Cancer Symptom Management and Prevention
The Overlake Cancer Center’s clinical staff developed the following educational material to help you prevent and manage side effects related to your cancer and cancer treatment. Always discuss your symptoms with your health care team. Your physician or nurse can review which symptoms you are likely to experience based on your cancer type and treatments prescribed. Focus initially on how to prevent specific symptoms. For symptoms that you are experiencing refer to the educational materials provided in this information packet. You may experience multiple symptoms or side effects at the same time and it may be helpful to keep a log to assist your medical team addressing each individual symptom.

For more information call:
Pauline Osborne, RN, MN, OCN,
Oncology Clinical Nurse Specialist,
Lung Cancer Patient Navigator
(425) 467-3531

Additional information is located in the Cancer Resource Center (425) 688-5986
Anemia: Low Red Blood Cell Count

Description:
Anemia is a term used for a low red blood cell count. When your red blood cell count is low you may experience fatigue. Your doctor may prescribe medications to prevent or treat the anemia or may recommend your receive a blood transfusion.

Signs and Symptoms:
• Fatigue or feeling unusually tired or weak
• Dizziness
• Rapid pulse rate
• Shortness of breath
• Pounding in your head
• Ringing in your ears
• Headaches
• Chest pain
• Pale skin

Prevention and Management:
There are various ways to help prevent and manage anemia. The following are some suggestions:
• Get plenty of rest.
• Save energy by having short periods of activity with rest breaks.
• Move slowly and sit up for awhile before standing to avoid dizziness.
• Eat a diet with adequate protein and vitamins.
• Drink plenty of non-caffeinated and non-alcoholic fluids.
• Ask others for help.
• Your doctor may prescribe a medication to prevent anemia.
• Depending on how low your red blood cell count is and the intensity of your symptoms you may need a blood transfusion.

Follow-up:
Notify your doctor or nurse if you are experiencing any of the following symptoms:
• Severe weakness
• Feel dizzy or light headed
• Rapid heart rate
• Shortness of breath or difficulty breathing
• **Chest pain: Call your doctor immediately!**
Bleeding

Description:
Bleeding most often occurs when platelets (cells in the blood that help stop bleeding) are low. Certain cancers and cancer treatments can decrease the amount of platelets available. Sudden bleeding can cause severe weakness, dizziness and pain. Slow bleeding can make you feel tired, weak or can cause shortness of breath.

Signs and Symptoms:
- Nosebleeds
- Bleeding gums
- Prolonged bleeding from a cut
- Black or bloody stools
- Pin point-sized red or purple spots
- Vomiting blood
- Blood in sputum

Prevention:
Your skin and the lining of your mouth are protective barriers for your body. Keeping them clean and free of debris and injury will decrease the risk of bleeding. Some specific tips include:
- Use an electric razor when shaving.
- Use an aloe-based skin lotion to prevent dryness and skin breaks.
- Use a soft toothbrush. Do not floss if your gums are inflamed or bleeding.
- Prevent dry, chapped lips by using cocoa butter or shea butter.
- Eat soft, easy to digest, non-spicy foods.
- Prevent nosebleeds by gently blowing your nose.
- Cleanse inside nose with cotton swabs and salt water.
- Avoid contact sports or activities that may result in injury.
- Prevent rectal irritation by avoiding the use of suppositories, enemas and rectal thermometers.
- Avoid vaginal suppositories, douches and tampons.
- Avoid sexual intercourse if your platelet count is below 50,000. (check with your nurse for your latest count)
- Avoid medications that can prolong bleeding.

(continued on next page)
Management:
The following are suggestions for when bleeding occurs:

- If bleeding is external, such as a cut or wound, apply pressure for at least 10 to 15 minutes.
- If you have a nosebleed:
  ✓ Sit in an upright position and apply firm pressure to the nostrils just below the bridge of the nose.
  ✓ Apply ice to the bridge of your nose and/or back of the neck.
  ✓ Do not lean your head back to avoid blood draining down the throat.
- If bleeding is on a leg or arm, raise the limb above your heart.
- If your gums bleed, rinse with cold water.
- Your physician may order a platelet transfusion if your platelet count is less than 10,000 to 20,000.

Follow-up:
Notify your doctor or your nurse if any of the following occur:

- Blood in stool, urine, or vomitus or blood from any body orifice.
- Vaginal bleeding if you are past menopause.
- Any unusual bleeding.
- Blood in sputum.
- Shortness of breath, or difficulty breathing.
- Dizziness, severe headaches, or changes in mental status.

Changes in Memory and Concentration

Description:
Cancer and its treatments may cause problems with thinking, concentration, memory, and confusion. Other factors include medications or health conditions that may or may not be related to cancer. Some cancer patients who have undergone chemotherapy and/or radiation may experience fatigue, lack of focus, memory loss and the ability to organize daily activities. These symptoms together have been referred to as “chemo-brain.” It is important to tell your physician about these symptoms so they may be treated.

Prevention:
Tips to help prevent memory dysfunction and improve concentration:

- Some medications may have an adverse reaction. Advise you doctor of all your medications including over-the-counter medications.
- Get plenty of sleep. Lack of sleep may reduce cognitive function.
- Patients who remain physically active during treatment may have less cognitive changes.
**Management:**
Difficulty with concentration and memory can be both scary and frustrating. For proper evaluation and treatment, discuss all symptoms with your healthcare team.
- Take all medications as prescribed by your doctor.
- Keep a note pad or diary with you at all times. Write down what is important to you.
- Keep a detailed calendar of events at all times.
- Use daily pill dispensers to avoid missing a medication or taking the wrong dosage.
- Bring a tape recorder to your doctor appointments and take a friend or family member with you to all your doctor appointments.
- Watches with alarms can be set to remind you when to take your medicine.
- Exercise your brain. Give your brain a workout by learning a new skill, take a class or work crossword puzzles.
- Exercise as tolerated. Exercise helps your mood and can make you feel more alert.
- When experiencing periods of confusion keep your environment quiet, eliminate background noises and try to focus your attention.
- Do not be alone. Have friends or family members around when you need them.

