


# The Hair Growth Cycle in Women and Common Hair Health Issues

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University of Nebraska Medical Center  Nebraska Medicine

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## Introduction

Erin Barrett MD

- Dr. Erin Barrett (Wei) is a dermatologist with expertise in hair loss, autoimmune bullous diseases, and clinical research.
- She trained under world-renowned hair loss experts Drs. Antonella Tosti and Mariya Miteva.
- A graduate of MIT and Harvard Medical School, she has received numerous accolades for her research and patient care.
- Currently, she serves in multiple leadership roles at the University of Nebraska Medical Center, advancing dermatologic innovation and education.

Disclaimer: The material provided in this presentation is for informational purposes only and is not intended as medical advice. If you have specific questions regarding your own health, including whether you should be evaluated by a specialist, please contact your health care provider.

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## Introduction

Ronald J. Sulewski, Jr., MD

- Medical school – Loyola University Stritch School of Medicine
- Internship – Resurrection Medical Center (Chicago)
- Residency – University of Miami (Dr. Phillip Frost Department of Dermatology and Cutaneous Surgery)
- Private Practice – Chicago for ~ 10 years
- UNMC/Nebraska Medicine - Assistant Professor/Director of Laser and Aesthetic Dermatology since April 2020

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### Disclosures

- Drs. Barrett and Sulewski have **no relevant disclosures** to therapeutics discussed here.
- We discuss Off-label use
- We do not own any of the web-based images
- *Disclaimer: The material provided in this presentation is for **informational purposes only** and is **not intended as medical advice**. If you have specific questions regarding your own health, including whether you should be evaluated by a specialist, please contact your health care provider.*

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### Learning Objectives

1. Identify **common patterns** of hair loss
2. Explore **effective treatment options** for managing common hair loss conditions
3. Differentiate **common treatments** for different types of hair loss

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### Part I: Hair Basics

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## Telogen

- **Resting phase**, where the hair follicle is inactive and hair shedding occurs before the cycle restarts
- Lasting from 1 to 4 months
- When you brush, telogen hair falls out (analogous to dead skin)

1. Ntarelli N, Gahoonia N, Sivamani RK. Integrative and Mechanistic Approach to the Hair Growth Cycle and Hair Loss. Journal of Clinical Medicine. 2023;12(3):893. doi:10.3390/jcm12030893. PMID: 36802385.  
2. Lin X, Zhu L, He J. Morphogenesis, Growth Cycle and Molecular Regulation of Hair Follicles. Frontiers in Cell and Developmental Biology. 2022;10:899096. doi:10.3389/fcell.2022.899096. PMID: 36334174.

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## Definitions: Shedding vs. Thinning

**Hair shedding** refers to the natural process of losing hair, typically up to 80 to 100 hairs per day




Image source: <https://www.foundhair.com/blog/telogen-effluvium-what-you-need-to-know>

**Hair thinning** involves a reduction in hair density, often due to factors like androgenetic alopecia or chronic telogen effluvium.




Image source: [http://www.researchgate.net/figure/Dermoscopy-of-the-scalp-A-FPHL-There-is-great-variability-in-the-thickness-of-the-hair\\_fig\\_281710265](http://www.researchgate.net/figure/Dermoscopy-of-the-scalp-A-FPHL-There-is-great-variability-in-the-thickness-of-the-hair_fig_281710265)

1. McDonald KA, Shelley AJ, Colantonio S, Beecker J. "Hair Pull Test: Evidence-Based Update and Revision of Guidelines." *Journal of the American Academy of Dermatology* 2017; 76(3):472-477. PMID: 28086322
2. Whiting DA. "Chronic Telogen Effluvium: Increased Scalp Hair Shedding in Middle-Aged Women." *Journal of the American Academy of Dermatology* 1996; 35(6):899-906. PMID: 8934454

