexate. Do not use torn or punctured gloves (Picture 3).
3. Check the prescription label to be sure it is the correct medicine and dosage. Inspect medicine for particles or changes in color (medicine should be yellow).
4. If using a new methotrexate vial, pop the plastic protective cap off of the top of vial and throw it away. You cannot put the cap back on.
5. Clean the top of the vial well with an alcohol swab or a cotton ball dipped in rubbing alcohol. Let the alcohol dry completely.
6. Clean the skin with an alcohol swab or cotton ball dipped in rubbing alcohol. Let it air dry. (Be careful not to touch the place where the shot will be given.)



**Picture 3** Putting on disposable gloves.

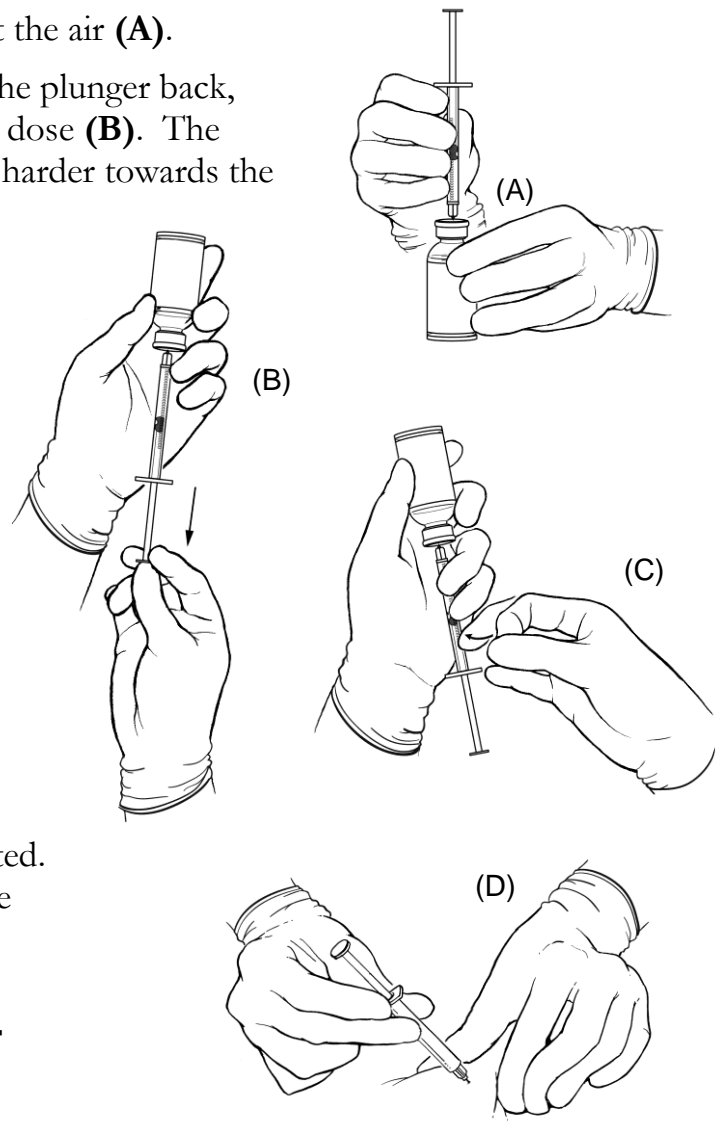
### Preparing the dose:

1. Remove the needle cover from the disposable syringe. If you need to attach the needle, leave the needle inside the package while you attach it to the syringe.
2. Put the vial on a table.
3. Add air to the syringe equal to the child’s dose by pulling back the plunger end of the syringe. Adding air to the vial makes it easier to draw up the medicine.

4. Insert the needle straight into the vial and inject the air **(A)**.
5. Pick up the vial and turn it upside down. Pull the plunger back, drawing medicine into the syringe to the child's dose **(B)**. The needle tip needs to be covered by liquid (this is harder towards the end of the vial)
6. Hold the syringe pointed up. Tap gently to make air bubbles rise **(C)**. Gently push on the plunger to force air bubbles out.
7. Remove the syringe from the vial. Inspect the needle to make sure it is not bent. Do not use a bent needle.