**Follow-up:**
Any changes in your thinking or behavior should be evaluated by your healthcare team.

---

**Diarrhea**

**Description:**
Diarrhea is defined as more than two loose or watery stools per day. Diarrhea can be a symptom or side-effect of chemotherapy or radiation therapy. When you begin experiencing diarrhea, you can take action by modifying what you eat and drink. It is very important when you have diarrhea to drink a lot of fluids. Uncontrolled diarrhea can lead to weight loss, dehydration, poor appetite and weakness.

**Prevention:**
Eat small amounts of soft bland low fiber foods frequently. Your doctor may prescribe medication to prevent or lessen the diarrhea.

(continued on next page)
Management:
• Avoid eating foods high in fiber, fatty foods, and rich deserts.
• Increase your intake of fluids to at least six 8-ounce glasses per day.
• Use over-the-counter or prescription medications as instructed by your doctor.
• Refer to dietary guidelines table for foods that may lessen diarrhea or contribute to diarrhea.
• Eat small, frequent meals.
• Skin Care: Be gentle with the skin around your rectum if irritation develops. Some suggestions include:
  ✓ Keep skin clean and dry, using only a mild soap and lukewarm water.
  ✓ Try sitting in a warm bath to relieve rectal discomfort.
  ✓ Use cotton disposable washcloths or cotton tissues that are less irritating than toilet paper on sensitive irritated skin.
  ✓ Talk to your doctor or nurse about creams available to soothe rectal irritation.

Follow Up:
Let your doctor or nurse know if the above measures do not control your diarrhea. Call your doctor or nurse immediately if:
• You have a temperature of 100.5°F (38°C) or greater.
• You have black stool or blood in your stool.
• You are unable to keep liquids down for more than 12 hours.
• You do not urinate for 12 hours or more. Also report if your urine is becoming dark yellow in color (more concentrated).
• You become suddenly dizzy, weak, and dry, or feel disoriented.
• You have a sudden rapid or irregular heart beat.
<table>
<thead>
<tr>
<th>Food Group</th>
<th>Suggested Foods</th>
<th>Foods to Avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEATS/ HIGH PROTEIN FOODS</td>
<td>• Baked, broiled or grilled meat, fish or poultry</td>
<td>• Legumes, beans, peas</td>
</tr>
<tr>
<td></td>
<td>• Eggs</td>
<td>• Nuts and seeds</td>
</tr>
<tr>
<td></td>
<td>• Hard cheeses</td>
<td>• Fried or greasy meat, fish or poultry</td>
</tr>
<tr>
<td></td>
<td>• Buttermilk</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Yogurt</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Milk (if tolerated)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Legumes, beans, peas</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Nuts and seeds</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Fried or greasy meat, fish or poultry</td>
<td></td>
</tr>
<tr>
<td>BREADS/ CEREALS</td>
<td>• White breads</td>
<td>• Whole wheat and whole grain breads</td>
</tr>
<tr>
<td></td>
<td>• Pretzels</td>
<td>• Whole wheat pasta</td>
</tr>
<tr>
<td></td>
<td>• Pancakes and waffles</td>
<td>• Brown rice</td>
</tr>
<tr>
<td></td>
<td>• Cream of wheat, oatmeal or grits</td>
<td>• Bran cereals</td>
</tr>
<tr>
<td></td>
<td>• Low fiber cold cereals</td>
<td>• Croissants</td>
</tr>
<tr>
<td></td>
<td>• White rice</td>
<td>• Donuts</td>
</tr>
<tr>
<td></td>
<td>• Pasta</td>
<td>• Pizza</td>
</tr>
<tr>
<td>FRUITS/ VEGETABLES</td>
<td>• Fruits without skins</td>
<td>• Raw vegetables</td>
</tr>
<tr>
<td></td>
<td>• Canned fruits</td>
<td>• Lettuce and salads</td>
</tr>
<tr>
<td></td>
<td>• Soft cooked vegetables such as summer squash, mushrooms, asparagus tips or green beans</td>
<td>• Berries</td>
</tr>
<tr>
<td></td>
<td>• Potatoes with skins</td>
<td>• Corn</td>
</tr>
<tr>
<td></td>
<td>• Whole wheat and whole grain breads</td>
<td>• Fresh fruits with skins, seeds or membranes</td>
</tr>
<tr>
<td></td>
<td>• French fries</td>
<td>• Gas-causing vegetables: broccoli, cabbage, Brussels sprouts, kale or collards</td>
</tr>
<tr>
<td></td>
<td>• Whole wheat and whole grain breads</td>
<td>• French fries</td>
</tr>
<tr>
<td>BEVERAGES/ DESSERTS/ MISCELLANEOUS</td>
<td>• Juices (except prune and grape)</td>
<td>• Prune juice</td>
</tr>
<tr>
<td></td>
<td>• Sports drinks such as Gatorade</td>
<td>• Popcorn</td>
</tr>
<tr>
<td></td>
<td>• Decaf coffee/tea</td>
<td>• Pickles</td>
</tr>
<tr>
<td></td>
<td>• Water</td>
<td>• Alcohol and caffeine</td>
</tr>
<tr>
<td></td>
<td>• Popsicles</td>
<td>• Ice cream</td>
</tr>
<tr>
<td></td>
<td>• Jell-O</td>
<td>• Carbonated beverages</td>
</tr>
<tr>
<td></td>
<td>• Pudding</td>
<td>• Creamy sauces or gravies</td>
</tr>
<tr>
<td></td>
<td>• Room temperature liquids</td>
<td>• Sugar-free chewing gum</td>
</tr>
<tr>
<td></td>
<td>• Prune juice</td>
<td>• Fried or spicy foods</td>
</tr>
<tr>
<td></td>
<td>• Popcorn</td>
<td>• Sugar-free products that contain Sorbitol</td>
</tr>
<tr>
<td></td>
<td>• Pickles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Alcohol and caffeine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Ice cream</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Carbonated beverages</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Creamy sauces or gravies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Sugar-free chewing gum</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Fried or spicy foods</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Sugar-free products that contain Sorbitol</td>
<td></td>
</tr>
</tbody>
</table>
Dry Mouth

Description:
Cancer treatment and some medications can cause dry mouth. Medications may include chemotherapy, pain medications, anti-depressants, and diuretics (water pills). Radiation therapy to your head and neck will cause some dry mouth that is permanent. Dehydration or infection of the mouth may also cause dry mouth.

