

Liposomal Doxorubicin

Names	The generic drug name is liposomal doxorubicin (LYE-poh-so-mal dox oh roo' bi sin). The brand name is Doxil®. There may be other names for this medication.
How is it Given?	This medication is given by injection/infusion into a vein (intravenous or IV).
What is it Used For?	This medication treats ovarian cancer, breast cancer, sarcoma, and other solid tumor cancers. It is used in combination with other medications to treat multiple myeloma.
How Does it Work?	<p>Chemotherapy agents are drugs that kill cancer cells. They are called <i>antineoplastic</i> or <i>cytotoxic</i> medicines. These medicines work by stopping the growth of cells that grow and reproduce very quickly. Many of these cells are cancerous. Unfortunately, other cells that reproduce very quickly are also harmed, and these include cells in the blood, gastrointestinal tract, and hair and skin. These normal cells will eventually grow back and be healthy. Your chemo schedule is based upon the type of cancer you have, how fast the cancer cells multiply, and which phase the drug is most effective. This is why chemotherapy is typically given in cycles.</p> <p>Liposomal doxorubicin is the chemotherapy drug doxorubicin encased in a capsule made of lipids (fat). The coated capsule is not detected by the immune system, which allows it to stay in your blood for a longer time. Liposomal doxorubicin is an antitumor antibiotic called an anthracycline, and is only used to treat cancer.</p>
What Should I Tell My Doctor Before I Begin This Medication?	<p>Tell your doctor if you:</p> <ul style="list-style-type: none">• have ever had an allergic reaction to doxorubicin or have allergies• have ever had chemotherapy with daunorubicin (Cerubidine®, DaunoXome®), doxorubicin (Adriamycin®), idarubicin (Idamycin®)• have had heart or liver disease or radiation therapy to the chest• are taking cyclophosphamide (Cytosan®, Neosar®), mitoxantrone (Novantrone®), or aspirin• are pregnant or breastfeeding

This drug may interact with other medications. Tell your doctor and pharmacist about all prescription or over-the-counter medications, vitamins, herbal, or diet supplements that you are taking.

What Are Some Possible Side Effects?

- Low blood counts - decreased number of white blood cells, red blood cells, or platelets (higher risk of infection, fatigue, or bleeding)
- Rash, Hand-Foot Syndrome*
- Mouth sores, stomatitis **
- Loss of appetite, nausea, vomiting
- Weakness
- Hair loss
- Constipation and/or diarrhea
- Red/orange urine (lasts about 48 hours after treatment)
- Radiation recall (darkening of the skin on areas of the skin that had previously been treated with radiation therapy)
- Darkening of the nail beds on the fingers and toes

*What is Hand-Foot Syndrome?

Hand-Foot Syndrome (HFS), also known as palmar-plantar erythrodysesthesia (PPE), usually occurs on the palms of the hand and soles of the feet. It can occur on any other parts of the body where friction or sweating may take place. Common symptoms include rash, swelling, tingling, pain, redness, burning, and/or peeling of the skin on the palms of your hands and the soles of your feet. Talk to your doctor if you experience any of these symptoms.

The symptoms are usually mild and occur about 5-6 weeks after treatment begins. HFS should improve in 1-2 weeks. If your reaction is more severe, you may need to delay or stop treatment.

**What is Stomatitis?

Stomatitis is a mouth irritation that causes inflammation and sores, making it very difficult to eat or drink.

Common symptoms of stomatitis include:

- dry, cracked lips
- dry swollen tongue
- pain or burning in the mouth
- difficulty swallowing

How Can I Manage These Side Effects?

