The primary cause of hair loss...

Hair loss can result from a number of factors, such as genetics, hormonal changes, medical conditions, medications, supplements, radiation therapy, stress, and lifestyle [1-2]. Among these factors, genetics have been shown to play the greatest role in the onset and development of hair loss. Subsequent research revealed that adults exhibiting hair loss typically had an increased level of dihydrotestosterone (DHT) in their hair follicles [3]. DHT, a byproduct of testosterone, is believed to be the primary cause of hair loss. The genetic connection to hair loss results from specific genes that are critical in the production and metabolism of DHT, in combination with a change in the hair follicle receptor affinity for DHT.

DHT

Understanding the role of dihydrotestosterone in hair loss...

In order to better understand the correlation between hair loss and elevated DHT levels in hair follicles, research began to identify the formation and mechanistic effects of DHT in hair loss. Dihydrotestosterone is the most potent androgen hormone, formed naturally in the body as a byproduct of testosterone metabolism. DHT is a stronger form of testosterone, binding more easily to the same sites as testosterone for a much longer period of time [4]. This is important because of the presence of androgen receptors in hair follicles.

Androgen receptors bind to androgens such as testosterone and DHT, and the number of DHT receptors on hair follicles has been shown to increase in balding scalp [5]. Once DHT is bound to androgen receptors in scalp hair follicles, it leads to the miniaturization of hair follicles resulting in progressively thinning hair before baldness [6]. Testosterone in hair follicles can be converted to DHT by enzymes known as 5-reductases (5-AR) which participate in androgen metabolism [7].

The local conversion of testosterone to DHT in hair follicles is the primary cause of male pattern baldness. Moreover, androgenetic alopecia or male pattern baldness accounts for over 95% of hair loss in men. Alarmingly, the genes involved in hair loss are fairly common, 66% of men report experiencing hair loss by age 35, with a quarter of these men starting to lose hair by age 21 [8]. These hair loss genes are believed to be responsible for increased 5-AR production and higher androgen receptor counts in hair follicles. Although DHT is primarily a male sex hormone, it is also expressed to a lesser degree in women, playing a similar role in the development of thinning hair and baldness.

Proposed theories for DHT’s role in hair loss are as follows:

DHT may activate genes responsible for follicular miniaturization through an unknown mechanism [9].

DHT reduces the subcutaneous fat around hair follicles, causing hair loss and elevated DHT levels in hair follicles, leading to a reduction of the physical pressure required to maintain normal follicle size, which eventually result in hair follicles unable to support proper hair growth [10].

While a definitive theory explaining the mechanistic action of DHT in balding has yet to be established, research has conclusively demonstrated the connection between DHT and hair loss.

Controlling DHT levels is the key to stopping hair loss!

Experimental and clinical studies have confirmed the effectiveness of DHT-reduction in the treatment of hair loss. The impact of this treatment approach has been clearly shown in the clinical data of finasteride. Finasteride prevents testosterone from being metabolized into DHT in certain tissues in the body such as skin, prostate gland, and hair follicles.

Finasteride is a competitive and specific inhibitor of the Type II - isozyme of 5α-reductase, an enzyme responsible for the conversion of testosterone into 5α-DHT. 5α-reductases are found in two distinct forms in mice, rats, monkeys, and humans: Type I and Type II. The type I 5α-reductase is predominantly found in most regions of skin, including scalp, and liver. The type II 5α-reductase isozyme, responsible for two-thirds of circulating DHT, is predominantly found in the prostate gland, seminal vesicles, the liver, as well as hair follicles. Oral ingestion of finasteride quickly results in significant reduction in serum and tissue DHT concentrations, reaching 65% suppression within 24 hours.
There are approximately 100,000 hair follicles on the scalp alone. Hair follicles can be considered the root from which hair grows and serve a critical role in the development of hair and hair loss. In order to understand how hair loss occurs, the hair growth cycle must first be understood. We note that each hair follicle on the human body must be in one of the three stages of the hair growth cycle: Anagen, Catagen, and Telogen.

**Anagen**

On average, 50-150 strands of hair are shed daily.