Prevention:
It is not likely that you can completely prevent dry mouth. However, preventing dehydration and infections to the mouth can assist in preventing dry mouth.

Management:
Treating the cause of dehydration or infection may help with your dry mouth. The following tips can help your mouth feel more comfortable and keep your teeth healthy:

• Keep your mouth clean and free of debris with frequent mouth rinse every 2 hours while awake – (1/2 tsp. salt in 1 quart of warm water).
• Brush your teeth before, after each meal, and at bedtime. Floss daily.
• Use fluoride gel regularly or as directed by your dentist or doctor.
• Avoid mouthwashes that contain alcohol and lemon glycerin swabs.
• Use saliva substitutes and mouth lubricants (available over the counter).
• Drink at least 8-12 glasses of fluid a day unless advised not to by your doctor. Sip water frequently during the day to alleviate dry mouth.
• Placing butter or oil in the mouth is sometimes effective.
• Keep fluids and a mouth lubricant within reach at night.
• Try a cool or warm water humidifier by the bedside.
• Prescription medication is available to increase saliva production.
• Sugarless gum (xylitol gum) and lozenge can help stimulate saliva.
• Keep lips moistened with a lip balm.
• Limit alcohol and caffeinated drinks, which can contribute to dry mouth.
• Soft, moist foods are easiest to manage. Hard, dry, sticky, acidic and highly spiced foods may be more difficult or impossible to eat.
• Avoid smoking or chewing tobacco.

Follow-up:
Call your doctor or dentist if you experience the following symptoms:
• Mouth or tooth pain.
• You are unable to eat or drink for 24 hours or have signs of dehydration.
  ✓ Decreased urine.
  ✓ Dizziness.
  ✓ Temperature greater than 100.5° F.
Dyspnea (Shortness of Breath)

Description:
Dyspnea (shortness of breath) can be a scary sensation. Dyspnea symptoms include; shortness of breath, a smothering feeling, an inability to get air, a feeling of suffocation, and/or tightness in the chest.

Some causes of dyspnea:
• Partial or complete removal of a lung.
• Some chemotherapy drugs.
• Radiation treatment to the lungs.
• Tumor blocking airways or pushing on lungs from outside.
• Lung damage from smoking.
• Anemia (low blood count).
• Infection or allergies.
• Fluid accumulation.
• Anxiety.

Prevention and management:
The following are tips to help decrease your shortness of breath and manage your symptoms:
• Breathe slowly and deeply.
• Avoid panic when breathing is difficult.
• Have someone nearby help you.
• Remain physically active by doing mild, gentle exercises such as walking.
• Anticipate and plan rest.
• Ask family and friends for help with daily activities.
• Avoid things that make your breathing worse, such as cold air or tobacco smoke.

The following positions may help your lungs expand and help you breathe more easily:
✓ Sit upright in a chair, lean forwards slightly, and rest your forearms on the arms of a chair, or on your knees.
✓ Sleep with your head on several pillows or while sitting up in a recliner.

The following breathing techniques may help manage your dyspnea:
Pursed-lip breathing may help you feel as if you are getting enough air. Breathe in through your nose as you normally would while counting the seconds it takes to inhale. Purse your lips by pretending that you are going to kiss someone. Exhale, through pursed lips, for twice the number of seconds as you inhaled.

(continued on next page)
**Abdominal breathing** may lessen dyspnea by making the muscles that help you breathe more effective and stronger. You want to feel your belly expand as you inhale and release as your exhale.

**Oxygen treatments** may help some people with shortness of breath feel better. However, many people may get the same results from cool air blowing on their cheek.

**Relaxation techniques** can be helpful.
- Apply a cold cloth to your cheek.

Dyspnea can cause anxiety and anxiety can worsen dyspnea. It is important to break the cycle of anxiety and dyspnea. Progressive muscle relaxation and diversion may help.

**Follow-up:**
If the above tips do not improve your symptoms, your doctor may prescribe oxygen therapy or medications.
- Call your doctor if your symptoms increase.

---

**Fatigue**

**Description:**
In cancer patients, fatigue is one of the most common symptoms. Patients describe it as a persistent sense of whole body tiredness. Several factors may contribute to your fatigue - radiation therapy, chemotherapy, surgery and biotherapy. Other causes may include your cancer, some medications, low blood counts, pain, stress, anxiety, depression, lack of sleep, lack of activity or poor diet.

Fatigue from cancer is different than fatigue from everyday life. Rest or sleep may not relieve cancer and cancer treatment fatigue. People experience fatigue in various ways and the level of fatigue and how long it lasts can vary from patient to patient. People receiving more than one type of cancer treatment are likely to have increased fatigue. With chemotherapy, fatigue often occurs suddenly. Fatigue may lessen within the two months of finishing treatment and your energy level will increase slowly over a period of several months.