- If your blood counts are low
- To help avoid infections, stay away from people with colds, flu, or other infections. Talk to your doctor before you have any vaccinations. Wash your hands often.
- To help prevent bleeding problems, be careful when handling sharp objects. Stay away from situations where you could be bruised or injured. Use an electric razor. Be careful when using a toothbrush or floss (Your doctor may recommend other ways to clean your teeth and gums).
- Use sunscreen with SPF 15 or higher when you are outdoors, even for a short time. Avoid tanning beds or booths. Cover up when you are out in the sun. Wear wide-brimmed hats, long-sleeved shirts, and pants.
- Ask your doctor about medication to help prevent or lessen nausea, vomiting, and diarrhea.
- Speak with your doctor or nurse if you plan to have children. Ask for information on sperm or egg banking.
- Talk to your doctor or nurse about a wig before you lose your hair.

- **Managing Hand Food Syndrome**
 - Apply ice or cool gel packs to your wrists and ankles or soak in a cool bath when needed.
 - Avoid adhesive bandages.
 - Wear loose clothing and well-ventilated, low-heeled shoes.
 - Take cool, short showers or baths.
 - Wash your skin with a soft cloth and use only mild skin products that do not contain anesthetics, steroids, or antihistamines.
 - Wear sun block (SPF 15 or higher) everyday on all exposed skin.
 - Avoid prolonged pressure on any parts of your skin.
 - Avoid repetitive motions or activities that cause friction such as drying with a rough towel, sweeping, typing or sexual activity.
 - Avoid heat (no hot showers, hot tubs, or washing dishes in hot water).

- **Managing stomatitis**

- Mouth care is very important. To minimize mouth problems, rinse your mouth with a mixture of ½ teaspoon of baking soda in 8 ounces of water after every meal and at bedtime.
- Brush your teeth and gums often with a soft toothbrush. (Soften it further by running it under warm water).
- Avoid smoking, alcohol, and mouthwashes that contain alcohol.
- Rinse your mouth frequently with cool water.
- Drink plenty of room temperature liquids.
- While Doxil® is being infused, chew on ice chips and drink cool beverages.
- Avoid foods that are hot, spicy, salty, acidic (citrus), hard, coarse, or crunchy.

When Should I Call the Doctor?

Call your doctor **immediately** if you have:

- any sign of an infection: temperature of 100.5 F (38 C) or above; chills; sore throat; sores in your mouth; increased, painful, or difficult urination; redness, pain, or swelling at the injection site
- unusual bruising or bleeding: bleeding lasts more than 10-15 minutes or that causes dizziness; black or bloody stools; vomit that is bloody or that looks like coffee grounds; blood in your urine or phlegm /mucus, unusually heavy menstrual bleeding, spontaneous bleeding from your gums or nose, or superficial bleeding into the skin that appears as a rash of pinpoint-sized reddish-purple spots (petechiae)
- redness, pain, warmth, or swelling at the IV site

Call your doctor as soon as possible if you have:

- nausea that is not relieved by prescribed medication and/or prevents you from eating or drinking
- extreme fatigue that interferes with normal activities
- redness, swelling, pain, or peeling of your skin
- vomiting more than 3 times in 1 day

What Else Should I Know About This Medication?

- Prolonged use of this drug can cause severe heart damage, even years after you have stopped taking it. Risk is higher if you have pre-existing heart disease, hypertension, or advanced age; are on other chemo drugs; or are having – or have had - radiation to the chest.
- This medication may interfere with the normal menstrual cycle (period) in women and may stop sperm production in men. Do not assume that you cannot get pregnant or that you cannot get someone else pregnant.
- Use two reliable methods of birth control to prevent pregnancy. This medication may harm a fetus. Do not plan to have children while receiving chemo or for a while after treatments. (Talk to your doctor for further details.)
- Do not breastfeed while on this medicine.
- Radiation recall reaction has been reported after radiation therapy. Radiation-induced toxicity to the myocardium (heart muscle), mucosa (mucous membranes), skin, and liver may be increased by doxorubicin.
- Do not use aspirin or any product that has aspirin it (such as some cold medicines) unless you have talked to your doctor.
- It is normal for this medicine to turn your urine red for 1 or 2 days after your treatment. You may need to protect your clothing from stains.
- Keep all appointments with your doctor and the laboratory. Your doctor will order certain lab tests to check your response to doxorubicin.
- For more information, please talk to your doctor or pharmacist.