Diphencyprone (DPC) treatment for Alopecia Areata

Irving Building Dermatology
0161 206 1846
What is diphencyprone treatment?

Diphencyprone (DPC) is a liquid chemical that has been used to stimulate hair growth in alopecia areata (AA) when painted onto the scalp. It works by causing an allergic reaction where it touches the skin. This causes a red and itchy eczema rash on the skin. How it works is not fully understood but the eczema appears vital in stimulating hair to regrow. Although it has been in use for over 30 years it is not licenced for treating AA.

How is DPC treatment given?
The treatment is applied by a trained member of staff in a dedicated room in the hospital. At the beginning we need to make you allergic to the DPC. This is done by painting the DPC liquid onto a small patch of skin on your arm. We expect that within a few days this area will become red and itchy.

This is a good sign as it shows you are now allergic to DPC. The treatment is then painted directly onto your scalp using a cotton bud. Treatment is usually given every week until hair has regrown. We start out using a very weak solution of DPC, and gradually build up the dose over time.

The aim is to induce redness and itching on the scalp where the DPC is applied. We aim for your scalp to be itchy for 20-24 hours after each application. The dose of DPC will be adjusted at each visit to achieve this. If there is no redness or itch the treatment is unlikely to be successful. If there is too much redness and itch, you will be uncomfortable.

How quickly will it work?
The first signs of hair regrowth typically appear after a delayed period of 3 months or more. This means you need to remain motivated to continue treatment in the earlier days as you will have the scalp discomfort but without the benefits of hair growth.

The actual time the treatment takes to work varies from person to person and will depend on how fast you respond. If there are no signs of hair regrowth by 6 months, then DPC treatment will usually be stopped.

While the treatment can usually be completed at each visit within 10-15 minutes, receiving the whole course requires a long-term time commitment from you.

You should strongly consider how much time the treatment takes before deciding whether to embark upon this treatment.

Who can have DPC treatment?
At Salford Royal, patients are considered eligible for DPC treatment if they have alopecia areata and have lost more than half of their scalp hair. Treatment with DPC may also be given to those with less than 50% hair loss if previous treatments have been unsuccessful. Children with AA may also be treated. Your dermatologist feels that your alopecia areata may benefit from being treated with DPC. You should not have this treatment if you are pregnant or trying to conceive. The safety of using DPC in pregnancy is currently unknown. Therefore, all women of childbearing potential must use effective contraception during the treatment course and for 6 months after to prevent pregnancy. A negative pregnancy test result is required before DPC treatment can start.
**Does it work?**

The chance of your hair re-growing with a course of DPC depends largely on the extent of your hair loss (the more scalp involved, the lower the success rate) and on the age you first developed AA (a younger age of onset gives a lower success rate).

An estimate is that 50-60% of patients treated with DPC have a worthwhile response.

While not all responders experience complete hair regrowth, many will experience an acceptable level of hair regrowth that may allow them, for example, to stop wearing a wig.

Therefore, a realistic aim of DPC treatment is to produce cosmetically acceptable hair regrowth.

Remember, no treatment is 100% successful and treatment of alopecia areata is particularly difficult.

However, out of all the available treatment options for alopecia areata, DPC is recommended by the British Association of Dermatologists published alopecia areata treatment guidelines (2012) as the best treatment for extensive AA.

**Are there any other treatment options available?**

Yes. There are a number of reported treatments for alopecia areata.

Commonly used treatments include topical steroid creams and lotions, steroid injections, steroid tablets and topical dithranol cream treatment, amongst others.

Also, sometimes hair can grow back on its own without any help, although this is less likely with extensive hair loss.

Feel free to discuss what alternative treatment options are available with your Dermatologist.

**Are there any risks or complications?**

**Local skin reactions:**

- Eczema (redness, scaling, itching) on the scalp where the DPC is applied is expected as part of the treatment. A degree of eczema is important to stimulate hair growth. Sometimes, the eczema may be more severe and uncomfortable than expected. Occasionally the skin may blister and ooze. In this case you should apply the steroid cream (given to you at the start of the treatment course) to the affected area every 12 hours until the rash has settled

- Lighter or darker skin pigmentation on the scalp where the DPC is applied. This is more likely if you have naturally darker skin. This usually settles with time

**Other side-effects:**

- Enlarged lymph glands in your neck and/or arm pits are common during DPC treatment

- Eczema and/or itching all over the body. This is more common if you had eczema before starting treatment

- Small itchy blisters on the hands or feet (known as “pompholyx”). This is more common if you had eczema before starting treatment

- Urticaria (“hives”) is a rash that causes itchy red bumps to appear on the skin. This can occur in up to 10% people treated

- Vitiligo can occur in up to 7% of people treated with DPC. This condition results in white patches on the skin due to loss of skin pigment. This is more visible if you have naturally darker skin. Rarely this skin colour change may be permanent

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What if I develop side effects that worry me?

Before starting treatment you will be given our contact details. You can contact us at any time during normal working hours to obtain advice or to organise an urgent review if necessary.

If you develop a worrying side effect over the weekend, you may need to seek medical advice from your local GP out of hours service.

If you are unwell and require urgent treatment you should attend your local Accident & Emergency department.

What precautions should I take during treatment?

Please follow the precautions listed below to reduce the risk of side effects and make the treatment more effective.

- Keep head covered for 6-8 hours after treatment. The cover needs to exclude all light (e.g. hat with thick closed-weave material or a wig)
- Avoid touching the treatment area for 24 hours. If you do touch the area wash your hands immediately
- Do not wash your head for 24-36 hours after treatment
- If the treatment area on your head becomes very hot, red and itchy immediately apply the steroid cream or lotion supplied and repeat every 8-12 hours until the discomfort has settled

If you have problems or other explained symptoms, please contact the department.

Contact details

DPC Treatment Room:
0161 206 1846
Dr Harries:
0161 206 0523

Email:
matthew.harries@srf.nhs.uk

The Dermatology Centre,
Salford Royal NHS Foundation Trust,
Stott Lane,
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M6 8HD

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For further information on this leaflet, it’s references and sources used, please contact 0161 206 1846.