

Cisplatin (Platinol®)

Pronounced: SIS-plat-in

Classification: Platinum Coordination Complex

About Cisplatin

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 the cancer from growing.

How to Take Cisplatin

Cisplatin is given through intravenous (IV, into a vein) infusion. The dose and schedule is determined by the person's size and type of cancer. It can be given alone or with other drugs.

This medication can affect the blood levels certain 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 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:

Kidney and Liver Function Changes

Your doctor may perform blood tests to check your liver and kidney function, as these can be affected by cisplatin. Call your doctor or nurse immediately if you have abdominal pain, if your urine becomes dark, or if your skin or the whites of your eyes become jaundiced (yellow in color).

Hearing Loss

Cisplatin can cause hearing loss. Call your doctor or nurse if you have ringing in your ears or if you notice a decrease in your hearing.

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.

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.

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 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®, 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.

Nausea and/or Vomiting



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.

Information Provided By: www.oncolink.org | © 2016 Trustees of The University of Pennsylvania

Talk to your doctor or nurse 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 antacids, (e.g. milk of magnesia, calcium tablets such as Tums), saltines, or ginger ale to lessen symptoms.

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.

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 and absorbs fluid, which can help relieve diarrhea. Foods high in soluble fiber include: applesauce, bananas (ripe), canned fruit, orange sections, boiled potatoes, white rice, 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.

Electrolyte Changes

Your doctor may order blood tests to check your electrolytes. If needed, the doctor may prescribe supplements, such as magnesium or potassium.

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 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 healthcare provider know if you experience numbness or tingling in the hands and feet, as they may need to adjust the doses of your medication.

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.



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.

Information Provided By: www.oncolink.org | © 2016 Trustees of The University of Pennsylvania

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.

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.

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.

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. Effective birth control is necessary during treatment. Even if your menstrual cycle stops or you believe you are not producing sperm, you could still be fertile and conceive. You should consult with your healthcare team before breastfeeding while receiving this medication.

Dacarbazine (DTIC, DTIC-Dome®)

Pronounced: da-KAR-ba-zeen

Classification: Alkylating Agent

About Dacarbazine

Dacarbazine exerts its anti-cancer effect by a process called alkylation. Alkylation damages the DNA of cells, which prevents them from dividing, and causes them to die.



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.

Information Provided By: www.oncolink.org | © 2016 Trustees of The University of Pennsylvania

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 Dacarbazine

Dacarbazine is given through intravenous (IV, into a vein) infusion, over a period of 30-60 minutes. The dosage and schedule is determined by the person's size, type of cancer, and treatment regimen. It can be given alone or with other medications.

Even when carefully and correctly administered by trained personnel, this drug may cause feeling of burning and pain. There is a risk that this medication may leak out of the vein at the injection site, resulting in a localized skin irritation. If the area of injection becomes red, swollen, or painful at anytime during or after the infusion, notify your doctor or nurse immediately. Do not apply anything to the site unless instructed by your doctor or nurse.

Possible Side Effects

There are a number of things you can do to manage the side effects of dacarbazine. 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:

Nausea and/or Vomiting

Limiting food intake for 4-6 hours before receiving the medication may help with these side effects. Talk to your doctor or nurse 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 antacids, (e.g. milk of magnesia, calcium tablets such as Tums), saltines, or ginger ale to lessen symptoms.

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.

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



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.

Information Provided By: www.oncolink.org | © 2016 Trustees of The University of Pennsylvania

- 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.

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.

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 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®, 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.

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 and absorbs fluid, which can help relieve diarrhea. Foods high in soluble fiber include: applesauce, bananas (ripe), canned fruit, orange sections, boiled potatoes, white rice, 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.

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 nurse



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.

Information Provided By: www.oncolink.org | © 2016 Trustees of The University of Pennsylvania

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.

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.

Secondary Malignancies

There is a very low risk of developing another type of cancer, including fibrosarcoma, sarcoma or angiosarcoma due to treatment with this medication, which can occur many years after treatment.