Oral dosage of finasteride led to a decrease of circulating DHT levels by about 65-70%, typically followed by significant slowdown or cessation of hair loss in most men. Extensive clinical studies have revealed that hair loss resumes upon the discontinuation of finasteride. Until an approach is developed to permanently shut off the biological mechanisms responsible for the formation and sequestering of DHT in hair follicles, DHT must be controlled daily in order to maintain hair growth.

**Understanding Hair**

Hair is a protein filament with biological functions in sense, heat regulation, and ultraviolet radiation protection. Its complex multicellular filament structures allow it to adaptively regulate heat; insulating via goosebumps, and cooling via sweat evaporation; and transmit mechanical forces perceived as the sense of touch. While these functions are not critical for human survival, they remain critical for other mammals. Follicle defects can lead to loss of fur or faulty coloration, quickly leading to death from cold or predation. This is evidenced by the significant amounts of time and money devoted to hair care, in the form of shaving, hairdresser appointments, and hair care products. Hair growth disorders have been recognized to cause substantial psychological distress.

Hair growth is typically diminished by age and strongly diminished by the elevation of DHT levels. In particular, elevation of DHT levels in hair follicles negatively affects the growth environment and consequently the hair growth cycle, which results in thinning or hair loss.
Anagen Phase (The Growth Stage)

The anagen phase is the most critical stage where all hair growth occurs. The anagen phase is composed of six distinct subphases in which new hair cells are formed, undergo mitosis or cell division rapidly, acquire pigmentation (hair color), visibly emerge from the follicle, and continue increasing in length.

This phase represents the longest stage of the hair growth cycle, typically lasting 2-8 years for healthy individuals. The average span of time a strand of hair will remain in this phase is largely determined by genetics. Hair strands in the anagen phase remain connected to the blood supply, which nourishes the strand and allows for the continuation of growth. On average, hair typically grows at a rate of approximately 1.25 cm every 4 weeks, or roughly 6 inches per year. In a normal hair growth cycle, 85-90% of the hairs growing on the scalp are in the anagen phase at any given time.

Catagen Phase (The Transition Stage)

The catagen phase represents the transition phase. During this phase, hair follicles will shrink, effectively detaching strands of hair from their blood supply. This not only leads to the cessation of hair growth for the strand, but also serves to slowly squeeze the hair shaft upwards. This transitional stage typically takes two weeks to complete and is critical for the hair follicle's continued ability to grow hair. It is largely hypothesized that the catagen phase allows for the recovery or renewal of hair follicles before the growth of new hair.

Hair follicles move from the anagen phase to the catagen phase from signals sent out from the body, with normal signaling putting 1-3% of all hair follicles in catagen at any given time.

Telogen Phase (Resting Stage)

The telogen phase represents the resting period for hair follicles. During this phase, follicles remain dormant for one to four months. The telogen phase is evidenced by the recovery of hair follicles, seen through the growth of epidermal cells lining the follicle channel. The growth of epidermal cells may also play a role in holding disconnected hair strands in place until new growth is able to take its place. Generally, 10-15% of hair follicles on the scalp are in this phase of the cycle at any given time.

Exogen Phase (The Shedding Stage)

The exogen phase marks the return to the anagen growth phase. After hair follicles recover sufficiently in the telogen phase, they begin growing back to their normal size. This simultaneously allows for the growth of new strands as described in the anagen phase and also allows for the release of old hair strands. Commonly referred to as shedding, the release of hair from hair follicles in the exogen phase results from the relaxation of mechanical forces responsible for holding detached strands in place. New strands emerge within two weeks of the completion of the telogen phase.

Early Anagen (Growth Stage)

This beginning stage is called the early Anagen phase. As the hair grows and becomes stronger, it continues into the later Anagen phase. At this stage, the hair is at its strongest point and the most difficult to permanently destroy. The next phase of the hair growth cycle is called the Catagen phase. During this phase, the hair begins to detach itself from the dermal papilla. As a result, it is losing nourishment but continues to be slightly nourished by the surrounding capillaries. When the hair completely detaches from the shrinking dermal papilla and no longer receives nourishment from surrounding capillaries the hair enters the Telogen phase. The hair is simply being held in the follicle which has also shrunken during the process. These hairs naturally shed and fall out with combing or friction.
A Better Understanding of Hair Loss

Proper hair growth relies on the delicate ratio follicles spend in their respective anagen, catagen and telogen phases. Despite the average shedding of 50-150 strands of hair per day, this amount often goes visibly unnoticed due to the substantial amount of hair growth occurring at the same time. It is only when new hair growth is being matched or surpassed by shedding that the phenomenon of hair loss becomes noticeable.