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## Pregnancy and Hair

- During pregnancy, hair **sheds LESS** primarily due to hormonal changes, particularly the increased levels of estrogen
- Estrogen **prolongs the anagen (growth)** phase of the hair cycle, resulting in a higher proportion of hair follicles remaining in this phase and fewer transitioning to the telogen (resting) phase
- Hormonal effect typically reverses postpartum, leading to an increase in hair shedding known as **postpartum telogen effluvium**



Image: <https://www.madeformums.com/pregnancy/how-pregnancy-changes-your-hair/>

1. Gizienti S, Ekmekci TR. "The Changes in the Hair Cycle During Gestation and the Post-Partum Period." *Journal of the European Academy of Dermatology and Venereology* 2014; 28(7):878-81. PMID: 25041094. doi: 10.1111/jdv.12188.

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### Post Partum Telogen Effluvium

- Occurs 2-5 months after childbirth
  - Due to **sudden drop in hormone levels**, particularly estrogen, causing large number of hair follicles to enter the telogen (resting) phase simultaneously, leading to noticeable hair shedding
- Self-limiting** and resolves within **6-12 months** without specific treatment.
- Breastfeeding** may influence the severity and duration of postpartum TE



1. Gizlent S, Ekmekci TR. The Changes in the Hair Cycle During Gestation and the Post-Partum Period. *J Eur Acad Dermatol Venereol.* 2014;28(7):878-81. doi:10.1111/jdv.12188. PMID: 24033943.

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### Disorder of Increased Shedding

- Telogen effluvium** is a condition characterized by excessive hair shedding due to a **higher number** of hair follicles entering the telogen (resting) phase of the hair growth cycle

1. Chien Yin GO, Siong-See JL, Wang ECE. "Telogen Effluvium - A Review of the Science and Current Obstacles." *Journal of Dermatological Science* 2021; 101(3):156-163, PMID: 33507193, doi: 10.1016/j.jdermsci.2021.01.007.  
 2. Gizlent S, Ekmekci TR. "The Changes in the Hair Cycle During Gestation and the Post-Partum Period." *Journal of the European Academy of Dermatology and Venereology* 2014; 28(7):878-81, PMID: 25041004, doi: 10.1111/jdv.12188.

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### Pull Test

- Pull test involves selecting 50 to 60 hairs and gently pulling them to see how many hairs are shed
- A positive test, indicating abnormal hair shedding, is defined by the removal of more than 10% of the hairs in each bundle: 5-6 hair
- Help differentiate between normal shedding and conditions like telogen effluvium or anagen effluvium

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**Causes of Telogen Effluvium**

- Thyroid functional changes
- Nutritional Deficiency: Low Vitamin D, Ferritin, and B12
- Excess Vitamin A supplementation or Vitamin A Derivatives
- Hormonal Changes and Childbirth
- Stress (psychological, physiological)

1. Chien Yin GO, Siong-See JL, Wang ECE. "Telogen Effluvium - A Review of the Science and Current Obstacles." *Journal of Dermatological Science* 2021; 101(3):156-163. PMID: 33590193. doi: 10.1016/j.jdermci.2021.01.007.  
2. Patel M, Harrison S, Sinclair R. "Drugs and Hair Loss." *Dermatologic Clinics* 2013; 31(1):67-73. PMID: 23266111. doi: 10.1016/j.det.2012.08.002.

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**What does NOT cause increased shedding**

- Increased brushing
- Increased washing
  - If you don't wash one day, the hair comes out next time you do
- Running finger through hair

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**Hair Breakage vs Hair Shedding**

- Typical complaint is hair does not grow out or cannot have long hair
- Due to external processing, such as heat or hair dye

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**Prevention of Hair Breakage**

- Shampoo the scalp, not the hair
- Brush out **while conditioner is in** the hair (while in shower)
- Limit heat or only dry 85%

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**Part I Take Home**

- Increased shedding and thinning are distinct
- Pregnancy is a time when shedding is less than normal; post partum this reverses
- Increase shedding is typically reversible except in rare cases
- Normal shedding is 100 hair per day, and increased if you do not wash or brush that day
- Hair washing and brushing does NOT cause increased shedding; breaking is NOT shedding

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**Part II. Types of Hair Loss (and most common hair loss)**

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## Broad Types of Hair Thinning Disorders



**Scarring hair loss** (cicatricial alopecia) involves permanent destruction of hair follicles due to inflammatory processes, leading to irreversible hair loss and scarring.

