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ANAGEN THERAPY

Nashville Medical Group

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HAIR REVITILIZING COMPLEX (HRC)

A. How HRC works

Bio 1

What It Does:

Therapeutic, deep-cleansing formula designed to:

- Remove buildup from sebum, dead skin cells, and product residue
- Support scalp health by maintaining a balanced microbiome
- Stimulate the hair follicles to encourage the anagen (growth) phase of the hair cycle
- Prepare the scalp for better absorption of active ingredients from follow-up treatments (like DHT blockers, minoxidil, etc.)

How It Works:

Combines bioactive ingredients, enzymes, and scalp-energizing botanicals that:

- Cleanse & Detoxify:
  Natural surfactants and exfoliating agents gently remove impurities without stripping the scalp of essential oils
- Enzymatic Action:
  Proprietary enzymes break down excess sebum and dead skin cells, unclogging follicles and improving oxygen flow
- Stimulate Circulation:
  Ingredients like peppermint oil or menthol (if included) increase blood flow to the scalp, which nourishes follicles and supports growth
- pH Balanced:
  Maintains an ideal scalp pH to reduce irritation and support a healthy barrier against inflammation or microbial overgrowth

Key Benefits:

- Promotes the Anagen Phase: Encourages hair to stay in the growth cycle longer
- Unclogs Hair Follicles: Reduces buildup that can suffocate follicles
- Supports Healthy Scalp Function: A clean, balanced scalp leads to healthier, stronger hair
- Prepares Scalp for Treatment: Improves efficacy of products like DHT blockers and growth serums
- Reduces Shedding & Breakage: By strengthening the root and nourishing the scalp

Bio 1

Cleansing & Scalp Detoxification

These ingredients gently remove buildup and excess oil without stripping the scalp:

- **Cocamidopropyl Betaine** — A mild surfactant derived from coconut oil that gently cleanses while maintaining moisture balance
- **Sodium C14-16 Olefin Sulfonate** — A cleansing agent that removes oil and buildup to unclog hair follicles
- **Citric Acid** — Balances pH, keeping the scalp environment optimal for growth
- **Sodium Benzoate / Potassium Sorbate** — Gentle preservatives that prevent microbial overgrowth, maintaining scalp health
- **Grapefruit Extract** — Natural astringent that helps clarify the scalp and remove excess sebum

Scalp Conditioning & Nourishment

These ingredients soothe irritation, hydrate, and support a healthy scalp environment:

- **Aloe Barbadensis (Aloe Vera) Leaf Juice** — Soothes inflammation, moisturizes, and helps reduce scalp irritation
- **Glycerin** — A powerful humectant that draws moisture into the scalp and hair.
- **Guar Hydroxypropyltrimonium Chloride** — Conditions the hair, adds slip, and reduces static without buildup

Strengthening & Repairing Hair

Proteins and vitamins that reinforce the hair structure and reduce breakage:

- **Hydrolyzed Barley Protein** - Strengthens the hair shaft and improves elasticity
- **Hydrolyzed Soy Protein** - Helps repair damaged strands and boosts shine
- **Panthenol (Provitamin B5)** - Penetrates the hair shaft, improves moisture retention, and adds thickness
- **Niacin (Vitamin B3)** - Improves blood circulation in the scalp, delivering more nutrients to follicles

Bio 1

Botanical Growth Activators

Natural extracts that promote hair growth by stimulating follicles and blocking DHT:

- **Saw Palmetto** — Natural DHT blocker, helps prevent follicle miniaturization in androgenic alopecia
- **Rosmarinus Officinalis (Rosemary Leaf Extract & Oil)** — Increases circulation to the scalp, shown in studies to be as effective as minoxidil in stimulating growth
- **Mentha Piperita (Peppermint) Oil** — Boosts blood flow and stimulates the scalp, promoting follicle activity
- **Chamomilla Recutita (Matricaria) Flower Extract** — Soothes the scalp and reduces inflammation that can inhibit growth
- **Achillea Millefolium (Yarrow) Extract** — Astringent and anti-inflammatory, helps reduce scalp irritation
- **Melissa Officinalis (Balm Mint)** — Antioxidant and antimicrobial; supports a healthy follicular environment
- **Cymbopogon Schoenanthus (Lemongrass Leaf Oil)** — Balances oil production and supports scalp health
- **Fruit Extracts** — Often contain natural AHAs and antioxidants that exfoliate and protect follicles