Hair loss typically stems from a disruption in the hair growth cycle, with follicles spending significantly less time in the anagen phase. This results in not only shorter hair, but also a drastic shift in the ratio follicles spend in each phase. When follicles reach the catagen and telogen phases faster than normal, excess shedding begins, quickly progressing into thinning and baldness. In fact, hair loss could really be understood as inadequate hair growth due to its progressive, non-acute nature.

The effects of DHT on the hair growth cycle...

A complex biochemical system exists in the regulation of hair follicle physiology and activity. It is a source and target of various neuropeptides, a neurohormone and neurotransmitters. While many of the complex interactions have yet to be identified or understood, dihydrotestosterone, a neurohormone has been identified to play a pivotal role in the overwhelming majority of hair loss.

Reduction of DHT levels increases hair growth

The effects of DHT reduction can be clearly seen in the clinical results of finasteride, a drug that is a competitive and specific inhibitor of the Type II isozyme of 5a-reductase, an enzyme responsible for the conversion of testosterone into 5a-DHT. In a 48 week study conducted by Van Neste et al, 212 men age 18-40 were randomized into placebo or daily treatment with 1mg finasteride. The results were particularly striking.

Compared to the baseline where 62% of hair in the anagen phase, the finasteride group saw net improvement compared with placebo of both total and anagen hair counts of 6.3% (+/- 1.4%) and 26% (+/- 3.1%) respectively (P<0.001). The finasteride treatment group also saw net improvement in the anagen to telogen ratio of 47%.

In other words, reduction of DHT levels leads to increased total hair counts, lengthened anagen growth phase relative to telogen resting phase, and increased percentage of hair follicles in the anagen phase. The increase in the total hair count compared to baseline reveals that reduction of DHT promotes the re-entry of resting telogen follicles into the anagen phase, including follicles exhibiting abnormally prolonged telogen phase. Abnormally prolonged telogen phase follicles typically shed their telogen hair shaft before the production of a new hair shaft, contributing to thinning and balding.

Based upon the highly selective nature of the finasteride drug, these results can be used to infer the effects of DHT on the hair growth cycle.

- DHT shortens the anagen growth phase and lengthens the telogen resting phase.
- DHT reduces the percentage of hair follicles in the anagen phase relative to catagen and telogen phases.
- DHT can eventually prevent hair follicles from entering the anagen phase altogether.

DHT, a potent neurohormone, has been shown to stimulate TGF-β1, TGF-β2, DKK1 and Interleukin 6, all of which are powerful neuropeptides or proteins which contribute to the miniaturization of hair follicles. It has been proposed that the hair loss in pattern hair loss is the consequence of repeated miniaturization of the hair follicles through shortened hair growth cycles. Additionally, the diameter or thickness of hair and pigmentation or color has been shown to diminish in tandem with the reduction of follicle size.

Miniaturization of hair follicle size may contribute to the shortening of the anagen phase. The duration of the anagen phase is the primary determinant of hair length, and progressive hair follicle miniaturization has been shown to reduce the anagen to telogen ratio from 12:1 to 5:1. Through this disruption in the hair growth cycle, the average anagen phase can shorten to the point where new hairs will no longer be able to grow enough to reach the skin surface, leading to the visible phenomena of hair loss.
SAW PALMETTO, EPIGALLOCATECHIN-3-GALLATE, AND CAFFEINE: THREE NATURAL POTENT DHT BLOCKERS

Saw Palmetto Berry

Saw Palmetto Berry, also known as serenoa repens, has been studied extensively for its DHT blocking activity. Used since the 1700s as folk medicine for urinary and prostate conditions, Saw Palmetto’s activity as a competitive, non-selective inhibitor for Type I and II isozymes of 5α-reductase was later characterized in the 1900s. Following the success of finasteride in the treatment of hair loss through 5α-reductase inhibition, studies were run to explore Saw Palmetto’s potential in treating androgenetic alopecia.