Sun Sensitivity

This medication can make your skin 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, a hat and long sleeves/pants to protect your skin and seek out shade whenever possible.

Flu-Like Symptoms

Dacarbazine can cause fever, body aches and sometimes a rash. You may also experience weakness and headache. These symptoms generally do not last long. These symptoms usually occur during the treatment and stop after the treatment is discontinued. Call your doctor or nurse for fever > 100.4F or any other symptom listed. Drink plenty of



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.

Information Provided By: www.oncolink.org | © 2016 Trustees of The University of Pennsylvania

fluids.

Sexual & Reproductive Concerns

This drug 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.

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. Effective birth control is necessary during treatment and for at least 6 months after treatment, even if your menstrual cycle stops or you believe you are not producing sperm. 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.

Carmustine (BCNU, BiCNU®)

Pronounced: CAR-mus-teen

Classification: Alkylating Agent

About Carmustine

Carmustine exerts its anti-cancer effect by a process called alkylation. Alkylation damages the DNA of cells, which prevents them from dividing, and causes them to die. 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 Carmustine

Carmustine is most often given through intravenous (IV, into a vein) infusion. The dosage depends on the person's size and the tumor type being treated.

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 drug 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 any time during or after the injection, notify your doctor or nurse immediately. Do not apply anything to the site unless instructed by your doctor or nurse.

Carmustine also comes in a wafer formulation (called Gliadel wafer), which is placed into a surgical cavity after the removal of a brain tumor. In addition, it can be used in a topical formula that is applied to the skin in the treatment of cutaneous lymphoma. The



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.

Information Provided By: www.oncolink.org | © 2016 Trustees of The University of Pennsylvania

medication remains in the area around the wafer or localized to the application area, therefore these patients are typically not at risk for the following side effects.

Possible Side Effects

There are a number of things you can do to manage the side effects of carmustine. 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:

Infusion Reactions

The infusion, when given rapidly, can cause a reaction that may lead to intense skin flushing, burning at the injection site, swelling, pain, skin necrosis, and redness in the eye. Reactions are most common during the first week of therapy, including the evening after the infusion. Your doctor or nurse will tell you what to do if this happens.

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.

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.

Low Platelet Count (Thrombocytopenia)



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.

Information Provided By: www.oncolink.org | © 2016 Trustees of The University of Pennsylvania

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 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®, 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.

Nausea and/or Vomiting

Talk to your doctor or nurse 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 antacids, (e.g. milk of magnesia, calcium tablets such as Tums), saltines, or ginger ale to lessen symptoms.

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.

Liver Toxicity

This medication can cause liver toxicity, which your doctor may monitor for using blood tests called liver function tests. If you develop elevations in your liver function tests, your healthcare provider may need to lower your dose or stop the medication. Notify your healthcare provider if you notice yellowing of the skin or eyes, your urine appears dark or brown or pain in your abdomen, as these can be signs of liver toxicity.

Kidney Problems

This medication can cause kidney failure and decreased kidney size, especially in patients who receive large doses or prolonged therapy with carmustine. Your healthcare team will monitor your kidney function throughout your treatment.

Lung Changes

Carmustine may cause serious pulmonary fibrosis (a scarring and stiffening of the lung tissue), particularly when high doses have been received. These problems can develop months to years after treatment is completed and may be more common in people with pre-existing lung conditions. You may have breathing tests (pulmonary function tests) performed periodically. **Call your physician right away if you have shortness of**



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.

Information Provided By: www.oncolink.org | © 2016 Trustees of The University of Pennsylvania

breath, cough, wheezing or difficulty breathing.

Secondary Malignancies

There is a very low risk of another type of cancer due to treatment with this medication, which can occur many years after treatment. This is most often associated with repeated treatments or high doses.

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. Effective birth control is necessary during treatment and for at least 6 months after treatment. Even if your menstrual cycle stops or you believe you are not producing sperm, you could still be fertile and conceive. You should consult with your healthcare team before breastfeeding while receiving this medication.