**Non-scarring hair loss** (non-cicatricial alopecia) such is characterized by temporary hair shedding without follicular destruction, allowing for potential hair regrowth.

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## Scarring Alopecia



### 1. Lymphocytic Scarring Alopecias

- Chronic cutaneous lupus erythematosus (discoid lupus erythematosus)
- Lichen planopilaris
- Frontal fibrosing alopecia
- Graham-Little syndrome
- Pseudopelade of Brocq
- Central centrifugal cicatricial alopecia (CCCA)

### 2. Neutrophilic Scarring Alopecias

- Folliculitis decalvans
- Dissecting cellulitis

### 3. Mixed Scarring Alopecias

- Acne keloidalis nuchae
- Folliculitis (acne) necrotica
- Erosive pustular dermatosis

1. Bolduc C, Sperling LC, Shapiro J. "Primary Cicatricial Alopecia: Other Lymphocytic Primary Cicatricial Alopecias and Neutrophilic and Mixed Primary Cicatricial Alopecias." *Journal of the American Academy of Dermatology* 2016; 75(6):1101-1117, PMID: 26769213, doi: 10.1016/j.jaad.2015.01.056.

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## Non-Scarring Alopecia



- Telogen Effluvium
- Androgenetic Alopecia
- Alopecia Areata
- Trichotillomania
- Traction Alopecia

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### Scarring Alopecia Example

Frontal fibrosing alopecia      Lichen planopilaris

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### Examples of Non-Scarring Alopecia

Female pattern baldness      Alopecia areata

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### Other Example of Non-Scarring Alopecia

Image source: <https://my.clevelandclinic.org/health/diseases/9880-trichotillomania>

Image source: <https://my.clevelandclinic.org/health/diseases/9880-trichotillomania>

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## Androgenetic Alopecia

- **Definition:** AGA, also known as **male or female pattern hair loss**, is a common hereditary condition causing progressive hair thinning.
  - **Cause:** Driven by genetics and **DHT (dihydrotestosterone)**, which shortens the hair growth cycle and shrinks hair follicles.
  - **Patterns of Hair Loss:**
    - **Men:** Receding hairline, thinning at the crown.
    - **Women:** Widespread thinning, usually at the part line.
  - **Prevalence:** Affects **50% of men by age 50** and **40% of women by age 70**.
- 💡 **Key Fact:** AGA is **gradual but treatable** with early intervention!

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## Male and Female Pattern



Image: <https://www.everydayhealth.com/hair-loss/male-vs-female-pattern-baldness-androgenetic-alopecia/>

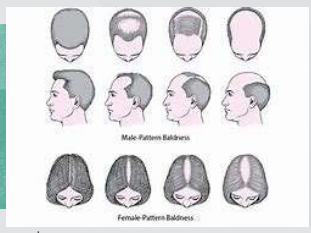


Image: <https://tejuvenatehairandskin.com.au/male-vs-female-pattern-baldness/>

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## Miniaturization and Variability

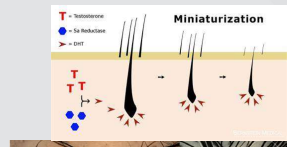


Image source: <https://www.bernsteinmedical.com/hair-loss/basics/miniaturization/>

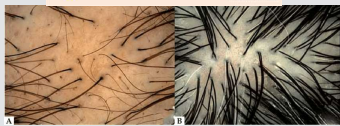


Image source: [https://www.researchgate.net/publication/319800000/Dermoscopy\\_of\\_the\\_scalp-A\\_FPHL\\_There\\_is\\_great\\_variability\\_in\\_the\\_thickness\\_of\\_the\\_hair\\_fig2\\_281719265](https://www.researchgate.net/publication/319800000/Dermoscopy_of_the_scalp-A_FPHL_There_is_great_variability_in_the_thickness_of_the_hair_fig2_281719265)

