

## **Pemetrexed (Alimta®)**

**Pronounced:** PEM-e-TREX-ed

**Classification:** Antifolate Antineoplastic Agent

### **About Pemetrexed**

Pemetrexed works by blocking three separate enzymes that cells need to replicate. These enzymes, needed for folate-dependent metabolic processes, are required for DNA replication. Therefore, inhibiting these enzymes inhibits cellular growth.

### **How to Take Pemetrexed**

Pemetrexed is given by intravenous (IV) infusion by a doctor or nurse in a medical office or infusion center. It is typically given once every 21 days. A steroid medication is often given for two days before pemetrexed to decrease skin rash. Folic acid supplements should be given a week before pemetrexed, throughout treatment and for three weeks afterwards. An injection of vitamin B12 should be given before the first dose of pemetrexed and then about every 9 weeks during treatment. These vitamin supplementations will decrease the side effects you experience.

### **Possible Side Effects of Pemetrexed**

There are a number of things you can do to manage the side effects of Pemetrexed. Talk to your doctor or nurse about these recommendations. They can help you decide what will work best for you. These are some of the most common side effects:

#### **Low White Blood Cell Count (Leukopenia or Neutropenia)**

White blood cells (WBC) are important for fighting infection. While receiving treatment, your WBC count can drop, putting you at a higher risk of getting an infection. You should let your doctor or nurse know right away if you have a fever (temperature greater than 100.4°), sore throat or cold, shortness of breath, cough, burning with urination, or a sore that doesn't heal.

*Tips to preventing infection:*

- Washing hands, both yours and your visitors, is the best way to prevent the spread of infection.
- Avoid large crowds and people who are sick (i.e.: those who have a cold, fever or cough or live with someone with these symptoms).

- When working in your yard, wear protective clothing including long pants and gloves.
- Do not handle pet waste.
- Keep all cuts or scratches clean.
- Shower or bath daily and perform frequent [mouth care](#).
- Do not cut cuticles or ingrown nails. You may wear nail polish, but not fake nails.
- Ask your doctor or nurse before scheduling dental appointments or procedures.
- Ask your doctor or nurse before you, or someone you live with, has any vaccinations.

For more suggestions, read the [Neutropenia Tip Sheet](#).

## **Low Red Blood Cell Count (Anemia)**

Your red blood cells are responsible for carrying oxygen to the tissues in your body. When the red cell count is low, you may feel tired or weak. You should let your doctor or nurse know if you experience any shortness of breath, difficulty breathing or pain in your chest. If the count gets too low, you may receive a blood transfusion. Read the [anemia tip sheet](#) for more information.

## **Low Platelet Count (Thrombocytopenia)**

Platelets help your blood clot, so when the count is low you are at a higher risk of bleeding. Let your doctor or nurse know if you have any excess bruising or bleeding, including nose bleeds, bleeding gums or blood in your urine or stool. If the count becomes too low, you may receive a transfusion of platelets.

- Do not use a razor (an electric razor is fine).
- Avoid contact sports and activities that can result in injury or bleeding.
- Do not take aspirin (salicylic acid), non-steroidal, anti-inflammatory medications (NSAIDs) such as Motrin®, Aleve®, Advil®, etc. as these can all increase the risk of bleeding. Unless your healthcare team tells you otherwise, you may take acetaminophen (Tylenol).
- Do not floss or use toothpicks and use a soft-bristle toothbrush to brush your teeth.

Read the [thrombocytopenia tip sheet](#) for more information.

## **Nausea and/or Vomiting**

Take anti-nausea medications as prescribed. If you continue to have nausea or vomiting, notify your doctor or nurse so they can help you manage this side effect. In addition, dietary changes may help. Avoid things that may worsen the symptoms, such as heavy or greasy/fatty, spicy or acidic foods (lemons, tomatoes, oranges). Try antacids, (e.g. milk of magnesia, calcium tablets such as Tums), saltines, or ginger ale to lessen symptoms. Read [the Nausea & Vomiting Tip Sheet](#) for more suggestions.

Call your doctor or nurse if you are unable to keep fluids down for more than 12 hours

or if you feel lightheaded or dizzy at any time.

## Decrease in Appetite

Visit [OncoLink's section on Nutrition](#) for tips on dealing with this side effect. Ask your nurse about [nutritional counseling](#) services.

- Try to eat five or six small meals or snacks throughout the day, instead of 3 larger meals.
- If you are not eating enough, nutritional supplements may help.
- You may experience a metallic taste or dislike foods or beverages that you liked before receiving chemotherapy. These symptoms can last up to several months.
- Avoid any food that you think smells or tastes bad. If red meat is a problem, eat chicken, turkey, eggs, dairy products and fish without a strong smell.
- Flavor meat or fish by marinating it in sweet juices, sweet and sour sauce or dressings. Use seasonings like basil, oregano or rosemary. Bacon, ham and onion can also add flavor to vegetables.