**Prevention and Management:**
Preventing fatigue can be a challenge in cancer especially when the cause is unclear. The cause of fatigue often involves many factors. For example, patients may experience pain, nausea and vomiting, and low blood counts at one time. Preventing and treating these symptoms may be one way to minimize the severity of fatigue.
To assist in the management of symptoms that influence fatigue, keep track of your symptoms and side effects. Identifying the cause of fatigue will determine the corrective treatment. This information will let your health care team know what problems you are having. They can then decide whether their corrective treatments are helping to prevent or manage these problems.

**Self-Management:**
- Conserve energy.
- Plan and organize your work ahead of time.
- Allow for frequent rest periods throughout the day.
- If you can, sit while doing a task.
- Push items instead of carrying them.
- Limit work that requires reaching over your head.
- Physical or occupational therapy may help you find ways to minimize effort required for specific activities.
- Avoid work that increases muscle tension.
- Avoid prolonged exposure to extreme temperatures (such as long, hot baths).
- Prioritize your activities. Plan activities with high priority when you have the most energy. Skip unnecessary tasks.
- Delegate, delegate! It is okay to ask for help when you need it. Take advantage of offers from people to help.

**Maintain Nutrition:**
- Meet your basic calorie needs. If necessary, ask your doctor for a referral to a nutritionist.
- Eat high protein, high complex carbohydrate foods (cereals, nuts, meats, beans, breads, seafood) and healthy fats (olive oil, fish oils, almond butter, coconut milk, organic dairy, olives, peanut butter).
- Drink plenty of liquids (at least 8 cups per day).
- Keep easy to prepare foods available.

Exercise is an important way to reduce or manage fatigue. Pick activities that exercise the whole body: walking, swimming, dancing. Free exercise classes for people with cancer are available through organizations such as Cancer Lifeline, Gilda’s Club, and TeamSurvivor Northwest.

**General guidelines for exercise in people with cancer:**
- You may only be able to walk for a couple of minutes and that is okay. With time, you will be able to increase the amount of exercise and the intensity.
- Stop exercising if you get very short of breath, have pain, feel dizzy, or have other unusual symptoms.
- Avoid exercising in very hot or very cold conditions.
• Do not exercise alone; take a friend with you, carry a cell phone.
• Listen to your body and let the way you feel guide what you do and how much you do.
• Check with your care providers about any special precautions you need to take. There may be specific instructions about scheduling exercise in relation to blood tests and treatments.
• Exercise with moderation. If you are stiff, sore, or exhausted you are doing too much.
• Acupuncture or massage may help manage fatigue and other symptoms that may influence fatigue.

Manage Stress:
• Keep a journal.
• Participate in leisure activities (like art and music) that are relaxing.

Follow-up:
Notify your doctor if the following occur:
• If the fatigue is impacting or hindering your usual activities.
• Your fatigue level increases with exercise.

Hair Loss (Alopecia)

Description:
Hair loss (alopecia) can be one of the most distressing side effects of cancer treatment. Hair loss varies from slight thinning to complete loss of hair. Some chemotherapy drugs may cause you to lose hair on your head, face, and entire body. Loss of hair may begin 10 to 21 days after drugs are started, with total hair loss in 1 to 2 months. Radiation therapy may cause hair loss in the radiated area. Hair re-growth after radiation may start 2 to 3 months after completing treatment. With chemotherapy, re-growth may occur while you are still on chemotherapy or 3 to 6 months after completing treatment. Not all chemotherapy or radiation treatments will cause hair loss. You may experience some scalp pain when you are losing your hair.

Management:
Given that preventing hair loss may be impossible, management focuses on your comfort. The following tips can help you manage hair loss:
• Before hair loss occurs, think about getting a wig. Your insurance may cover the cost of a hairpiece. Ask for a prescription from your provider.
• Diet should include protein and omega-3 fatty acids in each meal. Hair loss may increase if your diet lacks protein.
• Use a mild, protein-based shampoo such as Johnson’s Baby Shampoo every 3 to 5 days, follow with a cream rinse or conditioner; rinse your hair well and pat dry.

• Avoid excessive brushing and use a wide-toothed comb to avoid damaging your hair.

• Wear a soft stretch cap during hair loss, especially at night, to contain shedding and keep the head warm.

• Limit use of hair clips, barrettes, elastic bands, bobby pins, hair sprays, dyes, permanents, blow dryers, hot rollers and curling irons.

• When outdoors, cover your head to prevent heat loss and sunburn, use sunscreen.

• You may want to cut your hair short if you are expecting hair loss during treatment.

• Shaving your head may minimize the scalp pain that occurs from hair loss.

Follow-up:

• Hair loss may change the way you feel about yourself. If your feelings are stopping you from doing important things, talk it over with your doctor or nurse.

• The American Cancer Society’s (ACS) program: Look Good…Feel Better is a free class for women who are experiencing hair loss during cancer treatment. For registration call 1 (800) 392-Look.

• ACS provides free wigs at most medical facilities. Contact the Cancer Resource Center at Overlake Hospital Medical Center, 425-688-5986.

Hand-Foot Syndrome

Description:
Hand-foot syndrome is a condition caused by some types of chemotherapy. The palms of the hands and the soles of the feet burn or tingle and become red and sore. While this side effect is not life-threatening it is important to catch it early so that your treatment is not compromised in any way.

Prevention:
Because the drug concentrates in the palms of the hands and on the soles of your feet, the following instructions may help minimize the occurrence of hand-foot syndrome:

• Take short showers in cool or lukewarm water.

• Avoid hot baths, showers, or hot tubs 1 day prior to treatment and for 3 days following therapy with Doxil and throughout Xeloda therapy.

(continued on next page)
• Elevate your arms and feet as much as possible.
• Use mild soap when you bathe and gently pat your skin dry with a towel after bathing.
• Wear comfortable shoes.
• Apply sun block to all exposed areas while out in the sun.
• A manicure and pedicure are advised prior to beginning therapy to minimize cracking of nails and tearing of cuticles.
• Maintain hydration by drinking 8-10 glasses of fluid a day.
• Prevent excessive dryness of hands and feet. Gently apply an alcohol-free moisturizer immediately after bathing.
• At bedtime, apply a lanolin salve (Bag Balm) or shea butter and wear cotton gloves and socks to promote soft healthy skin.
• Avoid activities that cause excessive rubbing and prolonged pressure to elbows, knees, hands and feet.
• Avoid rubber dishwashing gloves.

