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INTRODUCTION

Historically, hair signified power. (Everyone knows the story of Samson who lost his power after his wife Delilah cut off his long hair). Today, hair is essential to our notion of beauty. Yet over 50% of men suffer from slight or severe baldness and a good deal of women suffer from thinning hair.

On average, people lose about 10% of their hair during a resting phase. After about three months, resting hair falls out and new hair begins to grow. The phase of new growing hair typically lasts anywhere from two to six years with hair growing about one-half to one-inch per month. As much as 90% of the hair on your head is growing at any given time.

Shedding hair is a normal process. In fact, on a normal day, you would lose about 100 hairs. You will lose more if going through significant hair loss. Although hair loss is not life or health threatening, it can cause serious problems with a person’s psyche and self-confidence.
HERIDITARY HAIR LOSS – SYMPTOMS AND CAUSES

The most common form of hair loss is androgenetic alopecia, which can affect both men and women. Women are usually affected less than men, which is why this condition is commonly referred to as Male Pattern Baldness. The condition is so common that it can almost be regarded as a part of the normal aging process. Although androgenetic alopecia is hereditary, contrary to popular belief, it is not passed down through only the mother’s side of the family. Either side of the family can pass down the genetic disposition toward baldness.

Symptoms Of Hereditary Hair Loss

The pattern of hair loss and baldness are different for men and women.

On men, the most notable symptom of the onset of male pattern baldness (androgenetic alopecia) is hair loss along the hairline that gradually recedes into an “M” shape. The hair at the crown begins to thin, eventually meeting the receding hairline and creating a horseshoe pattern of hair around the sides of the head. Male pattern baldness is typically diagnosed by the appearance of this pattern. Other diseases such as alopecia areata or folliculitis may cause dissimilar balding patterns and should not be diagnosed as male pattern baldness.

On women all the hair on the head begins thinning, and then gradually progress over the whole head for many years. Women seldom get completely bald areas on their head, but the hair often gets so thin that the scalp is clearly visible through the hair.

Causes Of Androgenetic Alopecia

The skin has three layers: The outer layer, called epidermis, consists of epithelial cells. Under this lies the dermis consisting of connective tissue. At the bottom there is a layer called the hypodermis consisting mostly of fat cells.

The skin has narrow pores, hair follicles, extending from the surface down to the top of the sub-dermis, called hair follicles. A hair extends from a growth zone in the bottom of each hair follicle and out at the skin surface.

In common forms of hair loss, a substance in the body, dihydroxy-testosterone (DHT), gives a signal to the cells in the hair follicles that causes these cells to divide less than normal, slowing or stopping the production of hair.
DHT is a metabolic product of testosterone, the male sex hormone. Women also have testosterone and DHT in their bodies, therefore hair loss can also affect them.

Only cells that are susceptible to the influence from DHT will slow their growth process. This susceptibility is inherited from the parents by some individuals. Follicle cells in the lower parts of the head are usually resistant to the influence of DHT, which is why these areas seldom become bald.

Hair growth is not only affected by DHT. Other substances found in the tissue may give the cells signals to divide more or less, and nutrients like vitamins, minerals and essential fatty acids may make the growth process more effective. Some substances in the tissue may also block the DHT or ease the removal of this substance. Therefore all individuals susceptible to the influence of DHT do not lose hair to the same extent.
DISEASES RELATED TO THE SCALP

There are a variety of hair and scalp diseases; some are very common, while other more severe hair and scalp diseases are fortunately rare. Alopecia Areata is an autoimmune skin disease that causes the body’s immune system to attack the hair follicles, causing baldness in patches. It affects 1.7 percent of the population, including 4.7 million people in the United States. In cases where the disease progresses to the point where all scalp hair is lost, it is called Alopecia Totalis, and where hair loss advances to the entire body it is called Alopecia Universialis. There is no known cause for alopecia areata and therefore no known cure. The disease usually hits before age 20, and does not seem to favor one particular gender or culture. Hair loss with alopecia areata comes in stages, with hair returning and falling out in phases.