In a two-year study, male patients treated with an oral saw palmetto extract exhibited a significant increase in hair growth. Participants in the study included 100 men from the age of twenty to forty. 38% of participants saw an increase in hair count and over 52% grew or maintained hair density, recorded at study start baseline. No adverse events were reported.

Saw Palmetto’s Anti-inflammatory effects may contribute to follicle health

Additionally, Saw Palmetto has been shown to contain the antioxidants epicatechin and methyl gallate, which have been shown to reduce oxidative damage to cells and reduce inflammation. These effects may support hair growth through the reduction of inflammation and follicular damage. Increased inflammation has long been recorded in patients with androgenetic alopecia, this may be a result from DHT, which has been shown to stimulate TGF and Interleukin-6, which play pivotal roles in inflammatory processes. Inflammation often leads to cell damage, and chronic inflammation often results in fibrosis or scar tissue. It has been suggested that fibrosis contributes to follicle miniaturization by reducing oxygen and nutrient flow, diminishing tissue integrity. Female patients with androgenetic alopecia responded positively to combined modality therapy based upon their immunoreactant profile.
Green Tea Extract

Epigallocatechin-3-Gallate, or EGCG, is one of the active constituents of green tea. In the February 2003 issue of The Journal of Nutrition, researchers from Harvard Medical School reported that green tea significantly reduced the concentration of DHT in the blood. Subsequent research has revealed that EGCG works to inhibit the metabolism of testosterone into DHT and suppresses androgen activity by repressing the transcription of the androgen receptor gene.

EGCG, as part of the family of catechins, also demonstrates potent antioxidant properties, which may help stop the progression of hair loss by mitigating follicular damage. EGCG also belongs to the structural class of polyphenols, which are reputed to hold a number of positive health benefits including the modulation of inflammatory factors. EGCG’s role as a polyphenol may be responsible for the promotion of hair growth seen in a study conducted on hair follicles ex vivo and cultured dermal papilla cells (DPC).

Caffeine

Caffeine is primarily known for its global use as a stimulant in coffee and energy drinks. Lately, it has been increasingly utilized in cosmetic products due to its high biological activity and ability to easily penetrate the skin barrier. Caffeine has been noted for its rare characteristic to be both soluble in water and hydrophobic enough to pass through biological membranes. This allows for caffeine to be well suited for topical applications.

It has been shown to have powerful antioxidant properties, preventing the excess buildup of fat in cells, and protect against UV radiation. UV radiation has been noted to play a role in reducing pigmentation and the thickness of hair shafts. In addition to these effects, it is used in cosmetic formulations for its ability to increase the microcirculation of blood in the skin.

The anagen phase is characterized by the hair shaft's continued connection to the blood supply. It is only after the hair shaft is disconnected from the blood supply by catagen processes that the shaft ceases growth. Reduced oxygen flow stemming from diminished blood flow has the direct consequence of diminishing tissue integrity, which results in follicular miniaturization when localized to the scalp.
Caffeine exhibits a multi-modal effect resulting from its ability to act upon various biological processes. While it is best known for its antagonism of adenosine receptors responsible for its stimulant and wakefulness effects, caffeine also acts as an inhibitor of certain enzymes such as phosphodiesterase (leading to reduction of inflammatory activity, degradation of fats via lipolysis, and improved circulation) and 5α-reductase.

These properties demonstrate caffeine’s triple threat ability in addressing the factors contributing to hair loss. Notably, caffeine’s mechanistic properties are remarkably similar to minoxidil, an FDA approved treatment for hair loss that works by improving blood flow to the scalp. A study conducted by Fischer et al, published in 2014 by the British Journal of Dermatology, appears to confirm this, with differential effects of caffeine noticed on hair shaft elongation, [hair] matrix and outer root sheath keratinocyte proliferation, and IGF 1/TGF activity regulation in both male and female hair follicles in vitro. Caffeine’s effect in male hair follicles is particularly pronounced, where evidence of caffeine’s ability to interfere with testosterone activity in hair follicles was reported by Fischer et al in the International Journal of Dermatology. The same study demonstrated the promise of topical solution where caffeine was shown to have a fast and high penetration through hair follicles. An open label study conducted in 2017 found that a 0.2% caffeine solution saw comparable results to a 5% minoxidil solution in men, where the caffeine saw an improvement in the anagen ratio of 10.59% compared to the minoxidil arm’s 11.68% in a 6 month period.