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](#). 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.

Tamoxifen (Nolvadex®)

Pronounced: ta-MOX-i-fen

Classification: Anti-estrogen

About Tamoxifen

Tamoxifen works by blocking estrogen receptors in breast tissue. While estrogen may not actually cause breast cancer, it is necessary for the cancer to grow in estrogen receptor-positive breast cancers. With estrogen blocked, the cancer cells that feed off estrogen may not be able to survive.

How to Take Tamoxifen

Tamoxifen is available in tablet form to be taken orally (by mouth). It should be taken around the same time every day. This medication should be swallowed whole with a full glass of non-alcoholic liquid. Do not crush, chew or break the tablets. If you miss a dose take it as soon as you remember. If it is close to your next scheduled dose do not double



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.

Information Provided By: www.oncolink.org | © 2016 Trustees of The University of Pennsylvania

your dose, rather skip the missed dose and continue your regular schedule.

This medication can be affected by other medications. Make sure your care team and pharmacist are aware of all medications (over-the-counter and prescription) and supplements that you are taking.

Storage and Handling

Store this medication at room temperature in the original container. If you prefer to use a pillbox, discuss this with your oncology pharmacist. Ask your oncology team where to return any unused medication for disposal. Do not flush down the toilet or throw in the trash.

Where do I get this medication?

Tamoxifen is available through retail and mail order pharmacies. Your oncology team will give you a prescription, which you can fill at your local pharmacy.

Insurance Information

This medication may be covered under your prescription drug plan. Patient assistance may be available to qualifying individuals without prescription drug coverage. Co-pay cards, which reduce the patient co-pay responsibility for eligible commercially (non-government sponsored) insured patients, may be available. Your care team can help you find these resources, if they are available.

Possible Side Effects of Tamoxifen

There are a number of things you can do to manage the side effects of tamoxifen. 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:

Nausea and/or Vomiting

Talk to your doctor or nurse 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 antacids, (e.g. milk of magnesia, calcium tablets such as Tums), saltines, or ginger ale to lessen symptoms.

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.

Menstrual Bleeding

Your periods may become irregular or stop all together. In some women, normal periods resume after completing tamoxifen therapy. However, women who are already



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.

Information Provided By: www.oncolink.org | © 2016 Trustees of The University of Pennsylvania

post-menopausal at the time they start tamoxifen should report any vaginal bleeding to their oncologist, primary physician or gynecologist. You will need to be checked to determine why you are bleeding. Tamoxifen can stimulate the lining of the uterus to grow, which can result in uterine polyps, and rarely, in uterine cancer.

Endometrial Cancer

There is a very small of developing endometrial cancer while taking this medication. Healthcare professionals believe that the benefits of this medication outweigh this risk. Women should report any menstrual irregularities, vaginal bleeding, pelvic pressure/pain, or any vaginal discharge, as these may be symptoms of endometrial cancer. An endometrial biopsy should be done if any concerning symptoms occur.

Cataracts

Women on tamoxifen have an increased risk of developing cataracts. You should have a yearly eye exam by an ophthalmologist. Report any vision changes, cloudy or blurry vision, difficulty with night vision, sensitivity to light, fading or yellowing of colors, as these can be symptoms of cataracts.

Blood Clots

This medication increases the risk of developing a blood clot, which most frequently occurs in the calves, and can travel from there to the lungs. Blood clots can also cause a stroke. Women at higher risk for developing blood clots include those with a family history of blood clots, heavy smokers, those who have an inactive lifestyle, older women, and those with other predisposing medical problems. Women with any one of these risk factors may want to consider another therapy that does not have this side effect.

Being immobile increased the risk of a blood clot. You should stop taking this medication 3 days prior to and during any prolonged immobilization (hospitalization or bed rest). When traveling, be sure to get up and move around frequently to reduce the risk of a clot.

