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Hair Loss (Alopecia)

Hair loss (also called **alopecia**) is one of the most asked-about side effects of cancer treatment.

Certain cancer treatments can make you lose some or all of your hair. When this happens, the hair most often falls out in clumps during shampooing or brushing. Hair loss can be devastating. But for many people, hair grows back after treatment. Learn more about what to expect, and how to manage and cope with treatment-related hair loss.

- The type and dose (amount) of cancer treatment
- The condition of your hair before starting treatment
- Genetic hair loss or thinning
- Changes in your hormones
- Hair styling and heat
- Medicines
- Tobacco use
- Nutrition and diet
- Scalp conditions and infections

Treatments that can cause hair loss

Some cancer treatments are more likely than others to cause hair loss or thinning.

Chemotherapy

[Chemotherapy works by killing fast-growing cells](#)¹. Unfortunately, that includes the cells in your hair follicles. This is why some chemo can cause hair loss or thinning. (When it happens, it's known as **chemotherapy-induced alopecia or CIA**.)

This hair loss doesn't just affect the hair on your head (scalp). Anywhere hair grows can be affected by hair loss or thinning, including your eyelashes, eyebrows, arms, legs, and groin hair.

For most people, low-dose chemo, oral (pill) chemo, and IV chemo given every week hair.

- Vinorelbine (Navelbine), vincristine (Oncovin), and vinblastine (Velban)
- Melphalan (Alkeran)
- Topotecan (Hycamtin) and weekly low-dose irinotecan (Camptosar)

Types of chemo more likely to cause complete hair loss

- Cyclophosphamide (Cytoxan), ifosfamide (Ifex), busulfan (Myleran), and thiotepa (Tepadina)
- Dactinomycin (Cosmegen), doxorubicin (Adriamycin), epirubicin (Ellence), and idarubicin (Idamycin)
- Etoposide (VePesid, VP-16) and high dose irinotecan (Camptosar) or liposomal irinotecan (Onivyde)
- Paclitaxel (Abraxane, Taxol), docetaxel (Taxotere), eribulin (Halaven), and ixabepilone (Ixempra)

Types of chemo more likely to cause long-term or permanent hair loss

- High doses of docetaxel (Taxotere)
- Chemo regimens that use a combination of taxanes (such as docetaxel or paclitaxel) and anthracyclines (such as doxorubicin)

Many chemo regimens are given every 2 to 3 weeks. In these cases, if hair loss or thinning is going to happen it usually starts about 2 to 3 weeks after the first cycle and peaks by the end of the second cycle.

Whether or not your hair will grow back after chemo depends largely on how much damage was done to the hair follicle. Most chemo-induced hair loss is reversible once treatment is over.

Immunotherapy and targeted drug therapy

[Immunotherapy](#)² and [targeted drug therapy](#)³ can also cause hair loss, but it happens less often than with chemotherapy. If it does happen, it's more likely to be incomplete (partial) hair loss or hair thinning than total hair loss. Hair loss may start later and take longer to recover compared to chemo, because of how immunotherapy and targeted drug therapy works.

- Is more likely to be long-term or permanent

just hair.” But for many people, hair is part of their identity, relationships, or culture.

You might notice yourself feeling guilty or even ashamed for worrying about your hair loss. You might wonder, “Why is this so important to me? Shouldn’t I be worrying more about my cancer than my hair?” It’s normal to have these mixed feelings.

But remember: It’s not vain or superficial to feel however you feel about losing your hair.

Chemo-induced alopecia has been linked to poor body image, depression, and decreased quality of life. Some people might even avoid chemo altogether because they are afraid of losing their hair.

For many people, losing their hair feels like losing a part of themselves. Studies on how chemo-induced hair loss affects body image have shown that many women worry about how their hair loss will affect their femininity or attractiveness to others.

There aren’t many studies yet on how hair loss affects body image in men or people who identify as non-binary. But no matter your gender identity, hair can be an important part of your self-image.

That’s why it’s so important to talk about the emotional toll of hair loss. Knowing that you aren’t alone, and sharing with others who have gone through a similar experience, can really help you manage the feelings and emotions that often come with hair loss.

