Mefloquine Hydrochloride Tablets, USP

**Mechanism of Action**

Mefloquine is an antimalarial drug that acts on the Plasmodium falciparum parasite. It is primarily used for the treatment of malaria caused by the Plasmodium falciparum strain. The drug is a synthetic analog of quinine. The drug is a white to almost white crystalline solid. The chemical name is 40-(6-Methoxy-3,4-Dihydro-2H-chromen-2-yl)-2,3-Dihydro-2,2,5,5-Tetramethyl-2,5-Hexanedione. It has the following structural formula:

![Structural formula of mefloquine](image)

**Pharmacokinetics**

Mefloquine is absorbed enterically and is distributed to most body tissues, including the brain, retina, and placenta. It is metabolized in the liver and excreted in the urine. The drug is eliminated primarily as inactive metabolites. The half-life of mefloquine is about 3 weeks. The active metabolite, 6-Methoxy-3,4-Dihydro-2H-chromen-2-yl, has a longer half-life of about 4 weeks. The drug is primarily metabolized by the liver. The metabolism of mefloquine is not significantly affected by hepatic impairment. Mefloquine may accumulate in parasitized erythrocytes.

**Pharmacokinetics in Special Clinical Situations**

**Drug Resistance**

Mefloquine resistance has been noted in areas of multi-drug-resistant malaria. Cross-resistance between mefloquine and halofantrine is not complete. Mefloquine may cause neuropsychiatric adverse reactions in some patients. The use of mefloquine for malaria prophylaxis is associated with an increased risk of drug interactions. The drug is contraindicated in patients with a known hypersensitivity to mefloquine or halofantrine.

**Drug Interactions**

Mefloquine is a moderate inhibitor of CYP3A4 and may increase the plasma concentrations of other drugs that are substrates of CYP3A4. Mefloquine should not be co-administered with CYP3A4 inhibitors such as ketoconazole. Mefloquine should be administered at least 12 hours after the last dose of other drugs that are substrates of CYP3A4.

**Adverse Reactions**

Common adverse reactions include dizziness, headache, somnolence, and anorexia. More serious reactions include psychiatric adverse reactions, particularly depression, anxiety, and agitation. Mefloquine is also associated with rare cases of agranulocytosis and aplastic anemia. In patients with a known hypersensitivity to mefloquine or halofantrine, the drug should be used with caution. Mefloquine is associated with a low incidence of drug-induced fever and rash. The drug is not recommended for use in patients with a known hypersensitivity to mefloquine or halofantrine.

**Contraindications**

Mefloquine is contraindicated in patients with a known hypersensitivity to mefloquine or halofantrine. The drug is not recommended for use in patients with a known hypersensitivity to quinine or quinidine. The drug should be used with caution in patients with a known hypersensitivity to related compounds (eg, quinine and quinidine) or to any of the inactive ingredients in the formulation.

**Side Effects**

Mefloquine is associated with a low incidence of side effects compared to other antimalarial drugs. The most common side effects are headache, dizziness, and somnolence. More serious side effects include psychiatric adverse reactions, particularly depression, anxiety, and agitation. Mefloquine is associated with a low incidence of agranulocytosis and aplastic anemia. In patients with a known hypersensitivity to mefloquine or halofantrine, the drug should be used with caution. Mefloquine is associated with a low incidence of drug-induced fever and rash.


**MEDICATION GUIDE**

**Mefloquine Hydrochloride Tablets, USP**

**What is Mefloquine?**

Mefloquine is a prescription medicine used to prevent and treat malaria caused by certain parasites that affect the brain or other areas of the body. These parasites are spread by mosquitoes that are biting, or by blood transfusions. Malaria can spread from person to person through these means.

**Who should not take Mefloquine?**

You should not take Mefloquine if you have ever had a serious allergic reaction to mefloquine, quinine, quinidine, or other medicines that contain quinidine or quinine.

**How should you take Mefloquine?**

Take Mefloquine exactly as your doctor tells you to take it. Your doctor will tell you how many Mefloquine tablets to take and how long to take them. These tablets should be swallowed whole. Do not crush or break them. Do not chew them.

