



## Cisplatin (Platinol®)

**Pronounce:** SIS-plat-in

**Classification:** Platinum Coordination Complex

### About Cisplatin (Platinol®)

Cisplatin 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 cancer from growing.

### How to Take Cisplatin

Cisplatin is given through intravenous (IV, into a vein) infusion. The dose and schedule are determined by your size and type of cancer. You will be given IV fluids prior to receiving cisplatin. It can be given alone or with other drugs.

Even when carefully and correctly administered by trained personnel, this drug may cause a feeling of burning and pain. There is a risk that this medication may leak out of the vein at the injection site, resulting in tissue damage that can be severe. If the area of injection becomes red, swollen, or painful at anytime during or after the injection, notify your care team right away. Do not apply anything to the site unless told to do so by your care team.

This medication can affect the blood levels of some anti-seizure medications. Be sure to tell your healthcare provider about all medications and supplements you take.

### Possible Side Effects

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

#### Kidney Problems

This medication can cause kidney problems, including an increased creatinine level, which your oncology care team will monitor for using blood tests. Notify your healthcare provider if you notice decreased urine output, blood in the urine, swelling in the ankles, or loss of appetite.

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

[Peripheral neuropathy](#) is a toxicity that affects the nerves. It causes numbness or a tingling feeling in the hands and/or feet, often in the pattern of a stocking or glove. This can get progressively worse with additional doses of the medication. In some people, the symptoms slowly resolve after the medication is stopped, but for some it never goes away completely. You should let your care team know if you experience numbness or tingling in the hands and/or feet, as they may need to adjust the doses of your medication.

#### Nausea and/or Vomiting

Talk to your oncology care team so they can prescribe medications to help you manage [nausea and vomiting](#). 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 saltines, or ginger ale to lessen symptoms.

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

## 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 or 38°C), 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 bathe daily and perform frequent [mouth care](#).
- Do not cut cuticles or ingrown nails. You may wear nail polish, but not fake nails.
- Ask your oncology care team before scheduling dental appointments or procedures.
- Ask your oncology care team before you, or someone you live with has any vaccinations.

## 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 oncology care team 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.

## 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 oncology care team know if you have any excess bruising or bleeding, including nose bleeds, bleeding gums or blood in your urine or stool. If the platelet 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/Advil (ibuprofen), Aleve (naproxen), Celebrex (celecoxib) etc. as these can all increase the risk of bleeding. Please consult with your healthcare team regarding use of these agents and all over the counter medications/supplements while on therapy.
- Do not floss or use toothpicks and use a soft-bristle toothbrush to brush your teeth.

## Hearing Problems

Cisplatin can cause hearing loss and ringing in the ears. Your hearing will be checked prior to you receiving cisplatin and as needed throughout treatment. Call your doctor or nurse if you have ringing in your ears or if you notice a decrease in your hearing.

## Allergic Reactions

In some cases, patients can have an allergic reaction to this medication. Signs of a reaction can include: shortness of breath or difficulty breathing, chest pain, rash, flushing or itching or a decrease in blood pressure. If you notice any changes in how you feel during the infusion, let your nurse know immediately. The infusion will be slowed or stopped if this occurs. Depending on the severity of your reaction, you may still be able to receive the medication with a pre-medication to prevent a reaction, or if the medication is given at a slower rate.

Less common, but important side effects can include:

- **Electrolyte Abnormalities:** This medication can affect the normal levels of electrolytes (potassium, magnesium, calcium, etc.) in your body. Your levels will be monitored using blood tests. If your levels become too low, your care team may prescribe specific electrolytes to be given by IV or taken by mouth. Do not take any supplements without first consulting with your care team.
- **Taste and Smell Changes:** You may experience a metallic taste or find that food has no taste at all. You may dislike foods or beverages that you liked before receiving cancer treatment. These symptoms can last for several months or longer after treatment ends. 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. Sometimes cold food has less of an odor. Add extra flavor to meat or fish by marinating it in sweet juices, sweet and sour sauce, or dressings. Use seasonings like basil, oregano or rosemary to add flavor. Bacon, ham, and onion can add flavor to vegetables. Ask your nurse about nutritional counseling services to help with food choices.
- **Vision Changes:** This medication can cause blurred vision and a change in color perception, especially with higher doses or increased frequency of doses. Report any vision changes to your healthcare team immediately.
- **Secondary Cancers:** A secondary cancer is one that develops as a result of cancer treatment for another cancer. This is quite rare, but you should be aware of the risk. In most cases, a secondary cancer related to chemotherapy is a blood cancer (leukemia, lymphoma). This can occur years after treatment. This is most often associated with repeated treatments or high doses. Your provider will monitor your labs closely. Consider having a complete blood count with differential checked annually by your healthcare provider if you received high risk therapies.
- **Posterior Reversible Encephalopathy Syndrome (PRES):** In rare cases, this medication has caused a neurological disorder called posterior reversible encephalopathy syndrome (PRES), also called reversible posterior leukoencephalopathy (RPLS). Symptoms of PRES/RPLS include headache, seizure, lethargy, confusion, blindness, and other visual and neurological disturbances. Report any of these symptoms to your healthcare team immediately.

## Reproductive Concerns

This medication may affect your reproductive system, resulting in the menstrual cycle or sperm production becoming irregular or stopping permanently. Women may experience menopausal effects including hot flashes and vaginal dryness. In addition, the desire for sex may decrease during treatment. You may want to consider sperm banking or egg harvesting if you may wish to have a child in the future. Discuss these options with your oncology team.