Seborrheic Dermatitis, an advanced form of seborrhea, is a non-contagious skin disease that causes excessive oiliness of the skin, most commonly in the scalp, caused by overproduction of sebum, the substance produced by the body to lubricate the skin where hair follicles are present. Seborrhea is the form of the disease where oiliness only occurs without redness and scaling. The disease commonly occurs in infants, middle-aged people, and the elderly, and is commonly known in infants as cradle cap. The disease has no cure, yet in infants it usually disappears in time. With adults the condition may persist with varying degrees of severity. Flaking, scaling and redness often are symptoms of this disease. It is easily treated with topical solutions found in creams containing corticosteroids and shampoos containing pine tar, selenium sulfide or salicylic acid. Seborrhea and seborrheic dermatitis are both easily treated and controlled, and should be because left untreated they can contribute to hair loss. In fact, a group of Japanese scientists have linked the overproduction of sebum to hair loss. This is because the sebaceous glands in areas of the scalp where hair is thinning or bald are enlarged, and are thought to cause the clogging of pores and several other problems that promote hair loss.

Psoriasis is termed an immune-mediated disorder that affects different areas and functions of the body. It is non-contagious, and one of the areas of the body it can affect is the scalp. It usually appears as patches of raised red skin accompanied by burning and itching. Several contributing factors are thought to contribute to the outbreak of psoriasis, including emotional stress, certain infections, toxemia, the thinning of the intestinal walls and adverse reactions to certain drugs. At least half of people who have psoriasis have scalp psoriasis. Like seborrhea, scalp psoriasis left untreated can cause hair loss. Fortunately, it can also be treated with a variety of topical creams and shampoos containing tar and salicylic acid. It is vital not to scratch the
scab and pick at the scabs that psoriasis causes, as this could damage the hair follicles in the dermis and cause permanent hair loss. As long as the follicles are not damaged, hair loss caused by this malady is usually temporary and hair will grow back once the condition clears. Some of the best ways to stop the itching are using very common household substances such as mouthwashes like Lavoris® and Listerine®. Carbolated Vaseline® works well along the hairline to relieve symptoms. Hair dyes of all kinds and chemical treatments such as permanents and relaxers should be avoided at all costs with psoriasis. These chemicals are extremely harmful in general, but with psoriasis can lead to irreversible damage to the hair follicle over a relatively short period of time.

Like any of these other maladies, one must keep in mind that psoriasis cannot be cured through drugs, and if any cure exists it is in the form of the body healing itself by the correction of malfunctions in the body. One condition present with everyone suffering with psoriasis is toxemia. When the body becomes toxic, various genetic dispositions mature and psoriasis is but one illness that arises due to toxemia. Toxemia is caused by poor circulation and the thinning of the intestinal walls. The patient’s blood becomes acidic, and thus this acidity comes through the largest organ in the body: the skin. Several cases of psoriasis have been healed through natural processes such as internal cleansing, giving up alcohol, increasing the intake of water-especially distilled water, an increase in exposure to the sun in certain cases, an active reduction in stress by removing stressful conditions and practicing meditation, and the elimination of nightshades such as tomatoes, tobacco, eggplant, white potatoes, peppers (not black pepper) and paprika. One food that is a common plague to those suffering with psoriasis is pizza. Obviously containing tomatoes, pizza also contains every ingredient a psoriasis sufferer should avoid, such as white flour, peppers and hot spices. Additionally, pizza is highly acidic and should be avoided by all means.

In addition to the dietary suggestions given earlier, it is suggested that those suffering with psoriasis should eat fish, poultry and lamb regularly, maintain a high alkaline diet and consume low fat milk or buttermilk. Fish, especially fresh or canned salmon, sardines and solid white albacore tuna contains Omega-3 fatty acids that are vital for skin and scalp health. Although most fish are recommended, avoid dark-fleshed fishes such as mackerel or bluefish, sushi or shellfish. Poultry such as chicken, turkey, Cornish Hens and other non-fatty fowl are excellent foods for those with psoriasis when not fried. To avoid excess fat, remove the skin before eating and avoid fowl that has high fat content like goose and duck. Lamb is the only recommended red meat for those suffering with psoriasis, being that it is easy to digest and still a great source of protein. Of course it should be
prepared any way except by frying. Dairy products should be consumed sparingly, and only low-fat or non-fat dairy products. Those suffering with psoriasis can obtain their calcium from sources mentioned earlier in the section on Diet, Nutrition and Hair Loss, such as soybean products, celery, lettuce and greens. White bread should be avoided. And a limited amount of whole grain bread and whole grain products can be substituted, but should be consumed with caution because all grains except millet are acid forming. Additionally, one should eliminate alcohol consumption entirely, except for perhaps a small glass of red wine with dinner to promote rich blood and digestion.