[Cancer Survivors Network](#)⁸

An online community where people with cancer, survivors, and caregivers can connect with others 24/7.

[Reach To Recovery](#)⁹

Through our Reach To Recovery website and app, you can match with a trained volunteer who is a breast cancer survivor.

[MHA - Mental Health America](#)¹⁰

Find a counselor or mental health provider with MHA's searchable directory.

Can hair loss be prevented?

Some [scalp cooling devices and cold caps](#)¹¹ are FDA approved to prevent chemotherapy-induced alopecia (CIA). But they can have some side effects, and they aren't recommended for everyone. Unfortunately, they don't prevent hair loss caused by

other types of cancer treatment such as immunotherapy and targeted drug therapy.

Ask your cancer care team if you are likely to lose your hair. If so, ask whether you will lose it quickly or over time. They may also be able to tell you if a scalp cooling device or cold cap could make you less likely to lose your hair.

Not all scalp cooling devices are FDA approved, and they might not be covered by insurance. You can talk to your cancer care team about the benefits, risks, and side effects.

What are my options if I do lose my hair?

[Wigs¹²](#) and other scalp coverings may be partially or fully covered by your health insurance. You will likely need to pay for your wig and then file a reimbursement claim with your insurance provider. Ask your cancer care team for a wig prescription.

Many people choose to cut their hair very short or even shave their head before it starts falling out. When your hair is very short or shaved, you might have less discomfort if it starts to fall out. Some people also feel more in control when they do this.

Many people choose to go bald, too. Some people like not having to worry about wigs or head coverings. Others see it as empowering or meaningful.

There isn't one right way to manage hair loss from cancer treatment. What matters most is finding an option that makes *you* feel comfortable, whatever that option is.

Is hair loss from cancer treatment permanent?

Hair loss related to cancer treatment is usually not permanent.

A few studies have found an increased risk of permanent or long-term hair loss with high doses of docetaxel (Doxil). Chemo regimens that combine taxanes and anthracyclines are also more likely to cause long-term or permanent hair loss.

About 1 in 3 breast cancer survivors experience long-term or permanent hair loss.

Just over 1 in 3 childhood cancer survivors experience long-term or permanent hair loss.

Hair growth after cancer treatment

When the hair on your scalp first starts to grow back, it might be a different color or texture. This is completely normal. A little over half of people who lose their hair because of cancer treatment report changes like this. These changes are almost always temporary.

Your hair will most likely return to its natural color and texture in a few months as your hair follicles recover and your hair continues to grow.

Everyone's hair grows at different rates. One person's hair might grow back quickly after cancer treatment, while another person's hair growth could take more time.

Certain people may also be more likely to lose their hair during cancer treatment because of other factors. Genetics, nutrition, and other health conditions can all play a part. This is why each person's experience with hair loss is unique, even if they get the same treatment.

Treatments for hair loss and thinning

There are many different treatments for hair loss and thinning. However, only a few have been shown to be effective in treating hair loss and thinning related to cancer treatment. Here are the most common ones.

Minoxidil

Minoxidil is a medicine approved for male and female-pattern alopecia. It's often used off-label for other types of hair loss, including chemo-induced alopecia. Many studies show that topical (applied to the scalp) minoxidil speeds hair growth after cancer treatment.

There aren't as many studies on oral (pill) minoxidil for hair loss, but the studies that have been done show positive results. There are also current clinical trials evaluating low dose minoxidil for permanent chemo-induced alopecia.

Important: Do not use minoxidil during cancer treatment.

This medicine causes your blood vessels to open wider (vasodilation), which can increase the amount of cancer treatment getting to the hair follicle. This can actually worsen hair loss or cause other problems.

Bimatoprost

Bimatoprost is a medicine for eye conditions like glaucoma. Topical bimatoprost has been shown to improve treatment-induced eyelash and eyebrow hair loss.

Spironolactone

Spironolactone is a medicine that is approved for female-pattern hair loss. More studies are needed to evaluate its use in people with chemo-induced hair loss. But it is sometimes used off-label for this purpose.