DPCs have been an area of substantial research interest for the treatment of hair loss. DPCs play a pivotal role in the development and growth of hair follicles and the interactions that govern the production of hair. EGCG has been shown to stimulate the growth of DPCs in vitro with the proposed mechanisms of upregulating phosphorylated Erk and Akt and increasing the Bcl-2/Bax ratio. In combination with EGCG’s role in the inhibition of DHT production, EGCG from green tea appears to contribute to hair growth through two distinct pathways.
Six months using Shapiro MD Topical Solutions

Inspired by the current body of work on finasteride and DHT's role on hair follicles, a formulation containing Saw Palmetto, Green Tea EGCG and Caffeine was created. This formulation was refined then tested as a topical solution in a dermatology clinic for its patients experiencing androgenetic hair loss. The trial was performed under informed consent in compliance with legal and ethical rules of the United States of America. Patients were asked to try this topical combination for 6 months with the aim of improving the thickness, appearance, and growth rate of hair.

The combination was conceived to treat the underlying factors upregulating hair loss through DHT.

In the initial trial run, several patients at varying stages of hair loss used the topical application daily. In the majority of patients, surprising results were noticed, potentially revealing that the combination of the three DHT-blocking ingredients worked synergistically in the treatment of hair loss. Treatment with the formulation typically led to visible results after 3 months of daily use. The formulation was well tolerated without occurrence of local or systemic adverse effects.

Figure #: Use of topical solution containing Saw Palmetto, EGCG, and caffeine to treat thinning hair in man age 50 (left): after two months of daily application significant growth and return of normal hair coloration was achieved (right).

These promising results in the clinic prompted the extension of the solution into shampoo, conditioner and foamer...

In response to the promising results seen from the topical formulation, the formulation was adapted as a shampoo, conditioner, and foamer to promote frequent ease of use. This stemmed from patient reports correlating frequent daily applications with improved results. This theory seemed highly plausible due to the constant formation of DHT through natural biological processes.

Hair loss is generally a progressive condition. The results from the topical solution demonstrated the effectiveness of the formulation in improving the thickness, growth, and coloration of hair over a period of time.

SYNERGISTIC EFFECTS BETWEEN VARIOUS DHT BLOCKERS

The original topical solution and its later shampoo, conditioner, foamer formulations were developed at the Gardens Dermatology Clinic in Palm Beach, Florida based on an exhaustive understanding of both the nutritive needs of hair and the role of DHT in hair loss. The shampoo, conditioner, and foamer was later named Shapiro MD after one of the two co-creators: Dr. Steven Shapiro who runs the Gardens Dermatology Clinic alongside Dr. Michael Borenstein.

The Shapiro MD System is the only hair loss system with products containing the unique combination of three different DHT blockers: Saw Palmetto, EGCG, and Caffeine. These ingredients individually confer additional benefits on the multifactorial system that governs hair loss and growth. The unique formulation provides the scalp, hair follicles and hair with the optimal balance of nutrients, moisture, and DHT blocking activity to halt the primary factor for hair loss and improve the quality of hair.

DHT must be treated at the hair follicle level to restore vitality to hair growth.
Complete Hair Regrowth Solution

Just what the doctor ordered. Our FDA-approved, doctor-recommended comprehensive hair regrowth plan, attacks all area of threatened hair loss including thinning hair, receding hairlines and crown-loss or bald spots.

Shapiro MD offers three safe and effective formulas, including minoxidil and finasteride which are FDA-approved for preventing hair loss.

Finasteride blocks DHT, to allow for regrowth of hair throughout your head and for most men can be effective at filling in of previously receding hairlines.

Minoxidil is a leave-in foam topical that is recommended for thinning at the crown, hairline and vertex.

Shapiro MD’s patented Shampoo and Conditioners leave your hair feeling thicker and healthier for improved quality of hair.

Remember that as with all great accomplishments, perseverance and patience are key to combating hair loss. With a combined treatment plan of Shapiro MD products results can typically be seen in 3-6 months and maximum results will be seen after 9-12 months of use.

Finasteride

Finasteride is the generic name for the well-known hair loss treatment Propecia. It is the only FDA-approved pill for male pattern baldness, proven to both stop hair loss and/or stimulate re-growth.