**Instructions for use:**

1. Follow your doctor’s instructions carefully. If you have any questions, ask your doctor.
2. Take Mefloquine after meals. If you find it difficult to swallow, you may take it with food.
3. Continue taking Mefloquine as directed. Do not stop Mefloquine treatment without talking to your doctor.
4. If you miss a dose, take it as soon as you remember. However, if it is almost time for your next dose, skip the missed dose and take your regular dose. Do not take two doses of Mefloquine at one time.

**If you forget to take Mefloquine:**

If you forget to take Mefloquine, call your doctor for instructions. Do not take extra medication to make up the missed dose.

**Before you take Mefloquine:**

Tell your doctor about all your medical conditions, including:

- Heart problems.
- Liver problems.
- Kidney problems.
- Seizures.
- Diabetes.
- Blood cell disorders.
- Allergy.
- Other conditions such as asthma, tuberculosis, or certain types of infections.

**While taking Mefloquine:**

Do not take other medicine without advice from your doctor.

**What should you avoid while taking Mefloquine?**

Do not take other medicines that contain quinidine or quinine. This includes cough, cold, or allergy medicine that contains these drugs. Other medicines may affect your ability to take Mefloquine.

**Are there any special precautions when taking Mefloquine?**

- Do not take Mefloquine with alcohol or other drugs that can cause drowsiness or dizziness. These include medicine for colds, allergy, cough, or pain; tranquilizers; sedatives; and sleeping pills.
- Do not drive or operate machinery if you are feeling dizzy or if you have any unusual symptoms.
- Do not drink alcohol while taking Mefloquine.
- Do not take Mefloquine with other medicines that contain the same active ingredient.
- Do not use Mefloquine with other medicines that contain quinidine or quinine.

**What are the possible side effects of Mefloquine?**

The most common side effect of Mefloquine is stomach upset. Other possible side effects may include:

- Vision problems
- Headaches
- Nervousness
- Abnormal blood tests
- Rash
- Loss of taste
- Numbness or tingling in the arms and legs
- Muscle stiffness
- Skin disorders
- Depression
- Dizziness
- Drowsiness
- Hallucinations
- Large pupils
- Rapid heartbeat
- Seizures
- Anemia
- Immune problems

If you take too much Mefloquine: Call your doctor for instructions. Do not take any more tablets until you talk to your doctor.

**What are the ingredients in Mefloquine?**

Mefloquine Hydrochloride Tablets USP contain the following active ingredient:

- Mefloquine hydrochloride (125 mg)

**Medication Guide Last Updated:**

06/17/2013

**Information Wallet Cord:**

Mefloquine Hydrochloride Tablets, USP

It is important that you read the entire Medication Guide for all information about Mefloquine.

**Carry this wallet card with you always.**

**Malaria represents a major health threat.**

**What is Malaria?**

Malaria is a disease caused by parasites called Plasmodium, which are spread by the bites of infected mosquitoes. Malaria can cause fever, chills, muscle pain, and headache, and it can cause severe and sometimes fatal complications.

**How can you protect yourself from Malaria?**

- Use insect repellent.
- Wear long-sleeved shirts and pants, or use insect repellent on your skin.
- Use bed nets, or use mosquito netting that is impregnated with insecticide.
- Do not use Mefloquine if you are pregnant or breastfeeding.

**Who should avoid Mefloquine?**

- People with certain heart problems.
- People with certain liver or kidney problems.
- People with certain blood disorders.
- People with certain lung, brain, or eye problems.
- People with certain infections.
- People with certain other health problems.

**Information Wallet Cord Last Updated:**

09/03/2013

**Gardner IO, Pyman FT, Bazzari J, Afdhal NH, Creagh CA.**

**Malaria in the United States: 1999-2002.**

**Ann Intern Med.**

**2004 Jan 20;140(2):117-25.**

**References**


Important:
Your doctor or pharmacist will give you an Information Wallet Card along with this Medication Guide. It has important information about mefloquine and should be carried with you at all times while you take mefloquine.

What is the most important information I should know about mefloquine?
Mefloquine can cause serious side effects, including:
1. Heart Problems. Do not take halofantrine (used to treat malaria) or ketoconazole (used for fungal infections) with mefloquine or within 15 weeks of your last dose of mefloquine. You may get serious heart problems (problems with the electrical system of your heart called QT prolongation) that can lead to death. Do not take quinine (Qualaquin) or quinine (used to treat malaria or irregular heart beat) with mefloquine. You may get serious heart problems.