Lecithin is beneficial for psoriasis, and can be taken in its granular form in the dosage of one tablespoon three times a day, five days a week, either plain or added to water, juice, sprinkled on salad or cereal. After the condition clears, reduce the dosage to one tablespoon taken once per day, five days a week. Lecithin can be obtained at any health food store, and although it can be obtained in liquid or tablet form in addition to granular form, it is best used in granular form due to the high phosphatide content when consumed as such. These doses should not be exceeded, as the over consumption of lecithin can cause a blockage in the absorption of calcium.

Eczema is another non-contagious skin disease that mimics psoriasis very closely. Eczema produces scales, reddened inflamed skin that periodically ooze, and the familiar itch that is of supreme annoyance to those that suffer with it. These are however two different diseases that usually require different treatments. However, there are certain treatments that work for psoriasis that work for eczema also. Eczema causes extreme buildup and sores on the scalp, and can cause severe scarring. The buildup caused by eczema can cause temporary hair loss, however the scarring that can occur especially if one scratches the painfully itchy lesions can cause permanent damage to the hair follicles.

Eczema is an illness caused by toxemia as well. And although one can use the various medicated shampoos and creams on the market to control its symptoms, permanent relief is only going to come from removing the cause of the toxemia. Therefore once again cleansing and drinking plenty of purified water are keys to fighting eczema. Many of the dietary recommendations are the same for one who suffers from eczema, except there is usually an increased sensitivity to fish—therefore it should be eaten in a limited amount. Also, there is usually a high intolerance of cow’s milk, since eczema is highly associated with allergies. Therefore, one should use soymilk or goat’s milk instead.
OTHER COMMON CAUSES OF HAIR LOSS

Another common cause of excessive hair loss is hormonal changes within the body. These changes could be for various reasons, such as having a baby, dealing with an under or overly active thyroid, having an imbalance of estrogen or androgens, and so on.

Fungal infections of the scalp can also lead to losing more hair than usual.

If you have undergone a major surgery or have had a serious illness, you may also lose more hair for several months afterwards due to the stress on your body.

Finally, underlying disease can also be a challenge. If you are living with diabetes, lupus, or another autoimmune disease, excessive hair loss is common. Remember, by taking the right medication to treat your illness, hair growth generally returns to normal.

Certain types of drugs can also cause hair loss. If this is the case, once the medication is stopped, the excessive hair loss usually stops as well. The most common culprits include blood thinners, excessive vitamin A, antidepressants, gout medication, birth control pills and chemotherapy.

Chemotherapy kills rapidly reproducing cancer cells, however the side effect of this treatment is that chemotherapy also destroys the rapidly reproducing cells that promote the growth of hair and nails. Hair is lost rapidly and in large quantities in most instances. During this process, no prescription, herbal or over the counter treatments of any kind have been found to assist in maintaining the hair. Fortunately, hair normally returns within six months to a year after treatments cease. Patients have found that hair re-grown after chemotherapy is finer in texture and lighter in color at first. These are usually temporary conditions that improve with time. Those recovering from chemotherapy should avoid chemical processes such as perms, relaxers, bleaching and coloring in the hair until it grows at least three inches and not until at least one year after the last treatment. Chemotherapy can cause skin sensitivity and these chemicals can be extremely irritating to the scalp.
HAIR CARE

Hair is fairly strong and can generally withstand normal grooming techniques. However, there can be thinning or breakage of hair due to poor grooming habits, and following several tips can prevent these bouts of thinning and breakage. Avoid combing hair with fine-toothed combs when wet, as this is a common cause of breakage. Although this is a tempting practice because hair straightens and detangles much better if combed when wet, the stress on the hair shaft is immense when the hair is wet because it is weakened.

This goes for brushing the hair when wet also. Brushing the hair in general can be stimulating to the scalp, encouraging blood flow to the hair follicles and maintaining their health. Brushing the hair before washing it can loosen up flakes of sebum and dead skin buildup and make it easier to thoroughly clean the scalp during shampooing. Remember, over combing or over brushing generally will cause damage to the hair, which is quite contrary to the old 100-stroke brushing rule.