Summary: How They All Help With Hair Growth

- Scalp health is the foundation of hair growth - Aloe, chamomile, peppermint, rosemary, and lemongrass calm, stimulate, and nourish the scalp
- Cleansing agents like cocamidopropyl betaine and olefin sulfonate remove buildup without disrupting the skin barrier
- Proteins and vitamins like panthenol, barley, soy, and niacin strengthen strands and support follicle function
- DHT blockers and circulation boosters like saw palmetto and rosemary directly address the root causes of hair thinning

Bio 2

How It Works

The Bio 2 Live Enzyme Cleanser uses active enzymes to break down buildup on the scalp, such as:

- Sebum (oil)
- Dead skin cells
- Product residue
- DHT (a hormone linked to hair thinning)

These enzymes digest impurities at a microscopic level without stripping the scalp of its natural moisture. This makes it different from harsh chemical exfoliants or abrasive scrubs.

What It Does

- Deep scalp detoxification
- Removes toxins and buildup that clog hair follicles
- Reduces inflammation and irritation
- Enzymes calm the scalp, which can reduce redness, itching, or flaking
- Unclogs hair follicles
- Promotes a clearer pathway for hair to grow, improving the effectiveness of other topical treatments like Minoxidil or DHT blockers
- Balances scalp microbiome
- Supports a healthier environment for beneficial bacteria, which is important for overall scalp health

7 Key Benefits

- Boosts effectiveness of hair growth treatments
- A clean scalp allows better absorption of serums and actives
- Improves scalp circulation
- Enzyme action promotes blood flow, which is essential for delivering nutrients to follicles
- Reduces hair loss triggers
- By minimizing DHT buildup and inflammation, it helps fight common causes of thinning
- Safe for sensitive scalps
- Gentle yet powerful, making it ideal for people who experience sensitivity to harsher scalp products

Bio 2

Functional + Active Ingredients for Hair Loss / Scalp Health

1. **Panthenol (Provitamin B5)**
   - Hydrates and strengthens hair by penetrating the hair shaft
   - Soothes the scalp, reducing irritation and flaking
   - Improves hair elasticity and prevents breakage, creating a healthier growth environment

2. **Saccharomyces Ferment Filtrate (enzyme-rich probiotic)**
   - A bioactive ferment packed with enzymes and nutrients
   - Helps break down buildup and excess oil on the scalp
   - Supports microbiome balance, creating optimal conditions for follicles to thrive

3. **Glycolic Acid**
   - A gentle AHA (alpha hydroxy acid) that exfoliates dead skin cells
   - Unclogs follicles, helping to reduce dandruff and inflammation
   - Improves cell turnover, keeping the scalp in a regenerative state

4. **Peppermint Oil**
   - Increases circulation to the scalp, which delivers nutrients to hair follicles
   - Has a cooling, anti-inflammatory effect that soothes itchiness
   - Known to stimulate the anagen (growth) phase in some studies

5. **Menthol**
   - Works synergistically with peppermint for that refreshing, tingly sensation
   - Improves blood flow and helps with scalp stimulation
   - Provides temporary relief from itch or irritation

6. **Rosmarinus Officinalis (Rosemary) Leaf Extract**
   - Shown in studies to be as effective as Minoxidil at promoting hair growth over time
   - Blocks DHT activity, reducing follicle miniaturization
   - Antioxidant-rich and anti-inflammatory

Bio 2

Functional Formulating Agents (Supportive)

7. **Cocamidopropyl Betaine**
   - A mild surfactant derived from coconut oil
   - Cleanses without stripping natural oils
   - Safe for sensitive scalps, helps distribute active ingredients evenly

8. **Propanediol**
   - Natural solvent and skin penetration enhancer
   - Helps other ingredients like panthenol and glycolic acid absorb better into the skin/scalp
   - Also a hydrator, preventing scalp dryness

