

Dandruff – treat the scalp, not the flake

Lynda Steyn

Amayeza Information Services

Seborrhoeic dermatitis is a common skin condition that usually affects oily areas of the body, such as the scalp, face, eyebrows, sides of the nose, eyelids, and chest. Dandruff is a mild form of seborrhoeic dermatitis that affects the scalp. In infants, this is known as cradle cap.

How does dandruff present?

Dandruff presents as white or yellowish flakes that may be oily or dry. The scalp is usually itchy, but there is no visible inflammation of the scalp. In infants, cradle cap usually presents as a scaly or crusty scalp. While not a serious condition, dandruff may cause embarrassment and lowered self-esteem. The itch may also cause physical irritation.

What causes dandruff?

The exact cause of dandruff remains unknown. An overgrowth of *Malassezia*, a yeast found naturally on the scalp, is thought to be a factor. Other factors, such as stress, genetics, cold, dry weather, a sensitivity, or reaction to certain hair care products, or having dry skin may also contribute to the development of dandruff. Poor hygiene does not cause dandruff. However, shampooing the hair less frequently makes the flakes more visible.

Who is more at risk of developing dandruff?

Age

Anyone can develop dandruff at any age. However, dandruff usually starts at around puberty, with incidence and severity increasing until around 20 years of age. The incidence of dandruff in people over the age of 50 years is lower. Infants usually present with cradle cap in the first three months of life.

Gender

Males are more likely to develop dandruff than females.

Certain illnesses

People with weakened immune systems, HIV, Parkinson's disease, certain cancers, or recovering from a stressful medical condition are more likely to develop dandruff. Certain medications, such as those used to treat psychiatric conditions, may also cause dandruff.

How is dandruff treated?

The aim of therapy is to treat the scalp, clear the flakes, treat any other symptoms, such as itch, and to prevent these symptoms from returning.

Infants

Cradle cap usually clears on its own without any therapy. However, the following advice may be given to the caregiver:

- Shampoo the infant's hair with baby shampoo once daily and use a soft brush or fine-tooth comb after shampooing to gently loosen and remove the scales. An emollient, such as white petroleum jelly or mineral oil, may be applied to the scalp before shampooing (and left overnight, if necessary) to soften the scales, making them easier to remove.
- If these measures fail to improve cradle cap, the infant may be referred to the doctor for alternative treatment (such as a mild topical corticosteroid or antifungal shampoo).

Adolescents and adults

Dandruff is commonly treated with an over-the-counter anti-dandruff shampoo. Although they contain different active ingredients, these treatments usually all achieve the same result after four weeks of use. The purpose of the shampoo is to treat the scalp and not the hair. It is therefore important that the patient knows that the shampoo should be left on the scalp for a few minutes before rinsing thoroughly.

Ketoconazole (e.g. Kez®, NizShampoo®)

Ketoconazole is an antifungal. Antifungal shampoos containing ketoconazole 2% may be used twice weekly, usually for about 2–4 weeks to treat dandruff. The shampoo should be left on the scalp for approximately 3–5 minutes before rinsing off. Once the dandruff is under control, the shampoo may be used once a week to prevent the return of dandruff.

Other commonly used anti-dandruff shampoos include:

Selenium sulphide (e.g. Selsun®)

Selenium sulphide has anti-infective properties that slows the growth of yeast. As a shampoo, it should be applied to a wet scalp and left for 2–3 minutes before rinsing thoroughly.

Zinc pyrithione (e.g. Head and Shoulders®)

Zinc pyrithione has antibacterial and antifungal properties.

Coal tar (e.g. Tritar®, Neutrogena T/Gel®)

Coal tar works by decreasing the scaling and dryness of the scalp. It can also decrease the itchiness associated with dandruff.

Anti-dandruff shampoos should be applied according to the manufacturer's instructions. As the symptoms of dandruff improve, they may be used less frequently. Although treatments are effective, dandruff can recur once treatment has stopped. An alternative anti-dandruff shampoo may be tried if the symptoms do not improve after 4–6 weeks.

Refer the patient for further investigation if:

- the scalp shows signs of infection
- the dandruff is not responding to topical treatments
- there are symptoms of another skin condition, such as psoriasis or eczema
- the patient complains of a very itchy scalp

Bibliography

- Blenkinsopp A, Paxton P, Blenkinsopp J. Symptoms in the pharmacy. 7th ed. Sussex, UK: John Wiley & Sons; 2014.
- Borda L, Wikramanayake T. Seborrheic dermatitis and dandruff: a comprehensive review. *J Clin Investig Dermatol.* 2015;3(2):10.
- Brazier Y. How to treat dandruff. In: *Medical News Today.* Updated 26 Oct 2020. Available from: <https://www.medicalnewstoday.com/articles/152844>. Accessed 1 Feb 2021.
- Coal tar shampoo – topical. HealthlinkBC. Updated Jun 2018. Available from: <https://www.healthlinkbc.ca/medications/fdb7226>. Accessed 7 Feb 2021.
- Gallagher G. How Pyrithione Zinc is used in skin care. Updated 26 Mar 2020. Healthline. Available from: <https://www.healthline.com/health/pyrithione-zinc#:~:text=Pyrithione%20zinc%2C%20also%20commonly%20known,a%20main%20factor%20in%20dandruff>. Accessed 7 Feb 2021.
- Marcin A. Dandruff: what your itchy scalp is trying to tell you. Updated 11 May 2019. Healthline. Available from: <https://www.healthline.com/health/dandruff-itchy-scalp#symptoms-and-causes>. Accessed 1 Feb 2021.
- Mayo Clinic. Seborrheic dermatitis (symptoms and causes). Updated 7 Apr 2020. Available from: <https://www.mayoclinic.org/diseases-conditions/seborrheic-dermatitis/symptoms-causes/syc-20352710>. Accessed 1 Feb 2021.
- Sasseville D. Patient education: Seborrheic dermatitis (including dandruff and cradle cap) (Beyond the Basics). Updated 5 April 2019. In: *UptoDate.* Available from: <https://www.uptodate.com/contents/seborrheic-dermatitis-including-dandruff-and-cradle-cap-beyond-the-basics>. Accessed 1 Feb 2021.
- Sasseville D. Seborrheic dermatitis in adolescents and adults. Updated 26 Mar 2020. In: *UptoDate.* Accessed 1 Feb 2021.
- Watson S. Is it dandruff or dry scalp? Symptoms, treatment, and more. Updated 7 Mar 2019. Healthline. Available from: <https://www.healthline.com/health/skin-disorders/dandruff-vs-dry-scalp>. Accessed 1 Feb 2021.