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## Treatment for Androgenetic Alopecia



- Topical Minoxidil
- Oral Finasteride – inhibits type 2 alpha reductase
  - Dutasteride - study shows non-inferiority
  - Spironolactone - anti-androgen option in women
- PRP
- Hair Transplant – Surgical option

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## Topical Treatments



- Minoxidil 2 and 5% (or compounded 7%)
  - Solution or Foam
- Prolongs Anagen phase, enlarges hair shaft diameter
- Risks – irritation
- Long term – must continue using to maintain benefits

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## Oral Minoxidil



- Opens potassium channels to improve blood flow to hair follicles
- Stimulates VEGF production, promoting hair growth
- Suppresses androgen receptor functions and modulates hormonal pathways involved in AGA.

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### Low-dose Oral Minoxidil Before and After

Image source: Dr. Maryanne Senna (Instagram @HairWithDMare)

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**AAD**

REVIEW | VOLUME 64, ISSUE 3, P737-746, MARCH 2021

### Oral minoxidil treatment for hair loss: A review of efficacy and safety

Michael Randolph, BS • Antonella Tosti, MD, PhD

Published: July 01, 2020 • DOI: <https://doi.org/10.1016/j.jaad.2020.06.1009> [Check for updates](#)

A review of 17 studies and **634** patients

Largest study review of 148 patients showed mean dose of 1mg to be effective for female pattern hair loss

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### Safety of low dose minoxidil in hair loss

- Hypertrichosis (20.5%)**
- Lower limb edema (2.2%)**
- Hypotension (1.8%)**
- ECG changes (0.9%)**

**Table II. Summary of adverse effects with varying oral minoxidil doses**

Minoxidil dosage, mg/d	Men, n	Women, n	Hypertrichosis, n (%)	Lower limb edema, n (%)	Hypotension, n (%)	ECG changes, n (%)
0.25	25	106	9 (6.8)	1 (0.7)	3 (2.3)	0
0.45*	33	31	8 (12)	2 (3.1)	5 (7.8)	0
0.5	0	15	4 (27)	0	0	0
1†	0	220	46 (21)	3 (1.4)	1 (1.4)	2 (0.9)
1.25	33	17	8 (16)	1 (2)	1 (5.5)	0
2.5	10	15	13 (52)	1 (4)	0	0
5	66	0	36 (55)	5 (7.6)	0	3 (4.5)
Total	167	404	117 (20.5)	13 (2.2)	10 (1.8)	5 (0.9)

ECG, Electrocardiography.  
\*Sublingual administration.

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## Platelet Rich Plasma Therapy

Image source: <https://www.igh.com/hair-restoration-procedures-la-jolla/prp-therapy-hair-loss/>

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## PRP

- **How PRP Works:** Rich in **stem cells & growth factors** to stimulate hair growth
- **Procedure:** 4 sessions, every **4-6 weeks**, then maintenance every **6 months**
- **Minimal Side Effects:**
  - 😣 Mild pain, headache, swelling, bruising
  - ❄️ **Cold air (Zimmer forced cryo)** used to reduce discomfort

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## PRP Before and After

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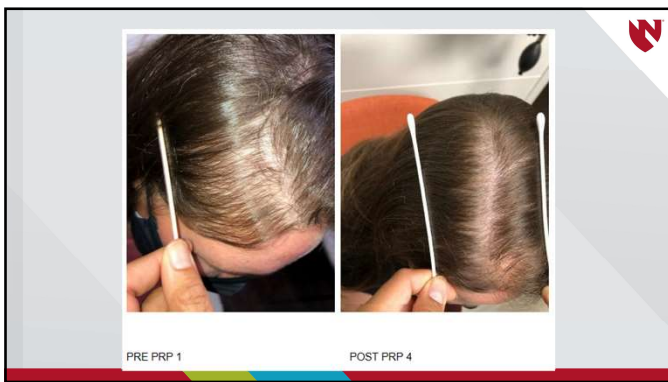
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**Sidenote of over-the-counter treatments**