Management:
The following measures may help to ease symptoms and promote healing:
• Soak hands in very cool water for 10 to 15 minutes three times a day.
• Apply petroleum jelly to the hands and feet while your skin is still moist.
• Wear cotton gloves and socks.
• Avoid trauma to your hands and feet.
• Your doctor may recommend medications to ease discomfort.

Follow-up:
Call your doctor:
• If you have any foot or hand tingling, pain or redness.
• If you have a temperature of 100.5°F or greater.

Infection and Low White Blood Cells

Description:
Cancer and cancer treatment can affect your white blood cell count. White cells are the cells in the blood that play an important role in the body’s ability to fight off infection. When you have a low white cell count, you are at a high risk to develop an infection. Your skin and mucous membranes are important barriers to infection.

Signs and Symptoms of Infection:
• Chills/sweating.
• Cough or sore throat/mouth.
• Any area with redness or swelling.
• Uncontrolled diarrhea for more than 2 days.
• Burning sensation when urinating.
• Unusual vaginal discharge or itching.
• General tiredness or body aches.
• Flu-like symptoms.
• Fever of 100.5°F or greater.

Prevention:
To decrease the risk of a life-threatening illness because of infection:
• Eat healthy; a high protein, high complex carbohydrate meal will aid against infection. If needed ask your doctor for a nutrition referral.
• Drink at least eight glasses of liquids each day.
• Take all medications exactly as prescribed by your doctor.
• If you are receiving chemotherapy, your doctor may prescribe a medication to keep your white cell count high.
• Avoid large crowds or people who have coughs, colds or infections.
• Keep your body clean by bathing daily and washing your hands frequently.
• Avoid handling pet feces or cleaning fish tanks.
• Good oral care is essential. Brush your teeth after eating and before bedtime.
• Clean and cook foods thoroughly.
• Wash fresh fruits and vegetables thoroughly.
• Follow all instructions from your healthcare team.

Management:
Your white blood count will be at its lowest point 10 to 14 days following chemotherapy treatment. Your blood counts should be observed during this time:
• Check your temperature if you feel hot or chilled.
• Take all medications as prescribed.

Follow-up:
If you have a fever or any signs of infection as noted above, call your doctor or nurse immediately. Usually temperature limits for fever range from greater than 100.5°F - 101.5°F.

Insomnia (Difficulty Sleeping)

Description:
Insomnia is the inability to sleep during your normal sleeping time. A side effect of cancer and cancer treatment for the majority of patients is a change in sleep patterns. Many factors can affect your sleep; these may include new medications, treatment, worry, and taking additional naps due to fatigue.
Some signs of insomnia may include:

• Following ‘lights out’ it takes 30 minutes or more to fall asleep.
• You wake frequently during the night.
• It takes 30 minutes or more to get back to sleep after awaking during the night.
• You wake up early in the morning and are unable to fall back asleep.

Prevention and Management:
The following guidelines may help to prevent or manage insomnia:

• Only go to bed when you are sleepy.
• Establish a regular time routine for going to bed each evening.
• Comfort routines such as a warm bath, non-caffeinated herbal teas, and a light snack may relax you prior to bedtime.
• Exercise regularly in the late afternoon.
• Mild exercise, such as stretching, walking, yoga, 2 or 3 hours before bedtime may aid in your sleep pattern.
• Use your bed only for sleep and sex; do not read, watch TV or eat while in bed.
• Avoid caffeine within 6 hours of bedtime. Avoid alcohol and smoking at bedtime.
• Avoid taking steroid medications after 5 or 6 p.m. (or within 3 hours of bedtime).
• If you get to bed and can’t sleep or can’t get back to sleep after waking in the night for 15 minutes or more, get out of bed and go to another room. Do something relaxing until you feel sleepy again and then return to bed.
• Limit naps if they interfere with your night-time sleep pattern.
• If pain is making it difficult for you to sleep, make sure you take your prescribed medications as recommended. If your pain is not controlled, talk to your doctor.
• Keep a diary to identify particular patterns of sleep or behavior that may cause insomnia, keep a log for 1-2 weeks, include:
  ✔ When you go to bed
  ✔ When you get up
  ✔ When you take prescription and non-prescription medications
  ✔ When you take herbals or supplements
  ✔ Your exercise routine
• Your doctor may prescribe drugs to help you sleep. Take them exactly as directed.
• Acupuncture, meditation and massage are other techniques that may help your relax and sleep.
Follow-up:
Usually all of the things listed in this handout can help you get back to your normal sleep pattern. If they do not help, make sure to talk with your doctor or nurse about this problem. Sleep is essential to your overall health.
• If you are unable to afford your medications advise your doctor or nurse.

Loss of Appetite (Anorexia) and Weight Loss

Description:
Anorexia is a lack or loss of appetite. A loss of appetite can lead to decreased food intake, weight loss, malnutrition, and loss of muscle mass and strength. Anorexia is common in cancer patients and may be caused by the following:
• Treatment side effects such as nausea, mouth sores, changes in taste and smells.
• Depression, grief and anxiety which decrease desire for food intake.
• The cancer itself, as cancer can cause changes in appetite and metabolism.

Prevention and Management:
Good nutrition is an important part of cancer treatment. The first step is to identify other symptoms such as nausea and vomiting that may interfere with eating. Ask your doctor for a nutrition consultation referral to aid in managing your nutritional needs. Benefits of proper nutrition before, during and after treatment may include:
• Maintaining lean body mass.
• Prevention of dehydration.
• Improved healing and recovery.