9. **Sorbitan Oleate**
   - An emulsifier that helps oil-based and water-based ingredients mix
   - Helps create a smooth, stable formula that spreads well on the scalp

10. **Decylglucoside Crosspolymer**
    - A non-irritating cleanser made from sugar
    - Enhances foam and improves the skin-feel of the product
    - Preservatives & Mild Antimicrobials

11. **Potassium Sorbate & Sodium Benzoate**
    - Food-grade preservatives that prevent bacterial and fungal growth
    - Essential for product safety and shelf life

12. **Ethylhexylglycerin**
    - Acts as a natural preservative booster and skin-conditioning agent
    - Offers mild antimicrobial benefits to help protect the scalp from unwanted bacteria

Summary: Why This Matters for Hair Loss

These ingredients are intentionally chosen to:

- Cleanse and detox without irritation
- Stimulate follicles through improved circulation
- Clear the path for other growth-promoting actives
- Support a balanced scalp environment, which is crucial to slowing shedding and encouraging regrowth

Bio 3

Botanical Extracts for Hair Growth + Scalp Health

1. **Serenoa Serrulata (Saw Palmetto) Fruit Extract**
   - DHT blocker: Inhibits 5-alpha-reductase enzyme, helping reduce hormone-related hair loss
   - Reduces follicle miniaturization

2. **Rosmarinus Officinalis (Rosemary) Leaf Extract**
   - Increases blood circulation to follicles
   - Helps reduce shedding and promotes the anagen (growth) phase

3. **Comfrey Rhizome/Root Extract**
   - Rich in allantoin, which supports scalp healing
   - Reduces inflammation and soothes irritation

4. **Equisetum Arvense (Horsetail) Extract**
   - High in silica, which strengthens hair and stimulates growth
   - Improves hair texture and elasticity

5. **Urtica Dioica (Nettle) Extract**
   - Natural DHT blocker
   - Rich in iron and antioxidants that support healthy hair follicles

6. **Achillea Millefolium (Yarrow) Flower Extract**
   - Astringent and anti-inflammatory; reduces scalp irritation
   - Supports circulation and follicle stimulation

7. **Yucca Filamentosa Root Extract**
   - Natural cleanser and scalp purifier
   - Contains saponins that help remove buildup

8. **Thymus Vulgaris (Thyme) Flower/Leaf Oil**
   - Antimicrobial and antifungal; helps with dandruff or scalp acne
   - Stimulates hair follicles and reduces shedding

Bio 3

9. Salvia Officinalis (Sage) Oil
- Balances scalp oils.
- Contains phytoestrogens which can help with hormonal hair loss

10. Peppermint Oil
- Enhances blood flow to scalp
- Creates a cooling sensation, stimulates growth phase
- Moisturizing + Conditioning Agents

11. Cetyl Alcohol
- Fatty alcohol that acts as an emollient and thickener
- Helps soften and smooth hair without drying the scalp

12. Stearamidopropyl Dimethylamine
- Detangling agent that reduces static and frizz
- Conditions hair while helping rinse out residue

13. Behentrimonium Methosulfate
- Gentle conditioning agent derived from rapeseed oil
- Excellent detangler, safe for sensitive skin

14. Dicetyldimonium Chloride
- Antistatic and conditioning agent
- Makes hair feel softer and easier to manage

15. Isopropyl Myristate
- Lightweight emollient that enhances absorption
- Gives a silky, smooth feel without greasiness

16. Amodimethicone / Silicone
- Selective conditioning silicone smooths damaged areas without weighing down healthy hair
- Adds shine, reduces frizz, protects from heat damage

Bio 3

Proteins + Strengthening Agents

17. Hydrolyzed Soy Protein
    - Strengthens and repairs damaged hair strands.
    - Increases moisture retention and volume.

18. Hydrolyzed Wheat Protein / Wheat Amino Acids
    - Adds elasticity and resilience.
    - Reduces breakage and strengthens the cuticle layer.