Although clean hair is desirable and even necessary for the maintenance of healthy hair, excessive shampooing can strip vital minerals like calcium, phosphorus, nitrogen and iron from the hair. This is particularly true when using commercial shampoos. Most commercial shampoos contain formaldehyde as a preservative. To disguise the presence of formaldehyde it is listed in the ingredients as Quanternium-15. This substance can be carcinogenic (cancer-causing) and poisonous to the entire system. Unfortunately for those who suffer with dandruff, anti-dandruff shampoos are some of the most dangerous shampoos on the market. Selenium sulfide is the main ingredient in most dandruff shampoos, a substance that has shown to cause degeneration of the liver. Other toxic chemicals such as polyvinyl pyrrlidone plastic (PVP), which is a proven carcinogenic, and creosol which has been proven to be highly toxic are commonly found in dandruff shampoos. This is why it is very important to correct this condition as quickly as possible through natural means.

Natural shampoos normally found in health food stores are a much better choice. Even with natural shampoos, be careful of the ingredient Sodium Lauryl Sulfate can strip away too much oil from the hair, causing shampoo residue to be left behind. Ingredients that have proven useful in shampoos are cocamides, Panthenol Pro-B, of course the previously discussed vitamins, aloe vera, sage, nettle, burdock, chamomile, chaparral, horsetail and rosemary. Also look for shampoos that contain keratin, the protein substance that hair is made of, or amino acids. This will help seal breakages in the cuticle.
Choose a shampoo with a proper pH balance; a level of 5.5 is ideal. The pH scale runs from 0 to 6.9 for acids and 7.1 to 14 for alkaline, with 7 being neutral. Although generally conditioners are good for hair provided that they do not contain the previously mentioned harmful chemicals, shampoos with conditioners included should be avoided. Shampooing and conditioning serve two different functions and the effectiveness of both are diminished by combining the process.

When shampooing, pour the shampoo into the hands and rub the shampoo in with your hands rather than pouring it on your head. By pouring shampoo directly into the hair you may promote buildup in one particular spot. Massage gently with your fingertips to loosen flakes and buildup and to stimulate circulation, but avoid using the fingernails as this may scratch the scalp and cause scarring over time. Shampoo with warm water to open the pores and rinse with cool water to promote shrinking the pores back to their normal size. After washing hair, dry it by blotting the hair with a towel. Avoid rubbing, especially with terrycloth towels, as this will pull hair when it is in a weakened state due to the wetness.

Be sure to follow directions on all perms and relaxers, as misuse can cause serious damage to the hair shaft. Excessive coloring, styling or heat treatments, and chemical treatments can damage hair and cause breakage even when directions are followed. Always keep in mind that these perms and relaxers have harsh chemicals in them that chemically alter hair, and long-term use of these chemicals can cause harm to hair shafts and follicles causing some hair loss. If you can avoid the use of these chemicals, by all means do. The result could be the increased life of your hair. If you decide to use perms or relaxers to process hair, be sure to use semi-permanent hair color or henna. This will avoid harsh reactions between the relaxer or perm and the ammonia and peroxide amounts in permanent dyes. It is always best to allow the hair to rest untreated as much as possible, and avoid mixing chemical processes.

Another styling caution is against the overuse of hairstyles that pull the hair too tight, such as ponytails and braids, which will cause hair loss especially along the sides of the scalp. This syndrome is called traction alopecia. Keep in mind when styling hair that hair is living and growing, and is susceptible to the stress of constant pulling continuous abuse causes scarring, which will lead to permanent hair loss in the areas affected. Along with leaving the hair chemically untreated for a time, leaving it in a loose style without over-manipulation for as long as possible will ensure optimum results.
AFRICAN AMERICAN HAIR

The typical hair and hair follicles of those of African descent are tightly curled, thus producing hair that spirals. This hair also typically has a larger diameter than Caucasian hair and retains less water, thus its relative “kinkiness.” The many styling methods utilized on African American hair cause concern with hair loss. African American hair is very strong, fortunately so because African American hair styles cause a great deal of stress on the hair and scalp.

For example, using a hair pick to pick the hair up to a bushy style is a very damaging process due to the constant pulling causing stress on the hair shaft as well as the follicle. In fact, combing African American hair in general can create high stress on African American hair and cause breakage, which perpetuates dryness. Cornrowing and braiding are methods of hairstyling that pull the hair tight, and this can cause a great deal of stress on the hair and scalp resulting in hair loss. Braiding that results in the hair being pulled very tight can cause traumatic alopecia, a hair loss that is caused by trauma to the hair and scalp. Traumatic alopecia is usually reversible with proper hair care.