The following are suggestions to stimulate your appetite and prevent weight loss:
• Take advantage of the times when you have more of an appetite.
• Avoid large meals; smaller meals 5-6 times per day is recommended.
• Make sure your diet contains foods that are good sources of:
  ✓ Protein: fish, chicken, meats, eggs, nuts, beans.
  ✓ Carbohydrates: breads, cereals, grains, pasta, fruits.
  ✓ Fats: olive oil, fish oils, almond butter, coconut milk, dairy, olives, peanut butter.
• Take a multivitamin daily.
• Limit the intake of fluids with meals as this can decrease the amount you are able to eat. Fluids should be taken 30 minutes before meals or between meals.

(continued on next page)
• Keep “favorite” foods readily available and be prepared when hunger strikes.
• Enlist your friends and family in the preparation of meals or “favorite” food reserves.
• Participate in some form of mild exercise for at least 20 minutes per day. This will keep your muscles active and your strength up.
• Stimulate your appetite by walking prior to meals.
• Exercise after meals to assist with gastric emptying.
• Eat in a pleasant space.
• If necessary your doctor may prescribe a medication to increase your appetite.

Follow-up:
Notify your doctor or nurse if any of the following occur:
• You are unable to consume or keep down fluids or food.
• Your urine output decreases.
• You experience symptoms that limit your intake of food/fluids.

Nausea & Vomiting

Description:
Nausea is a feeling of an upset stomach that may be accompanied with vomiting. Nausea and vomiting are usually short-term symptoms experienced during the first week after receiving chemotherapy. The cancer itself, surgery, some radiation treatments may also contribute to your nausea and vomiting.

Prevention:
Nausea and vomiting can usually be controlled by medication. If you are unable to keep the medications down your doctor will prescribe a suppository. Follow all medication instructions from your nurse or doctor.

Management:
• The following suggestions may be helpful in decreasing nausea and vomiting:
  • Refrain from eating or drinking fluids two hours before and after treatment.
  • Eat small frequent meals in a quiet, relaxed setting.
  • Do not eat your favorite foods when you are nauseated.
  • Ginger tea or peppermint tea can both be soothing.
  • Try foods and fluids you can tolerate such as dry crackers, rice, broth and ginger ale.
  • Do not eat fried, spicy or rich foods.
  • When nauseated have someone else prepare your meals.
  • Prepare and freeze meals prior to your chemotherapy.
  • Brush your teeth before and after each meal.
• Frequently rinse your mouth with cool water or mint flavored water.
• Do not cook or eat foods with strong aromas.
• According to the National Institute of Health, acupuncture can be effective in controlling chemotherapy-induced nausea and vomiting.

Follow-up:
Contact your nurse or doctor if the following occur:
• You are unsure of how to take your anti-nausea medication or unable to keep the medication down due to vomiting.
• Your nausea lasts for one or 2 days despite medications or nausea keeps you from doing your daily activity.
• You vomit more than one or two times a day for 2 days.
• You cannot keep any liquids (water, juices, and soda) or food down.
• You do not urinate as often as you normally do and your urine looks dark yellow.
• You feel lightheaded, dizzy, faint (pass out) or confused.
• If your vomit looks like dark coffee-grounds.
• You are unable to afford your medication.

Pain
Description:
Cancer patients often fear pain. Left untreated pain will interfere with every aspect of your care and your quality of life. Most cancer patients with proper pain management can find relief and improve their general feeling of well being. Initially drowsiness may occur with new pain medications, which in most cases will resolve after a couple of weeks.

Prevention:
The best method to treat pain is to prevent it from returning. The following are some suggestions for prevention:
• Take your pain medicines as prescribed.
• Waiting until the pain returns means you will have to play “catch-up” and it will take longer to control the pain.
• Take supplemental, or “as needed”, pain medication before any activity you know will be painful. This will allow you to be more active with less pain.
• Most patients taking pain medicines (e.g. opioids) will develop constipation. As recommended by your doctor, take a laxative and stool softener every day to prevent constipation.

(continued on next page)
Management:
Unrelieved pain can prevent you from moving and may actually cause more pain. If you have pain, TAKE ACTION. There are a variety of ways to relieve pain such as heat, massage, relaxation, hypnosis, acupuncture, physical therapy, diversion, exercise and medication. When possible, treatment of pain involves removing the cause.

Other suggestions to help you cope with pain:
• Talk to your doctor or nurse about your pain.
• Log and report your pain severity, time of event and activity to your doctor.
• Get enough rest and if necessary limit your physician activities.

Follow-up:
Notify your doctor or nurse if you experience any of the following:
• If you have trouble getting your medicines or if you cannot afford them.
• If your pain is not relieved with the medicines prescribed.
• If you have new pain, the cause or root of the pain should be determined.

Peripheral Neuropathy (Nerve and Muscle Damage)
Description:
Peripheral neuropathy involves damage to the nerves in your body. Some chemotherapy treatments can cause nerve damage. Symptoms of nerve damage may present at the time of treatment or up to several months following chemotherapy. Most patients have symptoms that resolve several months to a couple of years after treatment is complete.

Signs and Symptoms:
• Numbness or a feeling of “pins or needles” in your hands and/or feet.
• Difficulty buttoning your shirt or blouse or picking up an object.
• Ringing in your ears.
• Changes in your vision.
• Pain in your hands or feet.
• Constipation or changes in your bowel or bladder function.
• Loss of balance.
• Decreased muscle strength.
• Decreased sensation of hot or cold.