19. Hydrolyzed Keratin
    - Mimics the hair's natural keratin.
    - Repairs damage, smooths rough strands, boosts shine.

Vitamins + Antioxidants

20. Panthenol (Provitamin B5)
    - Deeply hydrates and strengthens hair.
    - Soothes the scalp and reduces inflammation.

21. Aloe Barbadensis Leaf Juice
    - Soothes and hydrates the scalp.
    - Promotes healing and balances pH.

22. Tocopherol (Vitamin E)
    - Powerful antioxidant that improves scalp circulation.
    - Protects hair follicles from oxidative stress.

23. Niacin (Vitamin B3)
    - Increases blood flow to scalp.
    - Supports stronger, thicker hair growth.

24. Retinyl Palmitate (Vitamin A)
    - Supports cell turnover and healthy sebum production.
    - Can help unclog follicles.

25. Cholecalciferol (Vitamin D3)
    - Crucial for hair follicle cycling.
    - A deficiency is linked to telogen effluvium (excessive shedding).

26. Hippophae Rhamnoides (Sea Buckthorn) Acids
    - Rich in omega fatty acids and antioxidants.
    - Nourishes follicles and improves scalp condition.

Bio 3

Delivery Systems + Preservatives

27. Glycolipids
- Natural emulsifier that enhances delivery of active ingredients
- Moisturizing and microbiome-supportive

28. Ethylhexylglycerin
- Preservative booster and skin conditioner.
- Helps maintain product freshness and scalp safety

29. Sodium Benzoate & Potassium Sorbate
- Broad-spectrum preservatives that protect against microbial growth
- Safe and gentle alternatives to harsher synthetics

30. Citric Acid
- Balances pH for scalp comfort and ingredient stability

31. Octyl Salicylate
- Often used as a UV absorber, can help protect hair/scalp from sun damage
- TL;DR — What This Formula Does Overall
- Strengthens and thickens hair with proteins and keratin
- Stimulates hair growth with botanical DHT blockers and circulation boosters
- Soothes and balances the scalp with aloe, panthenol, and vitamins
- Protects from damage with antioxidants, UV shields, and lightweight silicones
- Deeply conditions and detangles for better hair manageability and shine

Bio 4

Botanicals & Natural Extracts

Ingredient	How It Works	Key Benefits
Botanical Liquids	General term for water-based extracts from plants.	Provide nutrients, antioxidants, and anti-inflammatory benefits to scalp.
Aloe Vera Gel	Soothing, hydrating gel rich in vitamins and enzymes.	Calms inflammation, balances pH, promotes healing, adds moisture.
Jojoba Oil	Closely mimics sebum (natural oil).	Moisturizes without clogging pores, balances scalp, strengthens strands.
Peppermint Oil	Increases blood flow to follicles.	Stimulates hair growth, soothes itching, gives a refreshing feel.
Yeast Extract (Acetamide MEA Yeast Extract)	Rich in B-complex vitamins and peptides.	Supports follicle nourishment, boosts cellular energy, promotes hair vitality.

Bio 4

Proteins & Amino Acids (Strengthening Agents)

Ingredient	How It Works	Key Benefits
Hydrolyzed Wheat Protein	Broken-down protein that penetrates the hair shaft.	Adds strength, reduces breakage, increases elasticity.
Hydrolyzed Keratin	Restores natural keratin in hair.	Repairs damage, smooths, strengthens and adds shine.
Wheat Amino Acids	Small peptides that penetrate the cortex.	Improve moisture retention, elasticity, and texture.