Hot combs and relaxers used to straighten hair can cause a great deal of heat and chemical damage to hair and scalp, which can also cause traumatic alopecia, and over time can cause permanent hair loss. This becomes especially true when the heat or chemically processed hair is pulled tight by rollers or a hot curling iron.

Hot oil conditioners are excellent for African American hair, as hot oil treatments contain proteins and polymers vital to repairing the hair cuticles. Hot oil treatments involve heating the oil and putting it into the hair and scalp, then covering the hair with a plastic cap to allow the oil to soak in. Follow the recommendations on the treatment you are using for the amount of time you should leave the treatment on the hair. This process can heal breakages and shinier stronger hair will be the result.

Consider that hair relaxers commonly used on African American hair contain lye or similar chemicals that break down the hair shaft. Left on beyond the recommended time, these chemicals would eat right through the hair and cause it to fall out in clumps. No-lye relaxers are very popular today, mainly because it leads people to believe that the product is not caustic. This is far from the truth. The combination of calcium hydroxide and guanidine carbonate are combined to form guanidine hydroxide, which could just as
easily clean a sink. Repeated use of such products can cause some degree of
hair loss, and if scarring occurs while using these chemicals, the hair loss
can be permanent in that area of the scalp. One must ask themselves is it
wise to place such caustic chemicals in the hair on a regular basis for the
sake of desired appearance? The question must be answered by each
individual, however the facts should be known.

There is little that can be done to alleviate this syndrome without changing
the typical hairstyles of African Americans. There is a catch-22 concerning
relaxing African American hair, since combing natural African American hair
causes so much stress and breakage of hair, while chemicals cause so much
harm to the hair and scalp as well. There are a few hair-relaxing products on
the market that use chemicals and are somewhat less harsh than sodium
hydroxide (lye) or its popular equivalent in “no-lye” relaxers: calcium
hydroxide (quicklime) mixed with guanidine carbonate. These products do
not straighten hair in most instances the same way as commercial relaxers,
however it does tend to make African American hair more manageable.

Of course the bottom line is once again, if you can leave your hair in its
natural state then you will experience less stress and damage to the hair and
thus prevent at least one cause of hair loss. There is a growing segment of
the African American population that is becoming comfortable with wearing
their hair in natural styles. One such style is dreadlocks. There are many
rumors and myths concerning dreadlocks, as there is little proper
information available concerning this style, and as with anything that is
misunderstood many myths arise around it. Dreadlocks can and must be
washed; otherwise they will smell badly like any other dirty hair. The best
process to use to wash dreadlocks is to use a residue-free shampoo. Most
commercially made shampoos leave residue and can cause hair not to lock,
lending fuel to the rumor that hair had to be dirty to form dreadlocks. Clean
hair actually locks much better than dirty hair, as dirt is a residue in itself
that will inhibit hair from locking. For best results one should use a fragrance
free, conditioner free shampoo. Dreadlocks do not react well to oily and
greasy substances, yet there are many good substances that are on the
market today that will assist you in forming dreadlocks.
The term Male Pattern Baldness (MPB) tends to lay credence to the thought that hair loss is primarily a male problem. While males do lose hair more readily and tend to lose hair in sections, women suffer baldness and hair thinning also, except the thinning is more uniform throughout the head. Because a great deal more emphasis is put on the beauty of a woman’s hair, this is becoming a great concern for today’s woman. While the general information covered thus far is good for all persons in general, there are a few things specific to women concerning hair loss.

Many women suffer hair loss and an increase of facial hair after the onset of menopause. This is because of the drop in estrogen production, changing the ratio of estrogen to testosterone in a woman’s body. Prior to menopause, a woman’s body is constantly producing estrogen, which binds excess testosterone to proteins called globulins. Therefore, there is little excess testosterone in a woman’s body. After the onset of menopause this estrogen is no longer present, thereby exposing it to a similar although milder type of syndrome that males go through concerning the overproduction of DHT. An interesting note is that once again, the syndrome of menopause and its unique effects are not as common in the Eastern world, but are specific to Western civilization. The key differences are the consumption of less red meat and fatty foods in Eastern lands than in the West and less daily stressors in most Eastern lands as compared to Western civilization.

