Managing Hair Loss with Scalp Cooling During Chemotherapy for Solid Tumors

This information explains how scalp cooling (using a cold cap) during chemotherapy may help reduce hair loss. It also gives some basic information about caring for your head and hair during chemotherapy.

Hair Loss Related to Chemotherapy

Chemotherapy works by attacking fast-growing cells. Cancer cells are fast growing, but so are other cells, such as hair cells. Chemotherapy can cause hair loss on your scalp, eyebrows, eye lashes, arms, legs, and pubic area. Depending on your chemotherapy, you can lose hair in none, some, or all of these areas.

You may start to see your hair fall out 1 to 4 weeks after your first chemotherapy treatment. How much of your hair falls out depends on the type of chemotherapy and how much and how often you receive it. Talk with your healthcare team about the amount of hair loss you
should expect from the chemotherapy you will receive.

How quickly hair falls out also varies from person to person. The first signs of hair loss may be more hair on your pillow in the morning, in the shower, or when you brush your hair.

Once your chemotherapy has stopped, your hair should begin to grow back. It can take 3 to 5 months for your hair to grow back, and it may have a different texture, color, or volume. For most people, hair grows in as fully as it was before chemotherapy.

Reducing Hair Loss with Scalp Cooling

Scalp cooling is a way to reduce hair loss while you’re getting chemotherapy to treat solid tumors. Solid tumors are cancers that are not leukemia or lymphoma. Scalp cooling involves wearing a cold cap on your head before, during, and after receiving chemotherapy.

Scalp cooling has been used by people in Canada and parts of Europe for years. It has more recently been used in the United States since the Food and Drug Administration (FDA) approved scalp cooling machines in 2015. The FDA approval was based on clinical trials (research studies) that showed what we might expect from scalp cooling and how to best use this method to
reduce hair loss during chemotherapy for breast cancer.

**How effective is scalp cooling? Could I still lose my hair?**

The amount of hair you’re left with after scalp cooling depends on how much hair you start with and how healthy your hair and scalp are before you start treatment. It also depends on the type and dose of the chemotherapy medication you’re getting. Use the Decision Making Guide at [www.coldcap.com/cold-capping/decision-making-guide](http://www.coldcap.com/cold-capping/decision-making-guide) to see how scalp cooling can help you based on the type and dose of your chemotherapy treatment. For more information, talk with your healthcare provider.

Studies have shown that scalp cooling can work from 10% to 100% of the time. This makes it hard to predict how effective scalp cooling will be for you. Most studies have found that people lose less hair and use head coverings or wigs less often when scalp cooling is used compared to when it’s not used.

Even with scalp cooling, it’s normal to lose some hair (shedding) soon after you start treatment. This may not result in complete hair loss. The shedding may decrease as you continue to use scalp cooling during your chemotherapy treatment.
Even if you use one of the scalp cooling methods, there is no guarantee that you won’t lose a significant amount of hair and need a hair covering.

**Is scalp cooling hard to tolerate?**

Most people can tolerate scalp cooling, but about 30% to 50% of the time people have side effects such as headaches, nausea (feeling like you’re going to throw up), scalp pain, or feeling chilly. Some people also find the caps uncomfortably cold. A small number of people decide to stop using scalp cooling because of these side effects.

**Are there any risks to doing scalp cooling?**

There is a small risk of irritation on your scalp or forehead from cooling.

Some people worry about cancer cells traveling to the scalp and growing. There is a very small chance of this happening and it isn’t affected by the use of scalp cooling.

**How is scalp cooling done?**

Scalp cooling is done by wearing a special cap on your head. There are 2 different ways to cool your scalp: using frozen cooling caps or by using a machine that continuously cools the cap.
Frozen cooling caps

There are many well-known brands of cooling caps:


You can rent the Chemo Cold Cap and the Penguin cap through the companies that make them. Your healthcare provider can give you more information about these products.

It’s important for the caps to stay at the same cold temperature before, during, and after your treatment. To do this, you will need to have multiple frozen caps during each chemotherapy treatment and change them as they get warm. Follow each cap’s guidelines for how many caps you will need and how long you should wear each one.

All caps need to be frozen ahead of time and brought to your chemotherapy appointment in a portable cooler with dry ice. You will need to plan ahead to bring a caregiver, friend, family member, or a hired trained “capper” to help you change your cold cap during your treatment.
Cap attached to a cooling machine
Memorial Sloan Kettering (MSK) offers the Paxman Scalp Cooling System. This system works by attaching a cooling cap to a cooling machine. The machine pushes cold liquid through the cap while you’re wearing it.

How to Use the Paxman Scalp Cooling System

If you’re interested in using the Paxman Scalp Cooling System, talk with your healthcare provider before your first chemotherapy treatment. They will sign you up and Paxman will send you your cooling cap and kit. You will receive it in 3 to 4 days.