2. Mental problems. Symptoms of serious mental problems may include:
   • severe anxiety
   • paranoia (feelings of mistrust towards others)
   • hallucinations (seeing or hearing things that are not there)
   • depression
   • feeling restless
   • unusual behavior
   • feeling confused

Some people who take mefloquine think about suicide (putting an end to their life). Some people who were taking mefloquine committed suicide. It is not known if mefloquine was responsible for those suicides.

If you have any of these serious mental problems, or you develop other serious side effects or mental problems, you should contact your doctor right away as it may be necessary to stop taking mefloquine and use a different medicine to prevent malaria.

3. Problems with your body’s nervous system. Symptoms of serious nervous system problems may include:
   • dizziness
   • a feeling that you or things around you are moving or spinning (vertigo)
   • loss of balance
   • ringing sound in your ears (tinnitus)
   • convulsions (seizures) in people who already have seizures (epilepsy)
   • convulsions (seizures) in people who take quinine or chloroquine (used to treat malaria) with mefloquine. Do not take quinine (Qualaquin) or chloroquine (Aralen) with mefloquine.
   • unable to sleep (insomnia)

Dizziness, vertigo, tinnitus, and loss of balance can go on for months or years after mefloquine is stopped or may become permanent in some people.

What is Mefloquine?
Mefloquine is a prescription medicine used to prevent and treat malaria. Malaria can be a life-threatening infection. Mefloquine does not work for all types of malaria. It is not known if mefloquine is safe and effective in children under 6 months old for the treatment of malaria. It is not known how well mefloquine works to prevent malaria in children weighing less than 44 pounds (20 kilograms).

Who should not take Mefloquine?
Do not take Mefloquine if you have:
• depression or had depression recently
had recent mental problems, including anxiety disorder, schizophrenia, or psychosis (losing touch with reality)
• seizures or seizures (epilepsy or convulsions)
• an allergy to quinine, quinidine, mefloquine or any ingredients in mefloquine. See the end of this Medication Guide for a complete list of ingredi
ts in mefloquine.
• Talk to your doctor before you take mefloquine if you have any of the medical conditions listed above.

What should I tell my doctor before taking meflo
quine?
• Before taking mefloquine, tell your doctor about all your medical conditions, including if you have:
  • heart disease
  • liver problems
  • seizures or epilepsy
  • diabetes
  • blood clotting problems or take blood thinner medicines (anticoagulants)
  • mental problems
  • are pregnant or plan to become pregnant. It is not known if mefloquine will harm your unborn baby.
  • Talk to your doctor if you are pregnant or plan to become pregnant.
  • You should use birth control while you take mefloquine and for 3 months after you stop mefloquine. If you have an unplanned pregnan
  cy, talk to your doctor right away.
  • are breast-feeding or plan to breast-feed. Mefloquine can pass into your milk and may harm your baby. Ask your doctor if you will need to
  stop breast-feeding or use a different medicine.
• Contact your doctor right away if you have a fever while leaving a malaria area.
• Tell your doctor about all the medicines you take, including prescription and nonprescription medicines, vitamins, and herbal supplements. Mefloquine and other medicines may affect each other causing side effects.

How should I take Mefloquine?
• Take mefloquine exactly as your doctor tells you to take it. Your doctor will tell you how many mefloquine tablets to take and when to take them.
• You will start taking mefloquine to prevent malaria between 1 to 3 weeks before you travel to a malaria area.
• Take mefloquine just after eating your largest meal of the day and with at least 1 cup (8 ounces) of water.
• Do not take mefloquine on an empty stomach.
• If you vomit after taking mefloquine, contact your doctor to see if you should take another dose.
• Continue taking mefloquine for 4 weeks after you return home from a malaria area.
• Mefloquine tablets may be crushed and mixed with a small amount of water, milk or other bev
  erage for children or other people unable to swallow mefloquine whole. Your doctor will tell you the correct dose for your child based on your child’s weight.
• If you take Mefloquine for a year or longer, your doctor should check your
  • eyes (especially if you have trouble seeing while you take mefloquine).
  • liver function (to see if there has been damage to your liver)
• Use protective clothing, insect repellents, and bednets to protect you from being bitten by mosqui
toes. Medicine alone does not always stop you from catching malaria from mosquito bites.

