Cold Caps and Scalp Cooling

Scalp cooling is a type of therapy that might reduce hair loss caused by chemotherapy

Cooling caps (or cold caps) are **automated scalp cooling systems** regulated by the FDA.

They work by connecting a special cap to an automated device that circulates a liquid or gel cooled to a specific temperature. Automated cold caps are only approved for chemo-induced hair loss related to solid tumor cancers, not blood cancers.

There are currently three automated scalp cooling systems that are FDA-approved for preventing chemo-induced hair loss (alopecia).

- DigniCap
- Paxman
- Amma

Manual scalp cooling (frozen gel caps)

Frozen gel caps are **manual scalp cooling devices** not regulated by the FDA.

This type of device doesn't use an automated cooling system. Instead, it is manually cooled in a freezer or with dry ice. The temperature for frozen gel caps must be much lower compared to automated cold cap systems. This is because the cap starts to warm as soon as you put it on your head. You also need to switch to a new frozen cap every 30 minutes.

Frozen gel caps are not regulated by the FDA. Compared to automated scalp cooling systems, frozen gel caps are less expensive. But since they aren't FDA approved, they are less likely to be covered or reimbursed by insurance.

How does scalp cooling prevent hair loss?

Cold restricts blood flow. When you cool your scalp, you temporarily decrease blood flow to that area. This reduces the amount of chemo that gets to your hair follicle cells. For some people, protecting hair follicle cells from being damaged or killed by chemo can prevent or reduce scalp hair loss.

Does it work for immunotherapy or targeted drug therapy?

Scalp cooling does not prevent hair loss or thinning caused by immunotherapy and targeted drug therapy. This is because these treatments don't work in the same way as

chemo. However, chemo is more likely to cause hair loss compared to most immunotherapy and targeted drug therapy.

Can anyone getting chemo use scalp cooling?

Cold caps and other scalp cooling devices aren't recommended for everyone. It depends on several factors, including the type of cancer you have.

Scalp cooling is not recommended for people who:

- Have a central nervous system cancer
- Are getting chemo to prepare for a bone marrow (stem cell) transplant
- Had, or will have, radiation therapy to the skull
- Have leukemia, lymphoma, or multiple myeloma. (These cancers travel through the blood and lymph system, so we don't want to reduce the amount of chemo going to the head and scalp because of the possibility of cancer cells in these areas.)
- Have a cold-agglutinin disease, cryoglobulinemia, or post-traumatic cold dystrophy (due to the risk of toxicity)

Scalp cooling might not be as effective for people with:

- Severe liver problems, because scalp cooling affects how long a medication stays in your system.

Scalp cooling also isn't recommended for pediatric patients. It has not been well studied or approved in children under 18 years of age.

What the research shows

Each person responds to scalp cooling differently. These devices work better for certain types or doses of chemo. For example, if a chemo regimen includes an anthracyclineAy tothracyclineT

Research also suggests that the fit of a cooling cap is important. Cooling caps that aren't fitted tightly have been linked with more hair loss. Increased hair loss often happens in patches where the cap's contact with the scalp is poor.

Side effects

Scalp cooling side effects are rare and usually tolerable. The most common side effects reported include:

- Headaches
- Nausea
- Dry skin
- Claustrophobia
- General discomfort related to feeling cold

There are a small number of reports of scalp thermal injury happening when people use the nonregulated manual cold caps. Some people use an inner cap or band to reduce the risk of thermal injury.

Do cold caps increase the risk of cancer spreading to the scalp?

Cooling caps work by reducing the amount of chemo that gets to the hair follicle cells on the scalp. Some people ask if this increases the risk that their cancer could spread to the skin of their scalp (scalp skin metastases).

So far, studies looking at this have mostly been in people with breast cancer. But in general, the risk of scalp metastases (mets) is already quite low. No studies have shown that scalp cooling increases your risk for developing scalp mets any more than if you don't use scalp cooling.

Is scalp cooling covered by insurance?

Concern about the cost of scalp cooling is the most common reason people don't ask about or use it.

Medicare started covering scalp cooling in 2022 with a one-time benefit up to $1,850. This applies to automated scalp cooling systems, which are FDA-approved. Medicare might also cover certain supplies needed for scalp cooling, such as extra caps. Many insurance companies now also cover or reimburse for these systems.

Manual cold caps are not regulated or FDA-approved, so they may or may not be covered by insurance. Medicare does not cover manual cold caps.

If you are considering using scalp hypothermia (with a manual cap or an automatic cap), it's important to carefully weigh the potential benefits, discomforts, and risks. Discuss the pros and cons with your cancer care team. You might also want to ask if your treatment center has experience using cooling caps and how successful they have been.

If you need help paying for a cold cap

There are several resources available to people who can't afford to pay for scalp cooling.

- HairToStay[1] is a nonprofit organization that helps low-income families pay for scalp cooling treatment.
- The Rapunzel Project[2] is a nonprofit organization that partners with cancer facilities to provide cold caps without charge.

There are also many state and local organizations that offer financial assistance.

- Search for free and reduced-cost resources in your area through findhelp.org[3].

Learn more

Flyer: What to Do for Hair Loss
Learn more about how to manage hair loss during and after cancer treatment.

Where to Find Wigs, Scarves, and Hats
The American Cancer Society EverYou™ program features a collection of quality wigs, headwear, and scarves.

Hair Loss (Alopecia) [4]
Certain cancer treatments, like chemo, make people lose some or all of their hair. Learn what to expect and how to cope with treatment-related hair loss.

Choosing a Wig During Cancer Treatment [5]
Get tips on choosing and wearing a wig. Learn about different types of wigs, and how to

style and care for yours.

Hyperlinks

1. hairtostay.org/
2. www.rapunzelproject.org/
3. www.findhelp.org/
4. www.cancer.org/cancer/managing-cancer/side-effects/hair-skin-nails/hair-loss/coping-with-hair-loss.html
5. www.cancer.org/cancer/managing-cancer/side-effects/hair-skin-nails/hair-loss/choosing-and-wearing-wig.html

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