Anorexia is an eating disorder that is becoming more prevalent among women in the past few decades and is psychologically driven in Western society due to the emphasis put on slender women being the ideal in Western civilization. Needless to say, if you or a loved one is suffering with this disorder, a qualified physician should treat any cases of anorexia. However, some of the side effects of anorexia can be hair loss due to the malnutrition the syndrome caused.

It is of course recommended in all cases that you reduce your intake of red meats, fatty foods, and reduce stress, however due to your profession and engrained habits there may be a limit to how much you can change this part of your lifestyle. There is another factor in Eastern civilizations that may cause a stark difference in their women not suffering through typical menopausal symptoms here in the West. The consumption of soybeans and soybean products is much higher in the East. This is significant because soy contains estrogen-like substances and work in the body similarly to estrogen. Therefore there is not an extreme drop in estrogen levels in women who consume soybean products, thus reducing the symptoms of menopause typically suffered in the West.
Some women who suffer hair loss tend to have gastrointestinal problems that do not allow them to absorb proteins and zinc that are necessary to maintain a healthy head of hair. If you think that you have problems with your gastrointestinal system and are experiencing unusual hair loss, of course see your doctor. You may be able to take some natural non-dairy acidophilus after meals for a couple of months in order to increase your digestion of these nutrients.

There are a number of myths associated with hair loss in women particularly. Many were told that brushing the hair 100 strokes each night will promote healthy hair growth. As mentioned earlier, extreme brushing of the hair can cause stress on the hair which can cause breakage and hair loss. Also, just as hats have been rumored to cause hair loss, wearing wigs has also been rumored to cause hair loss. These are both very untrue. Although stress can cause temporary hair loss, permanent hair loss is usually unconnected to stress. Last but not least, the belief that there are cosmetic products that are out on the market that grow hair is simply unfounded.

During pregnancy, hair growth increases dramatically in most women. This increases the usual percentage of hair normally growing on the head. Therefore, after childbirth there may be an increase in hair loss due to more hair follicles than usual entering the rest phase. The temporary excessive loss of hair usually occurs between one and three months after childbirth and is quite normal; it should balance out a few months after childbirth at most. Similar syndromes occur after ceasing birth control pills or switching types of birth control pills.
HAIR LOSS PREVENTION

Avoid Hair Abuse

All of us want beautiful and healthy hair. Therefore, consciously caring for it should be a daily habit. It is better to be safe than sorry so don’t take your hair for granted! It is sometimes unfortunate that we appreciate what we have when we already lost them. Take care of your hair before it’s too late.

Although some types of hair loss are genetic, frequent abuse is another cause of hair loss. You can do a few things to help slow down or stop hair loss from hair abuse. For starters, avoid wearing your hair in cornrows, ponytails, or hot rollers, which tend to pull and stretch hair to the point of breakage. Avoid rubbing your hair too vigorously and styling your hair when it’s wet. This can cause it to stretch and break. In addition, if hair follicles should become inflamed, excessive hair loss may occur. In this case, having your hair permed, colored, or treated with hot oil could be damaging. The key here is to only have a professional work on your hair, using professional and safe products.

Diet and Nutrition

One key factor in maintaining a growing protein on a part of one’s biological body is obvious: one must maintain a healthy diet. Although certain factors have been definitely identified as contributors to hair loss, we must keep in mind that hair is part of the complete biological system of the human body. Being a system, dysfunctions in one part of the system can contribute to dysfunctions in other parts; chain reactions occur when one part of the body malfunctions, causing other parts within the system to falter. To maintain optimum health, it is best to maintain a healthy diet and regular exercise regimen.

Defining exactly what a healthy diet is when it comes to preventing hair loss can be a little more complex. Principally, the main vitamins, minerals, and nutrients that one must ingest in some form to maintain healthy hair are vitamin A, all B vitamins—particularly vitamins B-6 and B-12, folic acid, biotin, vitamin C, vitamin E, copper, iron, zinc, iodine, protein of course, silica, essential fatty acids (EFA’s, formerly known as vitamin F) and last but not least one must consume water.