**Nutrafol**

- **Botanical extracts** that target:
  - Inflammation
  - Oxidative stress
  - Hormonal imbalances
  - Intermediary signaling pathways
- **Key ingredients:**
  - **Saw palmetto:** Inhibits dihydrotestosterone (DHT).
  - **Curcumin:** Anti-inflammatory properties.
  - **Marine collagen and hyaluronic acid:** Support hair structure and hydration.
- **Clinical studies** show increased hair counts and reduced hair shedding in perimenopausal, menopausal, and postmenopausal women.
- **Caveat: trials mostly funded by companies**

1. Ablon G, Kogan S. A Randomized, Double-Blind, Placebo-Controlled Study of a Nutraceutical Supplement for Promoting Hair Growth in Perimenopausal, Menopausal, and Postmenopausal Women With Thinning Hair. *J Drugs Dermatol.* 2021;20(1):55-61. doi:10.36849/JDD.5701. PMID: 33400414.

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**Sidenote of over-the-counter treatments**

**Red Light Therapy (RLT) for Hair Regrowth**

- Also known as low-level laser therapy (LLLT).
- **Primary mechanism:** Activates the Wnt/ $\beta$ -catenin signaling pathway for hair follicle growth.
- **Specific wavelengths (e.g., 655 nm)** enhance  $\beta$ -catenin expression, promoting hair shaft elongation.
- **Reduces catagen transition and stimulates cellular activity** in hair follicles.
- **Increases proliferation of:**
  - Outer root sheath keratinocytes
  - Dermal papilla cells
- **Mediates ERK phosphorylation** and upregulation of **fibroblast growth factor 7 (FGF7)**.
- **Modulates reactive oxygen species (ROS)** and **nitric oxide (NO)** production, aiding hair follicle regeneration.
- **Caveat: OTC have variable strength**

1. Guo Y, Qu Q, Chen J, Miao Y, Hu Z. Proposed Mechanisms of Low-Level Light Therapy in the Treatment of Androgenetic Alopecia. *Lasers Med Sci.* 2021;36(4):703-713. doi:10.1007/s10103-020-03159-z. PMID: 33122601.

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**Part II Take-home**

- **First-Line Treatments**
  - **Topical Minoxidil (2% & 5%)** – Prolongs hair growth, requires continuous use.
  - **Oral Finasteride** – Blocks DHT to slow hair loss (men only).
  - **Oral Dutasteride** – More potent DHT blocker (off-label use).
- **Alternative Treatments**
  - **Spirolactone** – Anti-androgen option for women.
  - **Oral Minoxidil** – Enhances blood flow & growth, low-dose use.
- **In-Office Procedures**
  - **PRP Therapy** – Growth factor injections stimulate regrowth.
  - **Hair Transplant** – Permanent solution for advanced cases.
- **Key Considerations**
  - ✓ Results take 3-6 months.
  - ✓ Continuous treatment required to maintain effects.
  - ✓ Combination therapy often yields the best results.

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**Part III. Ethnic Consideration**

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## Hair Types

Afro ethnic hair: typically 3a-4c

1a 1b 1c 2a 2b 2c 3a 3b 3c 4a 4b 4c

Image source: <https://www.onychair.com/different-types-of-hair-textures-natural-hair-types>

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## Important differences in afro-ethnic hair

- Asian and Caucasian hair is round in shape compared to African hair which is **more oval/elliptical**
- Studies show afro-ethnic hair (compare to other hair type)
  - May be **weaker**
  - Has lower porosity making it **harder to absorb moisture**
  - Lower water content**
  - Less and uneven distribution of sebum**
  - Grows slower**

Image: <https://www.sciencephoto.com/media/1224167/view/hairstyles-chart-illustration>