## Fatigue

While on cancer treatment you may need to adjust your schedule to manage fatigue. Plan times to rest during the day and conserve energy for more important activities. Exercise can help combat fatigue; a simple daily walk with a friend can help. Talk to your healthcare team and see [OncoLink's section on fatigue](#) for helpful tips on dealing with this side effect.

## Diarrhea

Your oncology team can recommend medications to relieve [diarrhea](#). Also, try eating low-fiber, bland foods, such as white rice and boiled or baked chicken. Avoid raw fruits, vegetables, whole grain breads, cereals and seeds. Soluble fiber is found in some foods that absorb fluid and can help relieve diarrhea. Foods high in soluble fiber include: applesauce, bananas (ripe), canned fruit, orange and grapefruit sections, boiled potatoes, white rice and products made with white flour, oatmeal, cream of rice, cream of wheat, and farina. Drink 8-10 glasses of non-alcoholic, un-caffeinated fluid a day to prevent dehydration. Read [Low Fiber Diet for Diarrhea](#) for more tips.

## Mouth Ulcers (Sores)

Certain cancer treatments can cause sores or soreness in your mouth and/or throat. Notify your doctor or nurse if your mouth, tongue, inside of your cheek or throat becomes white, ulcerated or painful. Performing [regular mouth care](#) can help prevent or manage mouth sores. If mouth sores become painful, your doctor or nurse can recommend a pain reliever.

- Brush with a soft-bristle toothbrush or cotton swab twice a day.
- Avoid mouthwashes that contain alcohol. A baking soda and/or salt warm water mouth rinse (2 level teaspoons of baking soda or 1 level teaspoon salt in an eight

ounce glass of warm water) is recommended 4 times daily.

- If your mouth becomes dry, eat moist foods, drink plenty of fluids (6-8 glasses), and suck on sugarless hard candy.
- Avoid smoking and chewing tobacco, drinking alcoholic beverages and citrus juices.

Read the [mouth ulcer tip sheet](#) for more information.

## **Skin Changes**

These include dryness, itching, and rash. You should use a moisturizer on your skin and lips, but avoid moisturizers with perfumes or scents. Your doctor or nurse can recommend medication if itching is bothersome. If your skin does crack or bleed, be sure to keep the area clean to avoid infection. For more suggestions, read the [Nail and Skin Care Tip Sheet](#). Rash related to this medication typically occurs between doses and resolves before the next dose. A rash can result in blistering or peeling of the skin. Notify your oncology team if you develop a rash.

## **Other Side Effects**

Some less common side effects that have been reported include: shortness of breath, blood clots, and an allergic reaction to the medication. Report any side effects to your healthcare provider.

# **Carboplatin (Paraplatin®)**

**Pronounced:** car-boe-PLATT-in

**Classification:** Platinum Coordination Complex

## **About Carboplatin**

Carboplatin is a heavy metal compound that inhibits synthesis of RNA, DNA, and protein in cells. All of these compounds are vital for cells to divide and grow. By preventing them from dividing, the medication can stop the cancer from growing.

## **How to Take Carboplatin**

Carboplatin is given by intravenous (IV, into a vein) injection. The schedule and dosage is based on the person's size and the cancer type being treated. It can be given alone or with other drugs.

## **Possible Side Effects of Carboplatin**

There are a number of things you can do to manage the side effects of Carboplatin. Talk to your doctor or nurse about these recommendations. They can help you decide

what will work best for you. These are some of the most common side effects:

### **Low White Blood Cell Count (Leukopenia or Neutropenia)**

White blood cells (WBC) are important for fighting infection. While receiving treatment, your WBC count can drop, putting you at a higher risk of getting an infection. You should let your doctor or nurse know right away if you have a fever (temperature greater than 100.4 F), sore throat or cold, shortness of breath, cough, burning with urination, or a sore that doesn't heal.

*Tips to preventing infection:*

- Washing hands, both yours and your visitors, is the best way to prevent the spread of infection.
- Avoid large crowds and people who are sick (i.e.: those who have a cold, fever or cough or live with someone with these symptoms).
- When working in your yard, wear protective clothing including long pants and gloves.
- Do not handle pet waste.
- Keep all cuts or scratches clean.
- Shower or bath daily and perform frequent [mouth care](#).
- Do not cut cuticles or ingrown nails. You may wear nail polish, but not fake nails.
- Ask your doctor or nurse before scheduling dental appointments or procedures.
- Ask your doctor or nurse before you, or someone you live with, has any vaccinations.

For more suggestions, read the [Neutropenia Tip Sheet](#).

### **Low Red Blood Cell Count (Anemia)**

Your red blood cells are responsible for carrying oxygen to the tissues in your body. When the red cell count is low, you may feel tired or weak. You should let your doctor or nurse know if you experience any shortness of breath, difficulty breathing or pain in your chest. If the count gets too low, you may receive a blood transfusion. Read the [anemia tip sheet](#) for more information.

### **Low Platelet Count (Thrombocytopenia)**

Platelets help your blood clot, so when the count is low you are at a higher risk of bleeding. Let your doctor or nurse know if you have any excess bruising or bleeding, including nosebleeds, bleeding gums or blood in your urine or stool. If your platelet count becomes too low, you may receive a transfusion of platelets.