What should I avoid while taking mefloquine?
• Avoid activities such as driving a car or using heavy machinery or other activities needing alertness and careful movements (fine motor coordination) until you know how mefloquine affects you. You may feel dizzy or lose your balance. This could happen for months or years after you stop taking mefloquine and can be permanent in some cases. See "What are the possible side effects of mefloquine?" What are the possible side effects of mefloquine? See "What is the most important information I should know about mefloquine?"
• Mefloquine may cause serious side effects, including:
  • liver problems
  • Call your healthcare provider right away if you have unexplained symptoms such as nausea or vomiting, stomach pain, fever, weakness, itching, unusual tiredness, loss of appetite, light colored bowel move
  ments, dark colored urine, yellowing of your skin or the white of your eyes.
• The most common side effects of mefloquine include:
  • nausea
  • vomiting
  • diarrhea
  • abdominal pain
  • headache

The most common side effects in people who take mefloquine for treatment include:
• muscle pain
• fever
• chills
• skin rash
• fatigue
• loss of appetite
• irregular heart beat
• Call your doctor if you have any side effect that bothers you or that does not go away. These are not all the possible side effects of mefloquine. For more information, ask your doctor or pharmacist.
• Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

How should I store mefloquine?
• Store mefloquine at room temperature between 68°F to 77°F (20°C to 25°C)
• Safely throw away medicine that is out of date or no longer needed.
• Keep mefloquine and all medicines out of the reach of children.

General information about the safe and effective use of mefloquine.
• Medicines are sometimes prescribed for pur
  poses other than those listed in a Medication Guide. Do not use mefloquine for a condition for which it was not prescribed. Do not give mefloquine to other people, even if they have the same symptoms that you may have. It may harm them.
• This Medication Guide summarizes the most important information about mefloquine. If you would like more information, talk with your doctor.
• You can ask your pharmacist or doctor for infor
  mation about mefloquine that is written for health professionals.

What are the ingredients in mefloquine?
• Active ingredients: mefloquine hydrochloro
  ride (active ingredients: crospovidone, lactose mono
  hydrate, low-substituted hydroxypropyl cellulose, magnesium stearate, microcrystalline cellulose, pregelatinized starch and t alc).

This Medication Guide has been approved by the U.S. Food and Drug Administration. 06-2013M 7287
Sandoz Inc. Princeton, NJ 08540

Information Wallet Card: Mefloquine Hydrochloride Tablets, USP
It is important that you read the entire Medication Guide for additional information on mefloquine. Carry this wallet card with you when you are taking mefloquine.

Important: You need to take malaria prevention
• medicine before you travel to a malaria area.
• while you are in a malaria area, and after you return from a malaria area.
• Mefloquine can cause serious side effects, including:
  1. Heart problems.
  • Do not take halofantrine (used to treat malaria) or ketonazole (used for fungal infections) with meflo
  quine or within 15 weeks of your last dose of meflo
  quine. You may get serious heart problems that can lead to death. Do not take quinine (Qua
guin) or quinidine (used to treat malaria or irregular heart beat with mefloquine. You may get serious heart problems. Mefloquine may cause serious prob
• lems with the electrical system of you heart, called GT prolongation.
• 2. Mental problems. Symptoms of serious mental problems may include severe anxiety, paranoia (feel
  ings of mistrust towards others), hallucinations (seeing or hearing things that are not there), depres
  sion, feeling restless, unusual behavior or feeling confused. Some people who take mefloquine think
• about suicide (putting an end to their life). Some people who were taking mefloquine committed suicide.
• It is not known if mefloquine was responsible for those suicides.
• If you have any of these serious mental problems you should contact your doctor right away as it may be
  necessary to stop taking mefloquine and use a different medicine to prevent malaria.

3. Problems with your body’s nervous system.
• Do not take quinine (Qua
guin) or chloroquine (Aralen) (used to treat malaria) with mefloquine. You may have a greater risk for convulsions (seizures).
• Symptoms of serious nervous system problems may include dizziness, a feeling that you or things
  around you are moving or spinning (vertigo), loss