1. MV Quaresma et al. Hair Breakage in Patients of African Descent: Role of Dermoscopy. Skin Appendage Disord. 2015 Sep; 1(2): 99-104. Published online 2015 Aug 18. doi: 10.1159/000436981  
Image source: <https://www.thelibraryofahaveit.com/2020/09/growing-healthy-hair-harder-to-grow.html>

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## Differences in grooming practices

- Afro-ethnic hair tend to be on the dryer side, thus washing frequently would make the hair dryer
- AAD recommend washing **every other week to every week** to prevent build up of products, but hair washing frequency varies widely patient to patient
- Afro-ethnic hair products are typically **more protein rich** because of biologic differences in porosity
- Many patients will prefer oils vs non-SOC patients who prefer solutions or foams

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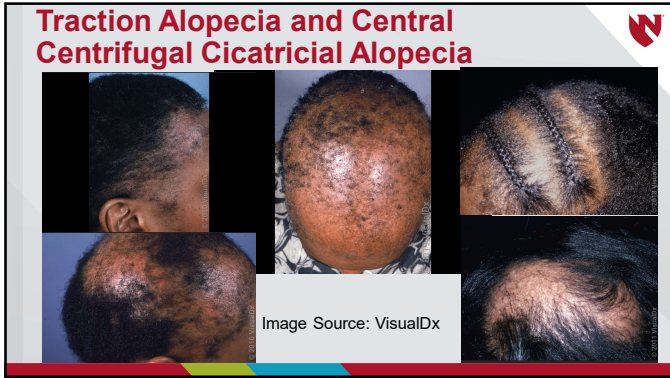
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### Risk Factors for Traction Alopecia

**Table 1. Hairstyling risk categories**

High risk	<ul style="list-style-type: none"> <li>• Frequent use of tight buns or ponytails</li> <li>• Application of weaves and/or braids to relaxed hair</li> <li>• Hair extensions applied to relaxed hair</li> <li>• Tight braids/comrows/dreadlocks</li> <li>• Any hairstyle causing symptoms such as pain, stinging, crusting, tenting, or pimples</li> </ul>
Moderate risk	<ul style="list-style-type: none"> <li>• Loosening of braids/comrows/dreadlocks</li> <li>• Weaves and braids applied to natural hair</li> <li>• Hair extensions applied to natural hair</li> <li>• Wigs worn with cotton or nylon wig caps</li> <li>• Permanent waving</li> </ul>
Low risk	<ul style="list-style-type: none"> <li>• Loose, low-hanging ponytails and buns</li> <li>• Wigs worn with satin cap</li> <li>• Natural/unprocessed hair</li> </ul>

1. All hairstyles are not created equal: What the dermatologist needs to know about black hairstyling practices and the risk of traction alopecia (TA)-Haskin A, et al. J Am Acad Dermatol. 2016; PMID: 27114262

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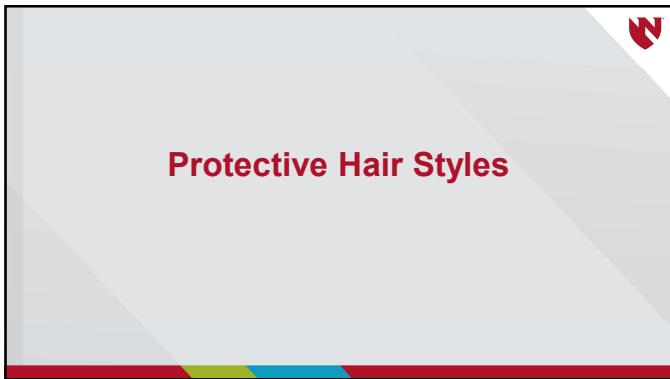
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**Dreadlocks**

**Why Dreadlocks Are a Protective Hairstyle:**

- **Minimal Manipulation:** Once formed, dreadlocks require little to no daily manipulation, which can prevent damage from frequent combing, brushing, or styling.
- **Reduced Breakage:** Dreadlocks can help protect the hair from breakage by keeping it compact and reducing the stress that comes from hair tangling or pulling.
- **Moisture Retention:** The hair is "locked" into a specific shape, which can help retain moisture and natural oils, leading to healthier hair.
- **Protection from Environmental Factors:** Dreadlocks can protect the hair from sun exposure, pollution, and other environmental elements that might otherwise cause damage.