The best way to maintain a healthy vitamin and mineral intake is a good diet. Eat foods that have high protein content such as Lean Meats, Peanuts and Almonds, Eggs, Legumes, Oatmeal, Whole Grain Bread and Cottage Cheese. Keeping yourself physically healthy will prevent you from taking
medications that can cause hair loss. It is not necessary or advisable to go out and buy a bunch of over-the-counter vitamin supplements in order to achieve your suggested nutritional levels. Many over-the-counter vitamins are chemically processed and are not completely absorbed into the system. It is also easy to overdose oneself with over the counter vitamins particularly when taking supplements of fat-soluble vitamins and minerals, causing toxicity and adverse reactions. The likelihood of doing this is far less with food; therefore it is always best to obtain the bulk of your vitamin and mineral requirements from whole foods.

Vitamin A is a key component to developing healthy cells and tissues in the body, including hair. Additionally it works with silica and zinc to prevent drying and clogging of the sebaceous glands, the glands vital to producing sebum, which is an important lubricant for the hair follicle. Vitamin A deficiencies commonly cause thickening of the scalp, dry hair, and dandruff. Air pollution, smoking, extremely bright light, certain cholesterol-lowering drugs, laxatives, and aspirin are some known vitamin A inhibitors. Liver, fish oil, eggs, fortified milk, and red, yellow, and orange vegetables are good sources for vitamin A, as are some dark green leafy vegetables like spinach. Be particularly careful if you take vitamin A supplements, as vitamin A is fat-soluble, allowing the body to store it and making it easy for the body to overdose on vitamin A. Vitamin A overdoses can cause excessively dry skin and inflamed hair follicles, and in some cases ironically can cause hair loss. If you choose to take supplements of this vitamin, consult with a specialist first. As mentioned above, the likelihood of overdosing by achieving your vitamin A intake by food sources is almost nil, so it is best to attempt to achieve this at all costs.

Toxemia can cause a great deal of dysfunction in the body’s systems, including hair-loss related illnesses such as eczema, psoriasis, seborrhea and possibly several others. It is vital for one to cleanse the body of impurities in order to maintain a healthy system and avoid such illnesses, as there are no cure for these illnesses beyond cleansing and the maintenance of a healthy diet to allow the body to heal itself. Regular cleansing should include a diet rich in fiber and the use of added fiber such as provided by consuming psyllium husk as a bulking agent along with laxative agents. Although hair loss can be caused by many other variables, lack of proper nutrition will assuredly cause hair loss in many people. Fortunately, adopting a proper diet that includes the above nutrients can reverse hair loss caused by malnutrition. One thing for certain, regardless of whether your hair loss was caused by malnutrition or not, adopting a healthier diet will help the function of other areas of the body.

Exercise and Stress Relief
Regular exercise and getting enough sleep naturally maintains overall health, as well as lowering stress in our lives. The body is a complete system, and neglect of the system can cause chain reactions of which one result may be hair loss. Take some time to exercise daily if only for a few minutes. This will improve blood flow, the delivery of oxygen to the cells of the body, and help the digestion of foods, all things that aid the health of hair follicles. If you have access to seawater, swimming is one of the most complete exercises available. It exercises the entire body with little stress on the joints, and the seawater helps wash away toxins. However, beware of swimming in chlorinated water such as found in most pools, as chlorine can have negative effects on the hair. Bicycling is also another low-impact beneficial exercise that can be done in one’s neighborhood or on a stationary bicycle, as is walking. Whatever method of exercising you choose, simply exercise to improve overall health. In combination with the other methods presented here, exercise will only help your condition.

If you are currently in the middle of a problem, you may be stressed. If you are putting a very high demand of your physical and mental energy to perform higher and above your capacity, you may be stressed too. Usually, hair loss happens after the onset of a very stressful situation or event. Telogen Effluvium is the medical name given to stress induced hair loss.

When you realize that you are stressed, you must think of ways you can effectively manage it. One good technique is the “art of disassociation.” It is a kind of meditation you can do by imagining that the cause of your stress is moving farther and farther away from you. You can feel a sense of calmness and it will show in your face and in your actions. This is an important tool to allow your body to calm down and remove built-up stress.

Another tool to use in managing stress is to have a form of relaxation that you enjoy doing. For example, if you like reading or watching a good movie, then do these activities often to release stress. Engaging in sports is the best way that some people use to relax themselves. Pick out a fun activity that will suit you.