Prevention:
As a side effect of some medications, damage to the nerves controlling your bowel function may occur.
• Ask your doctor about additional medications to prevent constipation.
Management:
Ways to manage the neuropathy:
• Describe your pain to your nurse or doctor. Pain medication can be prescribed specific to the intensity level and location of your pain.
• Physical or occupational therapy may help control nerve pain and maintain muscle strength.
• Exercise may also help control nerve pain and improve muscle strength and balance.
• If you have decreased sensation in your hands and feet be careful about walking; wear comfortable flat shoes.
• Ensure your living areas are safe and well lit.
• Protect yourself from injury by using gloves while:
  ✓ Washing dishes.
  ✓ Handling hot or cold items.
  ✓ Gardening.
• Use only warm water for bathing, decrease the temperature on your hot water tank.
• Avoid restrictive clothing.
• Avoid cold beverages, chewing ice, or using straws.
• Use emollient lotions for hands and feet.
• Your doctor may prescribe a supplement or medication to help control the symptoms.

Follow-up:
While most of the time it is not possible to prevent early nerve damage, it is possible to prevent symptoms from intensifying.
• It is important to tell your doctor or nurse immediately if any of the symptoms listed in this handout occur.
• If nerve damage continues, it can get worse and cause problems such as difficulty working with your hands or trouble walking.
• Notify your physician if you are unable to afford your medication.
Rash

Description:
A common side effect of certain cancer treatments is a rash involving the face, neck, chest and back. The rash may resemble acne or dry skin. If you experience such a side effect call your physician, do not stop your medications unless advised to do so by your physician.

Prevention and Management:
The following guidelines will help to minimize the severity and manage your rash symptoms:
• Use a mild soap to wash the affected area.
• Moisturize the area with a mild lotion.
• Avoid sun exposure or tanning booths.
• Use a sunscreen appropriate for sensitive skin.
• Do not expose your face or head to intense sun.
• Drink plenty of fluids.
• Avoid over-the-counter acne-related treatments.
• Remove any dermatologist-approved makeup with a gentle liquid cleanser.
• Depending on the cancer drug you receive, your doctor may recommend a topical cream or oral antibiotic to prevent or treat infection.
• If the rash is due to an allergic response your doctor may prescribe an antihistamine.

Follow-up:
Notify your doctor of the following:
• A fever of 100.5°F or greater and or chills as this could be a sign of infection.
• Site redness and or swelling.
• Unexplained or worsening skin rash.
• Itching, pain or other troubling symptoms accompanying a rash.
• Rash affecting the mucous membranes in the mouth or nose.
• Any blistering, peeling, open areas in the skin.
• If you suspect an infection in the skin or nail area.
• Chest pain or difficulty breathing, seek immediate help and call your physician.
Sexuality for Men

**Description:**
Intimacy and sexuality are very important to us as human beings. Sexuality is one important aspect of our need for closeness, touch, playfulness, caring and pleasure. Certain types of cancer and treatment side effects can affect your sexual interest, ability, and feelings of self-esteem. This is normal.

**Fertility and Birth Control:**
If fertility is important to you contact a group called “Fertile Hope” at 1-888-994-HOPE or www.fertilehope.org. Certain cancer treatments may cause infertility. You may have options to preserve fertility prior to cancer treatment. Before you have chemotherapy or radiation treatment to the genital area, ask your doctor about placing sperm in a sperm bank.

Chemotherapy can affect the growth of an unborn baby. Therefore, if there is a chance that your partner may become pregnant, it is important to use birth control measures while on chemotherapy and for a few months after treatment is completed.

**Promoting Sexual Function:**
- Wait until you feel ready for sexual activity. Do not over extend yourself.
- Express desire for sexual contact when you feel able; do not wait for your partner to ask.
- Talk with your partner about your feelings and concerns.
- You may consider the following options for sexual expression if your usual sexual activities are uncomfortable:
  - Manual stimulation.
  - Oral-genital stimulation.
  - Caressing, fondling, kissing.
  - Different positions (e.g. lying on your sides either facing or spooning) can allow you to control thrusting, avoid pressure on tender areas, or avoid tiring.
- A sex therapist may help to promote sexual expression.
- If you have had a radical surgery, implants or reconstructive surgery may be possible.
- For additional information refer to *Sexuality for Men and Their Partners*. Booklets are available free in the Cancer Resource Center.

**Special Precautions:**
- To reduce the possibility of infection and bleeding avoid intercourse if your white blood counts and platelets are low. Check with your doctor to see if this is an issue.

(continued on next page)
• A few chemotherapy drugs can be present in small amounts in semen or vaginal fluids. To be safe, you may want to use condoms during the time you or your partner are receiving chemotherapy.

Follow-up:
Sexuality is an important part of your health and well-being. It is important that you discuss any concerns with your doctor. Also, report the following to your doctor or nurse:
• You notice new or more pain with or without sexual intercourse.
• You have changes in erectile function or amount of semen.
• You have any sexual problems or questions concerning sexual activity.

Sexuality for Women

Description:
Intimacy and sexuality are very important to us as human beings. Sexuality is one important aspect of our need for closeness, touch, playfulness, caring and pleasure. Certain types of cancer and treatment side effects can affect your sexual interest, ability and feelings of self-esteem. This is normal.

Fertility and Birth Control:
If fertility is important to you contact a group called “Fertile Hope” at 1-888-994-HOPE or www.fertilehope.org Certain cancer therapies may cause infertility. You may have options to preserve your fertility before the start of treatment.

It is essential that you use good birth control. Becoming pregnant during treatment may increase the health risk for you as well as your baby. The use of oral contraceptives (the pill) is not recommended for women with certain types of cancer. Ask your doctor for further information. Barrier methods such as diaphragms and condoms with spermicidal gel/foam are appropriate.

Promoting of Sexual Function:
• Wait until you feel ready for sexual activity. Do not over extend yourself.
• Express desire for sexual contact when you feel able; do not wait for your partner to ask.
• Talk to your partner about your feelings and concerns.
• For problems with vaginal dryness, use only water-based lubricants such as K-Y jelly, Astroglide, or Replens. Do not use Vaseline, baby oil or other oil-based lubricants.
• If your usual sexual activities are uncomfortable you may consider the following options:
✓ Manual stimulation.
✓ Oral-genital stimulation.
✓ Caressing, kissing and fondling.
✓ Different positions (e.g. lying on your side, either facing or spooning) can allow you to control thrusting, avoid pressure on tender areas, or avoid tiring.