Exposure of an unborn child to this medication could cause birth defects, so you should not become pregnant or father a child while on this medication. For women, effective birth control is necessary during treatment and for at least 14 months after treatment, even if your menstrual cycle stops. For men, effective birth control is necessary during treatment and for at least 11 months after treatment, even if you believe you are not producing sperm. You should consult with your healthcare team before breastfeeding while receiving this medication.

# Pemetrexed (Alimta®)

**Pronounce:** pem-e-TREX-ed

**Classification:** Antifolate Antineoplastic Agent

## About Pemetrexed (Alimta®)

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. By blocking DNA production, cell growth and division is stopped, resulting in the slowing or stopping of cancer growth. Since cancer cells, in general, divide faster and with less error-correcting than healthy cells, cancer cells are more sensitive to this damage.

## How to Take Pemetrexed

Pemetrexed is given by intravenous (IV, into a vein) infusion. The dose is based on the patient's height and weight. A steroid medication is often given before pemetrexed to decrease skin rash. Folic acid supplementation and an injection of B12 may be given along with pemetrexed. These vitamin supplementations should decrease the side effects you experience. Speak with your provider concerning the specific dosing of steroids, folic acid, and B12 and the timing of these medications.

Let your healthcare provider know all medications, vitamins, and supplements you are taking as some can interfere with pemetrexed. Be sure to notify your care provider if you take any form of NSAID (non-steroidal anti-inflammatory drug) such as aspirin or ibuprofen because, taken in conjunction with pemetrexed, can cause kidney problems.

## Possible Side Effects of Pemetrexed

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

### Nausea and/or Vomiting

Talk to your oncology care team so they can prescribe medications to help you manage [nausea and vomiting](#). 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 saltines, or ginger ale to lessen symptoms.

Call your oncology care team 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

[Nutrition](#) is an important part of your care. Cancer treatment can affect your appetite and, in some cases, the side effects of treatment can make eating difficult. Ask your oncology care team about nutritional counseling services at your treatment center to help with food choices.

- 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 find that food has no taste at all. You may dislike foods or beverages that you liked before receiving cancer treatment. These symptoms can last for several months or longer after treatment ends.
- 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. Sometimes cold food has less of an odor.

- Add extra flavor to meat or fish by marinating it in sweet juices, sweet and sour sauce, or dressings. Use seasonings like basil, oregano, or rosemary to add flavor. Bacon, ham, and onion can add flavor to vegetables.

## Fatigue

**Fatigue** is very common during cancer treatment and is an overwhelming feeling of exhaustion that is not usually relieved by rest. While on cancer treatment, and for a period after, 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 for helpful tips on dealing with this side effect

Less common, but important side effects can include:

- **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 or 38°C), 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 bathe daily and perform frequent **mouth care**.
  - Do not cut cuticles or ingrown nails. You may wear nail polish, but not fake nails.
  - Ask your oncology care team before scheduling dental appointments or procedures.
  - Ask your oncology care team before you, or someone you live with has any vaccinations.
- **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 oncology care team know if you have any excess bruising or bleeding, including nose bleeds, bleeding gums, or blood in your urine or stool. If the platelet 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/Advil (ibuprofen), Aleve (naproxen), Celebrex (celecoxib) etc. as these can all increase the risk of bleeding. Please consult with your healthcare team regarding the use of these agents and all over the counter medications/supplements while on therapy.
    - Do not floss or use toothpicks and use a soft-bristle toothbrush to brush your teeth.
  - **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 oncology care team 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.
  - **Kidney Problems:** Report any changes in your urinary habits, including a change in the amount or color of your urine. Be sure to notify your care provider if you take any form of NSAID (non-steroidal anti-inflammatory drug) such as aspirin or ibuprofen because, taken in conjunction with pemetrexed,

can cause kidney problems.

- **Skin Changes/Rash:** These changes can include dryness, itching, and rash. 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. Use an alcohol-free moisturizer on your skin and lips; avoid moisturizers with perfumes or scents. Your oncology care team can recommend a topical medication if itching is bothersome. If your skin does crack or bleed, be sure to keep the area clean to avoid infection. Be sure to notify your oncology care team of any rash that develops, as this can be a reaction.
- **Radiation Recall:** This medication may cause radiation recall. It may present as a skin reaction that looks like a sunburn (redness, swelling, soreness, peeling skin) in areas where radiation was previously given. Notify your oncology care team if you notice this side effect. Treatment can include topical steroid ointments and a delay in your next chemotherapy dose.
- **Pneumonitis:** Patients can develop an inflammation of the lungs (called pneumonitis) while taking this medication. Notify your oncology care team right away if you develop any new or worsening symptoms, including shortness of breath, trouble breathing, cough, or fever.

## Reproductive Concerns

Exposure of an unborn child to this medication could cause birth defects, so you should not become pregnant or father a child while on this medication. For women, effective birth control is necessary during treatment and for at least 6 months after the final dose. For men, effective birth control is necessary during treatment and for 3 months after the final dose. You should not breastfeed while receiving this medication and for one week after treatment is finished.

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OncoLink is designed for educational purposes only and is not engaged in rendering medical advice or professional services. The information provided through OncoLink should not be used for diagnosing or treating a health problem or a disease. It is not a substitute for professional care. If you have or suspect you may have a health problem or have questions or concerns about the medication that you have been prescribed, you should consult your health care provider.