- Do not use a razor to shave (an electric razor is fine).
- Avoid contact sports and activities that can result in injury or bleeding.
- Do not take aspirin (salicylic acid), non-steroidal, anti-inflammatory medications (NSAIDs) such as Motrin®, Aleve®, Advil®, etc. as these can all increase the risk of bleeding. Unless your healthcare team tells you otherwise, you may take acetaminophen (Tylenol).
- Do not floss or use toothpicks and use a soft-bristle toothbrush to brush your teeth.

Read the [thrombocytopenia tip sheet](#) for more information.

### **Nausea and/or Vomiting**

Take anti-nausea medications as prescribed. If you continue to have nausea or vomiting, notify your doctor or nurse so they can help you manage this side effect. In addition, dietary changes may help. Avoid things that may worsen the symptoms, such as heavy or greasy/fatty, spicy or acidic foods (lemons, tomatoes, oranges). Try antacids, (e.g. milk of magnesia, calcium tablets such as Tums), saltines, or ginger ale to lessen symptoms. Read [the Nausea & Vomiting Tip Sheet](#) for more suggestions.

Call your doctor or nurse if you are unable to keep fluids down for more than 12 hours or if you feel lightheaded or dizzy at any time.

### **Peripheral Neuropathy (Numbness or Tingling in the Hands and/or Feet)**

Peripheral neuropathy is a toxicity that affects the nerves. It causes a numbness or tingling feeling in the hands and feet, often in the pattern of a stocking or glove. This can get progressively worse with additional doses of the drug. In some people, the symptoms slowly resolve after the drug is stopped, but for some it never goes away completely. You should let your healthcare provider know if you experience numbness or tingling in the hands and feet, as they may need to change the doses of your medication. See [OncoLink's section on peripheral neuropathy](#) for tips on dealing with this side effect.

### **Kidney Changes**

Your doctor may order blood tests to check your kidney function. Intravenous fluids are given with the chemotherapy to flush your kidneys and increase your urine output. Try to drink at least 6-8 glasses of uncaffeinated fluids a day. Call your doctor or nurse if you do not urinate for more than 12 hours.

### **Hearing Loss**

Carboplatin can affect your hearing. Call your doctor or nurse if you have ringing in your ears or if you notice a decrease in your hearing.

### **Mouth Ulcers (Sores)**

Certain cancer treatments can cause sores or soreness in your mouth and/or throat. Notify your doctor or nurse if your mouth, tongue, inside of your cheek or throat becomes white, ulcerated or painful. Performing [regular mouth care](#) can help prevent or manage mouth sores. If mouth sores become painful, your doctor or nurse can recommend a pain reliever.

- Brush with a soft-bristle toothbrush or cotton swab twice a day.
- Avoid mouthwashes that contain alcohol. A baking soda and/or salt warm water mouth rinse (2 level teaspoons of baking soda or 1 level teaspoon salt in an eight ounce glass of warm water) is recommended 4 times daily.
- If your mouth becomes dry, eat moist foods, drink plenty of fluids (6-8 glasses), and suck on sugarless hard candy.
- Avoid smoking and chewing tobacco, drinking alcoholic beverages and citrus

juices.

Read the [mouth ulcer tip sheet](#) for more information.

### **Nail and Skin Changes**

Your fingernails/toenails may become dark, brittle or fall off. You may notice dry skin or changes in the color or tone of your skin. Your skin will be more sensitive to the sun, which can result in severe sunburn or rash. Sun sensitivity can last even after chemotherapy is completed. Avoid the sun between 10-2pm, when it is strongest. Wear sunscreen (at least SPF 15) everyday; wear sunglasses and long sleeves/pants to protect your skin. Keep your fingernails and toenails clean and dry. You may use nail polish, but do not wear fake nails. Notify your doctor or nurse if any nails fall off. For more suggestions, read the [Nail and Skin Care Tip Sheet](#).

### **Loss or Thinning of Scalp and Body Hair (Alopecia)**

Your hair may become thin, brittle, or may fall out. This typically begins two to three weeks after treatment starts. This hair loss can be all body hair, including pubic, underarm, legs/arms, eyelashes, and nose hairs. The use of scarves, wigs, hats and hairpieces may help. Hair generally starts to regrow soon after treatment is completed. Remember your hair helps keep you warm in cold weather, so a hat is particularly important in cold weather or to protect you from the sun. [Read more](#) on alopecia.

### **Liver changes**

Your doctor may order some blood tests to check your liver function. Call your doctor or nurse immediately if you have abdominal pain, your urine becomes dark or if your skin or the whites of your eyes become jaundiced (yellow in color).

[About OncoLink](#) [Contact OncoLink](#) [Privacy statement](#) [Disclaimer](#) [Link to OncoLink Home](#)

For assistance please visit our [HELP section](#)  
© Trustees of the University of Pennsylvania