Top Image source: <https://www.dreads-expert.com/en/creation-dreadlocks-naturelles/>  
Bottom Image source: <https://locextensions.com/blogs/news/sisterlocks>

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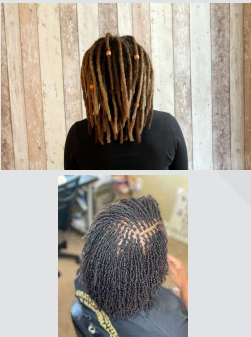
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**Dreadlocks**

**Dreadlocks:** rope-like strands of hair that are formed by matting or twisting hair

**Sister-locks:** Usually these are much smaller than dreadlocks; uses interlocking patterns to create woven locs; allows women with tightly textured hair to style their hair without changing its texture, adding products, or using heat.



Top Image source: <https://www.dreads-expert.com/en/creation-dreadlocks-naturelles/>  
Bottom Image source: <https://locextensions.com/blogs/news/sisterlocks>

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**Twist Hairstyle**

**What is a Twist Hairstyle?**

- A **protective hairstyle** where sections of hair are twisted together.
- Popular in **natural hair care** for its versatility and ease of maintenance.

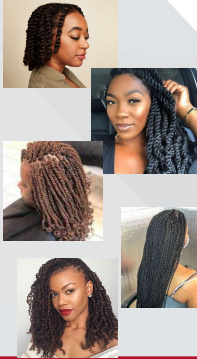


Image source from top:  
1. <https://www.byrdie.com/all-about-twists-or-two-strand-twists-hairstyles-400274>  
2. <https://www.byrdie.com/havana-twists-4593475>  
3. <https://aifotoach.com/products/marley-twist-spring-twist-braids>  
4. <https://aifotoach.com/products/sensational-twist>  
5. <https://www.byrdie.com/passion-twists-4705310>

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## Twists

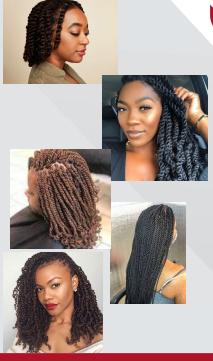
**Types of Twist Hairstyles:**

- **Two-Strand Twist:** Simple and classic, with two sections of hair twisted together.
- **Senegalese Twists:** Tight, sleek twists made using added hair extensions.
- **Havana Twists:** Larger, voluminous twists often created with thicker extensions.
- **Flat Twists:** Twists that are braided flat against the scalp for a different look.

**Benefits:**

- **Protective:** Minimizes damage and promotes hair growth.
- **Versatile:** Can be styled in various ways (updos, buns, or left loose).
- **Low-maintenance:** Ideal for reducing daily styling time.

Image source from top:  
 1. <https://www.byrdie.com/all-about-twists-or-two-strand-twists-hairstyles-400274>  
 2. <https://www.byrdie.com/havana-twists-4693475>  
 3. <https://afrotoch.com/products/marley-twist-spring-twist-brands>  
 4. <https://afrotoch.com/products/senegalese-twist>  
 5. <https://www.byrdie.com/passion-twists-4705310>



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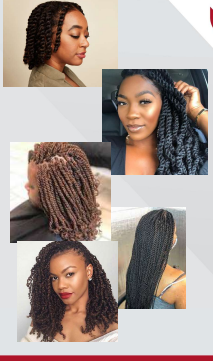
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## Twists

- **Reduces chemical damage** by avoiding harsh treatments like relaxers or color.
- **Retains moisture** and minimizes breakage, promoting healthier hair growth.
- **Protective styles** like braids or twists safeguard hair from environmental stressors and daily manipulation.