Light therapy (Photobiomodulation)

Low-level laser therapy (LLLT) is a type of treatment usually used for wounds, pain, or inflammation. It has been shown to treat male and female-pattern hair loss effectively. There have not been as many studies evaluating how well LLLT works for chemo-induced alopecia.

LLLT is relatively low cost (compared to some other treatments for hair loss). It can be used at home, and it carries few risks. LLLT is sometimes also called **photobiomodulation (PBM)**.

There have been a small number of studies in breast cancer patients that show significant improvement in hair regrowth following chemo compared to breast cancer patients who did not have LLLT.

As with any treatment or medicine, always talk to your doctor or cancer care team before starting or stopping anything. Tell them what medicines you currently take and if you've tried anything for hair loss in the past.

Tips for coping with hair loss and thinning

Whether your hair is just starting to fall out, or is beginning to grow back, here are some ways you can take care of yourself.

Be gentle.

- Your scalp might feel itchy, sore, or sensitive. Be gentle when brushing and washing your hair.
- Styles that pull on your hair (like ponytails and braids) can also worsen or speed up hair loss.
- Use a mild shampoo (such as baby shampoo) to wash your hair.

- Try to limit washing your hair to no more than 2 times per week.

Protect your scalp.

- If your scalp is exposed, use a broad-spectrum sunscreen with an SPF of at least 30.
- In cold weather, wear a hat or scarf to cover your head and stay warm.

Choose gentle fabrics and materials.

- A sleep cap minimizes friction (rubbing) between your scalp and pillowcase. This can reduce irritation.
- Bamboo, silk, and cotton are among the softest materials for people with hair loss. They tend to be the gentlest and coolest on the scalp.
- Hats with soft cotton or bamboo linings are often suggested.
- For unlined hats and wigs, think about adding a liner that absorbs and wicks away sweat to keep you comfortable.
- Organic fabrics might be a good choice for people with sensitive scalps. These fabrics are free from many chemicals that may cause itchiness and irritation.

Avoid harsh treatments.

- Avoid products with harsh chemicals or fragrances.
- Don't bleach, color, relax, or perm your hair. These types of treatments can weaken the hair and worsen breakage.

Avoid styling with heat.

- Whenever possible, let your hair air-dry.
- Avoid heating devices like flat irons, curling irons, or hot rollers.

Improve blood flow to your scalp.

- Regular scalp massages can improve circulation (blood flow). This may promote hair growth.

Take care of your body.

- Good sleep, nutrition, and physical activity are all important for your body to heal and recover.

Find emotional support.

- Losing your hair is one of the most traumatizing side effects of cancer treatment because it's so visible.
- It isn't selfish or vain to be sad, angry, or however you feel.
- Connecting with friends, family, or support groups can help you cope.
- Be patient and kind to yourself during this process. Remember, you aren't alone.

Most hair loss related to cancer treatment is temporary. Hair often starts growing back after treatment ends. A small number of cancer treatments are more likely to cause long-term or permanent hair loss. Ask your cancer care team about your specific cancer treatments and what to expect.

More resources

[Flyer: What to Do for Hair Loss](#) ¹³

Learn more about how to manage hair loss during and after cancer treatment.

[Where to Find Wigs, Scarves, and Hats](#) ¹⁴

The American Cancer Society EverYou™ program features a collection of quality wigs, headwear, and scarves.

[Choosing a Wig During Cancer Treatment](#) ¹⁵

Get tips on choosing and wearing a wig. Learn about different types of wigs, and how to style and care for yours.

[Styling Your Scarf, Handkerchief, or Bandana](#) ¹⁶

Learn how to wear and tie a scarf if you've lost or expect to lose your hair due to chemo or other cancer treatment.

Hyperlinks

1. www.cancer.org/cancer/managing-cancer/treatment-types/chemotherapy/how-

- [chemotherapy-drugs-work.html](#)
2. www.cancer.org/cancer/managing-cancer/treatment-types/immunotherapy.html
 3. www.cancer.org/cancer/managing-cancer/treatment-types/targeted-therapy.html
 4. www.cancer.org/cancer/managing-cancer/treatment-types/hormone-therapy.html
 5. www.cancer.org/cancer/managing-cancer/treatment-types/radiation.html
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 8. csn.cancer.org/
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