Finasteride is a once-daily medication for male pattern baldness (androgenetic alopecia, or typical male balding) that works by blocking the conversion of testosterone into dihydrotestosterone (DHT). DHT is a male sex hormone that acts on hair follicles to shrink and weaken them in men who are genetically susceptible to the condition. By reducing DHT in the body, this medication reduces the hormone’s impact on hair follicles, slowing hair loss and even improving hair regrowth of receding hairlines.
I couldn’t believe my eyes! I’ve used Shapiro MD for about 12 months. Amazed by the results! For me Shapiro it’s the best shampoo I’ve tried in the battle with losing hair, it has works wonders will highly recommend will call 10/10 as soon as all my hair finish showing!
– Eric B.

bought this for my son who is in his late 20’s and was balding very quickly. I thought it wouldn’t hurt to take a chance. He started the shampoo and conditioner on September 21, 2017, and has used it EVERY day since. He leaves the shampoo on for the full 20 minutes and the conditioner on for the full two minutes. He took a picture every month on the 21st to follow any progress.
We think this shampoo works!!! Here are the pictures in order from Sept, Oct, Nov, Dec and Jan…
– Amazon Customer. P. Barney

I do not shampoo and condition my hair every day so when I refer to day 1 and day 15 I actually mean the first time I used the product and the 15th time I used product (that’s why the dates are odd) I wore hair extensions for several years and finally decided over a year ago to stop using them and let me hair do it’s own thing and I got it to a relatively healthy condition with the aid of my hairdresser. Unfortunately, due to medications that I take my hair just would not grow and was very thin and lifeless.
As you can see from the picture I’m attaching to this email, the progress is incredible! I take extreme care of my hair and try not to torture it with styling products or tools so my hair looked pretty healthy but would not grow! I can’t thank you enough for the opportunity to use these incredible products that actually work!
– Maria M.

I couldn’t believe my eyes! I’ve used Amazing Results! Hair started growing faster, so need to buy hair dye more often now for the new hair. Amazing results! Using this system had made a drastic difference in my hair and my life in general. I would say hands down the best remedy I’ve ever tried before. Try it and you’ll see what I mean.
– Amazon Customer. KEA.
Shapiro MD's Comprehensive Hair-Loss Prevention & Regrowth Products

Each Shapiro MD product includes our patented combination of the three DHT-blocking active ingredients. All three products are free of sulfates, phthalates, and parabens.

**Shampoo**
- DI Water, Sodium c14-16 Olefin Sulfonate, Cocamidopropyl Betaine, Cocamide DEA, Dimeethacrylamide, Glycol Dimethacrylate, Sodium Chloride, Fragrance, Hydrolyzed Wheat Protein, Dodecylbenzenesulfonate, Glycol Distearate, Sodium Chloride, Dimethiconol, dodecylbenzenesulfonate, Glycol Distearate, Hydrolyzed Wheat Protein, Caffeine, Serenoa Serrulata Fruit Extract, Chlorophyllin, Hydrolyzed Wheat Protein, Guar Hydroxypropyltrimonium Chloride, Epigallocatechin Gallate, Panthenol, Methylchloroisothiazolinone, Methylisothiazolinone, Caffeine, Serenoa Serrulata Fruit Extract, Citric Acid.

**Conditioner**
- Water (Aqua, Propylene Glycol, Dimethyl Ether, Behenamidopropyl Dimethylamine), PPG-3 Benzyl Ether Methacrylate, Cocos Nucifera (Coconut) Oil, Argania Spinosa Kernel Oil, Aloe Barbadensis Leaf Juice, Hydrolyzed Wheat Protein, Caffeine, Serenoa Serrulata Fruit Extract, Glycol Stearate, PEG-100 Stearate, Calendula Officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officinalis, Calendula officina

**Finasteride**
- Active ingredient: 1mg Finasteride. Inactive ingredients: lactose monohydrate, microcrystalline cellulose, pregelatinized starch, sodium starch glycolate, hydroxypropyl methylcellulose, hydroxypropyl cellulose, magnesium stearate, talc, docusate sodium, yellow ferric oxide, and red ferric oxide.

**Men’s Minoxidil**
- Active ingredient: Minoxidil 5% by volume. Inactive ingredients: alcohol, propylene glycol, purified water.