Image source from top:  
 1. <https://www.byrdie.com/all-about-twists-or-two-strand-twists-hairstyles-400274>  
 2. <https://www.byrdie.com/havana-twists-4693475>  
 3. <https://afrotoch.com/products/marley-twist-spring-twist-brands>  
 4. <https://afrotoch.com/products/senegalese-twist>  
 5. <https://www.byrdie.com/passion-twists-4705310>



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## Natural Hair

**Wash and go's:** Usually washing hair and allowing to dry in natural curl pattern

**Twist-outs:** a natural hairstyle that involves dividing hair into sections, twisting, and then unraveling to create waves

**Braid-outs:** A braid-out is a hairstyle that involves unraveling cornrows, or plaits.

**Afros:** a large, bushy shape of tight curls that form a ball shape. Afros can be created by combing out natural kinky hair.

Image sources (top to bottom):  
 1. <https://beautifyholsted.com/natural-hair/try-easiest-and-fastest-wash-and-go-using-only-two-products>  
 2. <https://www.pinterest.com/pin/natural-hair-care-for-men-35243087125077525/>  
 3. <https://www.youtube.com/watch?v=7NuMDTMv8s>  
 4. <https://www.allure.com/gallery/a-timeline-of-the-best-afros>



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### Other recommendations

- Alternate hairstyle as much as possible; avoid up-do
- Decrease use of thermal and chemical relaxer
- When possible take break from all styling processes

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### Treatment

- Similar to androgenetic alopecia PLUS topical or intralesional steroids

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### Treatment for CCCA/Traction

- Topical and intralesional steroid
- Topical Minoxidil
- Oral Minoxidil

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### Part III. Take Home

- Afro-ethnic hair** has oval/elliptical shape, lower porosity, slower growth, and tends to be drier with uneven sebum distribution.
- Washing frequency** should be kept to every other week to avoid dryness and buildup; varies by individual needs.
- Hair products** for Afro-ethnic hair are typically protein-rich to accommodate its low porosity.
- Common **protective hairstyles** include dreadlocks, sister-locks, twists, braids, and afros to minimize damage.
- Hair care tips** include limiting chemical and thermal styling, alternating styles, and using treatments like Minoxidil for conditions like CCCA and traction alopecia.

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### Oral Minoxidil



Improvement in traction alopecia with 2.5 mg oral minoxidil. SOURCE: Kim and Craglow. Treatment of traction alopecia with oral minoxidil. JAAD Case Rep. 2022 Apr 1;23:110-113. used with creative commons license  
 Image source: <https://pubs.ascpnet.org/jaad/article/doi/10.1093/jaad/2022.01.017> (Image from Publication from JAAD Nguyen, M., & Tosti, A. (2022). Treatment of traction alopecia with oral minoxidil. JAAD Case Reports, 23, 112-113. <https://doi.org/10.1016/j.jacr.2022.01.017>)

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### Topical Minoxidil with Intralesional Triamcinolone



Image Source: <https://skinfoodupdate.com/intralesional-triamcinolone-aceonide-in-the-treatment-of-traction-alopecia/> (Case report published in JDD Desai, S R., Alexis, A. F., & Jacobson, A. (2020). Intralesional Triamcinolone Acetonide in the Treatment of Traction Alopecia. Journal of Drugs in Dermatology, 19(10), 1000-1004.)

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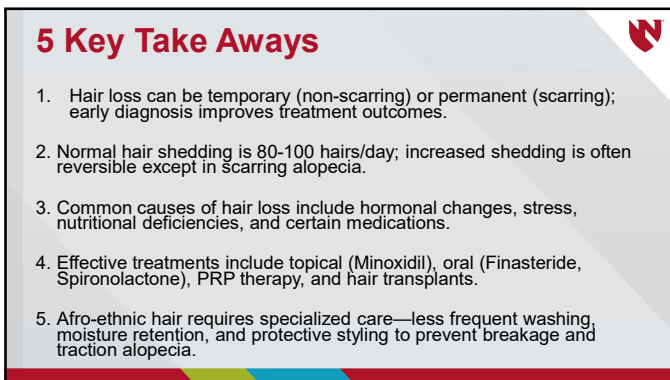
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