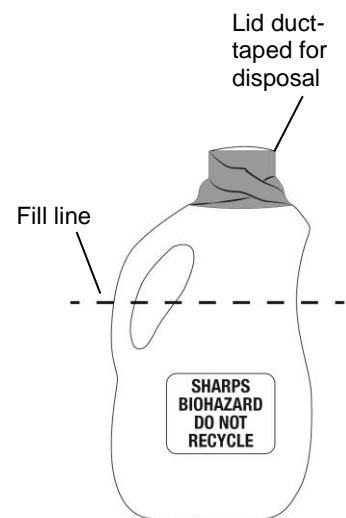
### Giving the dose:

1. Pinch the skin at the cleaned injection site.
2. Hold the syringe like a pencil and inject quickly into the skin with a dart-like motion at a 45 degree angle **(D)**.
3. Inject methotrexate by pushing down on the plunger slowly until all medicine has been injected. Count to '5' after injection is done, then remove needle from skin.



### Handling hazardous medicines at home – needles and sharps

- Do not recap the used needle. Do not bend or break off the needle.
- Do not remove the needle from the syringe.
- All sharps or needles must be thrown away in a safe 'sharps container.' If you do not have a hospital-issued sharps container, use a container made of **heavy-duty plastic. This can be a laundry detergent bottle or liquid laundry softener bottle (Picture 4)**. It must close with a lid that screws on tightly. Needles should not be able to poke through (puncture) the lid. The container must be leak-proof, and able to sit up and not fall over (stable).



**Picture 4** Hard plastic laundry detergent bottle and fill line.

- Place the container in the middle of a full, heavy duty trash bag. In the state of Ohio, you are allowed to put the trash bag out for regular trash pick-up. DO NOT put the container in the recycling.
- Please ask your nurse for Helping Hand HH-IV-168, *Sharps Containers at Home* for more information or you can find the Helping Hand at <https://www.nationwidechildrens.org/family-resources-education/health-wellness-and-safety-resources/helping-hands/sharps-containers-at-home>.

## Accidental methotrexate spill

1. If a spill occurs, wear a disposable gown and two pairs of gloves to clean up the spill. Cover the spill with a disposable towel, and then thoroughly wipe up the spill. The area should then be cleaned three times with a home cleaning product. This is to make sure that no medicine is still on the surface. All materials should be disposed of in a sealed bag and placed in a wastebasket that is out of reach of pets and children.
2. Hazardous liquid medicines spilled on your skin may cause irritation. Wash area thoroughly with soap and water and dry. If redness or irritation occurs within 7 days, contact your doctor.
3. If the drug splashes in the eye, rinse the eye with tap water for at least 15 minutes and contact your doctor.

## Medicine storage

- Store all medicine and supplies in a cupboard out of the reach of children, pets, and others who might misuse them.
- Always keep medicine in the original bottle from the pharmacy.
- Keep items clean and free of dust.
- Keep this medicine away from heat or direct sunlight.
- If your child's methotrexate vial is a single dose vial (does not have preservatives), use it once, and then throw the rest away.
- If your child's methotrexate vial is a multi-dose vial (has preservatives in it), you can reuse one vial for multiple doses. Once you have opened the vial, it can only be used for 28 days.
- Unopened vials should not be used after the expiration date printed on the container.
- When methotrexate is no longer needed, throw the vial away in a sharps container.

## Safety tips and other advice

- While this medicine may be safe and effective for your child, it may be harmful if other people come in contact with the bodily fluids. Consider flushing the toilet two times with the lid down after using the restroom for the first 48 hours after a dose.
- Tell your child's doctor and pharmacist if your child has an unusual or allergic reaction to any medicine.
- Bring all your child's medicines with you in the original containers whenever your child sees a doctor, goes to an emergency room or is admitted to the hospital. This helps doctors who may not know your child.
- Learn the name, spelling and dose of this medicine. Also, teach your child if he is old enough. You will need to know this information when you call your doctor or pharmacist.
- If your child takes too much of this medicine, or if someone else takes this medicine, first call the Central Ohio Poison Center at 1-800-222-1222 (TTY 614-228-2272). They will tell you what to do.
- When your child goes to the dentist, be sure to tell the dentist your child is taking this medicine and why.
- Tell your child's teacher, school nurse, coach, baby-sitter and others your child is taking this medicine and what side effects to watch for.

## Follow-up appointments

You can expect to have regular follow-up appointments with your child's doctor. If you have any questions, be sure to ask your child's doctor, nurse or pharmacist.

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