Signs of a blood clot in the leg may include any of the following: leg pain, warmth, swelling of one leg more than the other. Signs of a blood clot in the lung could include: fever, shortness of breath that comes on very quickly, racing heart, chest pain (that tends to be worse when you take a deep breath). Signs of a stroke include: numbness or weakness on one side of the body, trouble talking, confusion or mental status changes. *If you have any of these signs or symptoms of blood clots, you will need to be seen immediately so that you can be treated. Blood thinners can be given. Call your doctor or nurse.*

Hot Flashes

There are a few things you can do to help with hot flashes. Several medications have been shown to help with symptoms, including clonidine (a blood pressure medication), low



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.

Information Provided By: www.oncolink.org | © 2016 Trustees of The University of Pennsylvania

doses of certain antidepressants (such as venlafaxine and Prozac), and gabapentin. Non-medical recommendations include:

- Keep well-hydrated with eight glasses of water daily.
- Drink ice water or apply an ice pack at the onset of a hot flash.
- Wear cotton or lightweight, breathable fabrics and dress in layers so you can adjust as needed.
- Exercise on a regular basis.
- Try practicing meditation or relaxation exercises to manage stress, which can be a trigger.
- Avoid triggers such as warm rooms, spicy foods, caffeinated beverages, and alcohol.

Vaginal Dryness

Vaginal dryness, itching, and related painful intercourse are one of the more common side effects of cancer therapy in women. Vaginal lubricants and moisturizers (longer lasting form of moisturizers) can help with these concerns. Talk to your healthcare team for more suggestions in managing this side effect.

Weakening of the Bones (Osteoporosis)

Premenopausal women who take hormone therapy for extended periods of time are at risk for **bone thinning** (osteoporosis). In post menopausal women, tamoxifen preserves bone strength. You may be advised to take calcium and vitamin D supplements to help prevent bone loss. Weight bearing exercise and a healthy diet rich in calcium and vitamin D can also help protect your bone health. You may have a bone density scan (DEXA scan) to assess your bone health. If your healthcare provider determines that you are at high risk of developing osteoporosis, they may recommend additional treatment with a type of medication called a bisphosphonate to help strengthen the bones.

Liver Toxicity

This medication can cause liver toxicity, which your healthcare provider may monitor for using blood tests called liver function tests. Notify your healthcare provider if you notice yellowing of the skin or eyes, your urine appears dark or brown or pain in your abdomen, as these can be signs of liver toxicity.

Radiation Recall

While rare, tamoxifen can lead to radiation recall. This is when a medication causes a skin reaction that looks like a sunburn (redness, swelling, soreness, peeling skin) in areas where radiation was previously given. Notify your oncology team if you notice this side effect. Treatment can include topical steroid ointments and a delay in your next chemotherapy dose.



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.

Information Provided By: www.oncolink.org | © 2016 Trustees of The University of Pennsylvania

Other Side Effects

Other reported side effects include:

- Muscle and joint aches. Acetaminophen may help with these side effects. Talk to your care provider if they become bothersome.
- Weight gain can occur and can be managed with dietary modifications and exercise.
- Constipation
- Hair thinning or loss
- Mood changes or depression. Please talk to your healthcare provider if you feel that you are troubled by these symptoms.

Bone Metastases

Patients with cancer that has spread to the bone may experience pain or discomfort at the tumor site after starting this medication, but this should decrease over time and should be managed with pain medication.

In addition, patients with bone metastases may develop hypercalcemia (high levels of calcium in the blood) and may require hospitalization to correct this. Symptoms of hypercalcemia include increased thirst and urination, nausea, constipation, muscle weakness, confusion or changes in mental status. Report any symptoms to your care provider.

Sexual & Reproductive Concerns

Women may experience menopausal effects including hot flashes and [vaginal dryness](#). The desire for sex may decrease during treatment.

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. Effective birth control is necessary during treatment and for at least 2 months after treatment. Even if your menstrual cycle stops or you believe you are not producing sperm, you could still be fertile and conceive. You should not breastfeed while receiving this medication.



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.

Information Provided By: www.oncolink.org | © 2016 Trustees of The University of Pennsylvania