Bio 4

Vitamins & Nutrients

Ingredient	How It Works	Key Benefits
Niacin / Vitamin B3	Increases microcirculation to scalp.	Encourages stronger, thicker hair growth.
Panthenol / Vitamin B5	Converts to pantothenic acid, deeply hydrating.	Moisturizes, strengthens hair, adds shine.
Retinyl Palmitate / Vitamin A	Supports cell turnover and sebum regulation.	Keeps follicles clear, promotes healthy scalp environment.
Ascorbic Acid / Vitamin C	Antioxidant that supports collagen synthesis.	Protects against oxidative stress, improves follicle function.
Ergocalciferol / Vitamin D2	Supports hair cycle regulation.	Helps reduce shedding, keeps follicles active.
Tocopherol / Vitamin E	Potent antioxidant and circulation booster.	Protects hair follicles, improves scalp health.
Tocopheryl Nicotinate	Combines Vitamin E and Niacin.	Improves microcirculation and nourishes the scalp.
Linoleic Acid / Linolenic Acid / Vitamin F	Essential fatty acids for scalp and Nourish scalp barrier, reduce hair.	dryness, promote elasticity.
Biotin / Vitamin H	Key nutrient for keratin production.	Prevents breakage, promotes stronger, fuller hair.

Bio 4

Moisturizers & Delivery Agents

Ingredient	How It Works	Key Benefits
Propylene Glycol	Humectant that helps other ingredients absorb.	Attracts moisture, boosts penetration of actives.
Polysorbate 60 / 80	Emulsifiers that help mix oil and water.	Stabilize formula, aid delivery of essential oils and nutrients.
Methyl Nicotinate	Vasodilator related to niacin.	Enhances scalp circulation and absorption of nutrients.

Bio 4

Preservatives & Stabilizers

Ingredient	How It Works	Key Benefits
Diazolidinyl Urea	Preservative that prevents microbial growth.	Keeps product safe from bacteria/mold.
Methylparaben / Propylparaben	Widely used preservatives.	Extend shelf life and prevent contamination.
Tetrasodium EDTA	Chelating agent that binds minerals.	Prevents ingredient degradation, boosts preservative efficacy.

TL;DR - What This Formula Does for Hair / Stimulates Hair Growth

Strengthens & Repairs

- With keratin, wheat protein, and amino acids to rebuild hair structure

Improves Scalp Health

- Anti-inflammatory and healing (aloe vera, jojoba, yeast extract)
- Regulates oil, clears buildup (Vitamin A, peppermint oil)

Hydrates & Conditions

- Deep moisture from panthenol, jojoba, propylene glycol

Protects & Nourishes

- Antioxidants and essential fatty acids (vitamins C, E, F, linoleic acid) combat stress and support healthy hair environment

Hair Revitalizing Complex (HRC)

How Hair Revitalizing Complex Works

1. DHT Inhibition

Saw Palmetto, Nettle Root, Pumpkin Seed Oil, and other botanicals often included in revitalizing complexes help block the enzyme 5-alpha-reductase, which converts testosterone into DHT (dihydrotestosterone)-the main hormone linked to androgenetic hair loss.

Result: Helps reduce follicle miniaturization and prolongs the hair growth cycle (anagen phase).

2. Improved Scalp Circulation

Ingredients like Niacinamide (Vitamin B3), Methyl Nicotinate, Peppermint Oil, and Tocopheryl Nicotinate increase blood flow to the scalp.

Result: Delivers more oxygen and nutrients to hair follicles, encouraging thicker and faster-growing hair.

3. Follicle Nourishment

Packed with vitamins (Biotin, Vitamin A, C, D, E, B-complex), amino acids, and minerals, the complex feeds the follicles essential nutrients for keratin production and cell metabolism.

Result: Strengthens the structure of the hair shaft and supports overall follicle vitality.

4. Protein Reinforcement

Hydrolyzed Keratin, Soy, and Wheat Proteins help rebuild the hair shaft, increasing elasticity and resistance to breakage.

Result: Hair appears fuller, stronger, and more resilient.

Hair Revitalizing Complex (HRC)

5. Anti-Inflammatory & Antioxidant Protection

Ingredients like Aloe Vera, Green Tea, Rosemary Extract, and Vitamin E help reduce inflammation and protect follicles from oxidative stress-a lesser-known but significant contributor to hair loss.

Result: Creates a healthier scalp environment and protects against premature follicle aging.

6. Hydration and Barrier Support

Emollients like Jojoba Oil, Aloe Vera, and Panthenol (B5) maintain proper moisture levels and support the scalp's natural barrier.

Result: Prevents dryness, flaking, and inflammation that can inhibit growth.