- A sex therapist may help to promote sexual expression.
- For more information refer to *Sexuality for Women and Their Partners*. Booklets are available free in the Cancer Resource Center.

**Special Precautions:**
- To reduce the possibility of infection and bleeding avoid intercourse if your white blood counts and platelets are low. Check with your doctor to see if this is an issue.
- A few chemotherapy drugs can be present in small amounts in semen or vaginal fluids. To be safe, you may want to use condoms during the time you or your partner is receiving chemotherapy.

**Follow-up:**
Sexuality is an important part of your health and well-being. It is important that you communicate any concerns with your doctor. Also report the following to your doctor if you:
- Have new or increased pain with or without sexual intercourse.
- Notice any unusual vaginal bleeding.
- Have any sexual problems or questions concerning sexual activity.

**Sore Mouth and Throat (Mucositis)**

**Description:**
The mouth and throat are lined with a mucous membrane. Cancer and/or its treatments can affect this membrane causing mucositis. The symptoms of mucositis may include mouth sores, white patches on the tongue, redness or irritation of mouth or throat, pain when swallowing and mouth dryness. Discuss pain issues with your doctor or nurse. Your doctor may prescribe medications.

**Prevention:**
Your mouth plays an important role in keeping you healthy. Mucositis can interfere with this role and can place you at risk for infections. The following tips can help:
• Brush your teeth with soft bristle toothbrush and swab within 30 minutes after eating.
• Floss at least once daily after brushing unless you are at risk for bleeding.
• Rinse and gargle your mouth with warm salt water (1/2 teaspoon of salt to 1 quart of water 2-3 times per day and following meals).
• Keep your lips moist.
• Visit your dentist, prior to starting cancer treatment. Visit your dentist at least once a year thereafter.
• Drink at least eight glasses of liquids each day.
• Avoid foods and liquids that may be irritating such as: lemon and glycerin swabs; mouthwashes that contain alcohol; and foods and drinks that are hot, spicy, or fried.
• Avoid smoking or chewing tobacco.
• Avoid consuming excessive alcohol.
• Eat a high protein diet in order to get the nutrients needed to prevent or help repair mouth sores.

Management:
If you are at risk for mucositis, examine your mouth once a day. Use a flashlight and mirror to look in your mouth for ulcers, pimples, red areas, or patches:
The following are tips to help manage mucositis:
• Eat soft foods such as puddings, mashed potatoes, soups, pasta, and frozen desserts.
• Avoid hard-to-chew foods such as crackers, apples or nuts.
• Controlling pain in mucositis is very important as pain can affect your food and fluid intake.
• If bleeding occurs from mouth sores, apply pressure to the wound site using sterile gauze dipped in ice water or use a wet tea bag that has been partially frozen. Rinsing your mouth with ice water may also help.
• Antibiotics may be needed if you have an infection in your mouth. Take as prescribed by your doctor.
• Denture wearers: Only wear dentures when eating.

Follow-up:
Report the following symptoms to your doctor or nurse:
• Temperature greater than 100.5°F or per doctor’s instructions.
• Redness, extreme dryness, pain, cracks, ulcers, blisters or white patches to mouth.
• Mouth sores or ulcers that interfere with your ability to eat, drink or sleep.
• Inability to stop bleeding from sores despite above recommendations.
• Any other unusual or new symptoms.
Taste Changes

Description:
After receiving cancer treatments, you may experience a variety of changes in how food and beverages taste ranging from foods tasting differently to a complete loss of taste. Flavors of some foods and beverages may taste unusually strong or intense. Sweet, bitter and salty tastes can seem very different. You may have a metallic or medicine-like taste in your mouth. Your sense of taste usually returns to normal a few weeks after your treatment has been completed. Taste changes can lead to food aversions, decreased intake of food and weight loss. Making sure you are able to eat properly and maintain weight during cancer treatment is important to your recovery and to your overall health.

Prevention and Management:
The following tips may help you manage the effects of taste changes:

- Eat foods that taste good.
- Eat in pleasant surroundings.
- Eat small, frequent meals.
- Drink at least eight glasses of liquids every day.
- Eat cold foods they are usually better tolerated than warm or hot foods.
- Try soft foods such as deviled eggs, egg salad, chicken, ham, ice cream, milk shakes, puddings, custard or cheese.
- Avoid preparing foods in metal pots and pans. Use glass cookware and plastic utensils.
- Eat tart foods. This may help overcome metallic or bitter tastes.
- Tart enhancements such as orange juice, pickles, lemonade, vinegar and lemon juice amplify flavor.
- Chew sugar free gum or suck on hard candies or mints.
- Substitute other sources of protein if red meat does not taste good.
- Marinate meat, chicken, or fish to enhance their taste.
- Do not use butter or margarine to flavor starchy foods.
- Use sugar to tone down salty foods.
- Frequently rinse your mouth with cool water or a mild solution of warm salt water (1/2 teaspoon of salt to 1 quart of water 2-3 times per day).
- Avoid cigarette smoking.

Follow-up:
Notify your doctor or nurse if:
- Taste changes prevent you from maintaining your food intake.
- You experience other symptoms such as nausea or vomiting that interfere with your ability to eat or drink.
For more information call:
Pauline Osborne, RN, MN, OCN,
Oncology Clinical Nurse Specialist,
Lung Cancer Patient Navigator
(425) 467-3531

Additional information is located in the
Cancer Resource Center (425) 688-5986
Cancer Symptom Management and Prevention

[Address and contact information]

[Website]

[Logo and additional information]