It’s important that you get ready for your scalp cooling treatment before your first appointment. Your nurse will connect your cap to the cooling machine, but you will need to prepare your hair and fit your cap on your head.

To learn how to get ready for your Paxman scalp cooling treatment, watch the videos on the Paxman website at www.coldcap.com.

After you watch the videos, practice getting your hair ready and fitting your cap. You may need some help from a caregiver, friend, or family member. You may also bring someone to your appointment with you.
Remember to bring your cap and kit with you to your appointment.

**How long does scalp cooling take during treatment?**

Scalp cooling will add time before and after each of your chemotherapy treatments. How long you need to cool before and after your treatment depends on the type of cooling cap you’re using and your chemotherapy. It can range from 20 minutes to 2 hours. If you’re using frozen caps, you can go back home with your cold cap on to finish your cooling.

Once you finish each chemotherapy treatment, you may be asked to finish your cooling in a separate area outside the chemotherapy infusion unit so that other patients can get treatment during the day.

Your healthcare team will answer your questions about how long cooling will take after treatments.

**How much does scalp cooling cost?**

The cost of scalp cooling depends on the type of scalp cooling system you use and the number of treatments you need. Most insurance companies don’t cover the cost of scalp cooling at this time.

For information on the cost of frozen cooling caps,
contact the company or look on their website.

If you use the Paxman scalp cooling system, you will be charged directly by Paxman for your cap and treatments. Pricing depends on how many treatments you need but can be as much as $2,200. For more information, visit the Paxman website at www.coldcap.com.

You will also be charged a facilities fee by MSK each time you use the cooling machines. This is about $73 per treatment and isn’t usually covered by insurance.

If you have any questions about cost, call Patient Billing Services at 646-227-3378.

There’s some financial support available for scalp cooling from an organization called “Hair to Stay.” For more information, visit their website at www.hairtostay.org.

**Caring for Your Hair and Head**

Here are suggestions on how to care for your hair and head while you’re getting treatment. For more information, read our resource *Hair Loss and Your Cancer Treatment* (www.mskcc.org/pe/hair_loss_cancer_treatment).
• Wash and condition your hair every 2 to 4 days with a fragrance-free shampoo and a cream rinse or hair conditioner.

• Always rinse your hair well and pat it dry with a soft towel.

• Brush or comb your hair gently with a soft-bristle brush or comb. Start brushing or combing your hair at the ends and gently work your way up to your scalp. You can also finger-comb your hair by wetting your fingers with water.

• If your hair is long, you may want to have it cut short before you begin treatment.

• Try using hair products specially designed to cover bald spots and thinning areas of your hair (such as Bumble and bumble™ Hair Powder).

Do not use the following things on your hair during treatment. They can be too harsh or pull on your hair.

• Hair spray, creams or oils, hair dye, bleach, relaxers, or permanents (perm)

• Clips, barrettes, bobby pins, pony tail holders, or scrunchies

• Hair dryers, curlers, curling irons, hot rollers, or a
• Hair straightener
• Rubber bathing or swimming caps

Also, don’t put your hair in braids, corn rows, or pony tails.

**Wigs and Head Coverings**

You may still want to wear a wig or other hair covering during chemotherapy. If you have any questions or concerns, talk with your healthcare provider.

**Wigs**

If you want to wear a wig or hair piece, try to get one before your hair falls out because it will be easier to match your hair color and style. If you’ve already lost some or all of your hair, bring a photo of your usual hairstyle and, if you can, a lock of your hair to the store. This will help you find a wig or hair piece that looks like your hair did before your treatment started.

When shopping for wigs or hair pieces, you may want to shop around and compare prices. A wig or hair piece should fit properly, be comfortable, and be easy to care for. You may want to start wearing it as soon as your hair begins to thin. As your hair gets thinner, you may need to have your wig or hair piece adjusted to make it fit better.
Many insurance companies will pay for wigs or hair pieces when hair loss is related to medical treatment. Contact your insurance company to find out what your plan offers. If you need help finding a place to buy a wig or hairpiece, talk with your healthcare provider.

**Head coverings**

Scarves, turbans, and hats can help hold hair that’s falling out and also hide a bald scalp. Head coverings come in different colors, textures, and styles. Scarves that are made from silk can easily slide off your head. You may want to buy a cotton blend scarf because it can be more comfortable and less likely to come untied or slip off your head.

Some people choose not to wear any head covering during their chemotherapy. This is your choice.

**Look Good Feel Better Program**

Sign up for a free, virtual Look Good Feel Better class to learn about wigs, make-up, and skincare techniques. To register for an online class, visit [www.lookgoodfeelbetter.org/virtual-workshops](http://www.lookgoodfeelbetter.org/virtual-workshops).
If you have any questions, contact a member of your care team directly. If you're a patient at MSK and you need to reach a provider after 5 p.m., during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.