**Women’s Minoxidil**
- Active ingredient: Minoxidil 2% by volume. Inactive ingredients: alcohol, propylene glycol, purified water.

Regimen and usage for Shapiro MD Hair Loss Treatment System

**Use of Shapiro MD Shampoo**

Shapiro MD's advanced hair therapy shampoo is designed for men and women to enjoy thicker, fuller hair without any added inconvenience. It's that easy!

**Step 1: “Cleanse the skin”**

Apply the shampoo to your hands, lather and massage onto your moist scalp, concentrating on the front hairline and the area on top of your head. These zones have more hair follicles and can benefit the most from Shapiro MD’s DHT-fighting formula. We recommend massaging the problem areas of your scalp for 1 minute to maximize the absorption of the formula into your hair follicles.

**Step 2: Nourish and Restore**

Leave applied for at least 2 to 5 minutes before rinsing off. For best results, leave in for 20 minutes.

**Step 3: Rinse Out**

Rinse thoroughly, taking care to wash away from the skin directly around the scalp. Leave for 2 to 5 minutes before rinsing off, leave in for 20 minutes at most.
Use of Shapiro MD Conditioner
Get the most from Shapiro MD’s powerful DHT-fighting system by combining our advanced hair therapy shampoo with our dermatologist-developed conditioner.

Step 1: Apply
After rinsing Shapiro MD’s shampoo from your scalp, apply a quarter-sized amount of Shapiro MD conditioner generously, working through the scalp to the hair ends.

Step 2: Let it sit
Leave the conditioner applied for at least 2 minutes while you complete the rest of your shower activities.

Step 3: Rinse
Rinse thoroughly

Use of Shapiro MD Foamer
The Shapiro MD Leave-In Foamer features a less powerful version of the DHT-fighting formula found in our Shampoo and Conditioner. This allows you to apply the Foamer without needing to rinse it out - effectively providing you with round-the-clock, 24-hour DHT-fighting protection!

Step 1: Cleanse and Dry Scalp and Hair
Best results have been seen from the application of the foamer on clean and dry scalp and hair. Wash hair, removing product or other external elements that may prevent the thorough application of the leave-in foamer. The Shapiro MD Shampoo and Conditioner will work best. Ensure hair is dry before application of the foamer.

Step 2: Apply and Nourish
Apply 1-2 pumps to palm, rub hands together, and evenly distribute to scalp in the morning or evening. Evenly distribute throughout scalp and hair.

Step 3: Massage
Massage the foam into your scalp for 1 minute.

Step 4: Leave it in
Leave it in! Designed for once daily use, continue daily administration of the foamer in the morning or evening until satisfactory results are achieved.
Step 1: Make sure your hair and scalp are dry.

Step 2: Fill the dropper to the 1ML mark.

Step 3: Apply the dose to the crown and vertex areas.

Step 4: Once applied, gently rub into the scalp.

Step 5: Avoid getting any of the dose on your eyes.

Step 6: Apply twice daily. Recommended morning and evening.

Use of Shapiro MD Minoxidil

Step 1: Ingestion seek professional assistance or contact a poison control center immediately.

Step 2: Apply twice daily. Recommended morning and evening.

Step 3: Once applied, gently rub into the scalp.

Step 4: Apply the dose to the crown and vertex areas.

Step 5: Avoid getting any of the dose on your eyes.

Step 6: Apply twice daily. Recommended morning and evening.

Additional Information about Shapiro MD Hair Loss Treatment System

Note that it is for external use only. Avoid contact with eyes, in case it does not improve or worsens, a medical professional should be consulted, do not apply over open or puncture wounds, infections or lacerations, keep out of the reach of children. In case of incidental ingestion seek professional advice or contact a poison control center immediately.

Store in a controlled temperature between 55-95°F (c conversion) in the absence of direct light exposure.

Health Warning: Not for use by women who are pregnant, may become pregnant, or breast feeding. Please check with your physician if you have any sensitivity to any ingredient of this shampoo.

REFERENCES:

Shapiro MD’s Comprehensive Hair-Loss Prevention & Regrowth Products

For further details, visit:
www.shapiroMD.com
Distributed By:
Conversion Labs, Inc.
1460 Broadway, New York, NY 10036