If the hair loss is extreme and you have tried everything you know from eating healthy to using good hair care products but nothing is working, you might visit with your doctor. First, he or she will look at what is going on with your body to see if medication, infection, or illness could be the problem. If not, blood work may be performed to look further at a possible cause. In some cases, your doctor may prescribe certain medication such as hormones for an imbalance or antibiotics for an infection.
While there is no sure-fire way to prevent all hair loss, there are many options out there. The most prevalent include:

- **Hair replacement surgery**—small pieces of hair growing scalp are removed and placed in thinning or bald regions. This method, as with any surgery, is risky and can be difficult for some people to recover from. In addition, it is pricey and does not always work.
- **Structured hairpieces**—a semi-surgical approach that stitches hair to the scalp. It is now considered unethical to perform this procedure and most ethical surgeons are no longer willing to perform it.
- **Hair weaving**—strands of synthetic hair are weaved into real, growing hair. This makes the scalp difficult to access, interfering with proper hair and scalp maintenance, puts undue stress on existing hair, only lasts a few weeks and is pricey, costing several thousand dollars per application.
- **Rogaine**—an over the counter “hair restoration” drug. It does not work for everyone, continuous use of the drug is necessary to maintain hair growth, it introduces unnecessary chemicals into the body causing potential side effects.
- **Propecia**—a prescription drug which blocks the production of DHT. Not approved for women and can cause diminished sex drive, difficulty in achieving an erection, decreased sperm production and puts undue stress on the liver. This drug also masks PSA levels making it difficult to diagnose potential prostate cancer.
- **Wigs/Toupees**—cannot be worn while exercising or to the beach, in the shower or to bed. The risk of embarrassment of wearing an obvious “rug” is high.
- **The Farrell Ultra Custom Hair Replacement System**—a non-surgical, drug-free system that puts real hair back on your head. The system can be worn 24 hours a day/7 days a week, while exercising, showering, swimming and sleeping.
THE FARRELL ULTRA CUSTOM HAIR REPLACEMENT SYSTEM

For over twenty years, Farrell Hair Replacement has been creating ultra-custom nonsurgical hair replacement hair systems for people suffering from the devastating effects of hair loss. Farrell hair systems are virtually undetectable to both sight and touch, are produced with the highest quality human hair available and have fooled some of the top people in our industry. Farrell hair systems have been voted "Best in the World" for nine consecutive years and are worn by many major movie stars. You would be shocked if you knew who they were, as you would never guess their hair is not their own! No other hair replacement company can perform hair replacement at the undetectable level of Farrell Hair Replacement.

Farrell achieves results that cannot be achieved with expensive and invasive hair transplant surgeries and potentially dangerous chemicals such as Propecia and Rogaine that empty wallets but haven't grown back even one full head of hair.

**The Hair...**
What do people look at first? The Hair... Is your real hair fine and straight? Coarse and wavy? Whatever the case may be, that is the type of hair that needs to be on your hair replacement system. In order for you to have a completely natural look, we use the finest quality human hair and custom blend it to match your own color, density and texture, creating a hair replacement system that perfectly matches, flows and moves as if it were your own hair.

**Hairlines...**
We produce hair systems that appear as though the hair is growing right out of your scalp. With a Farrell hair system you can create any hairstyle you wish including those that allow you to comb your hair back and away from your face, exposing your entire hairline. Farrell's base materials virtually disappear on your skin.

**Hair Density...**
If hair is too dense it simply has no room to move into certain hairstyles. When other companies use their thinning shear in order to adjust the density of a factory system, they lose the scalp-like appearance that the system should have. My hair replacement systems are made with the same amount of hair tied into the base as the hair you have in the area that the system will be placed against. Using this method it will look like the hair is growing right out of your head.

**Breathability & Washability...**
I believe in designing and producing systems that breathe. Men are active. So, whether you are training for a triathlon or playing at the beach, your system must be as breathable as you own hair.

When you are laying on a chaise lounge by a hotel pool, your hair system should look as good as real hair would when damp or wet. Only at Farrell will you find hair with these characteristics.

**Lightweight...**
Base materials need to be thin and lightweight. If they are too thick then they are too detectable to the touch. Our systems are ultra custom, comfortable and undetectable to both sight and touch in most situations.

**Keep in mind...**
- Our systems are truly undetectable.
- You can do physical activities such as swimming without fear of our system coming off and of being exposed.
- Our systems are wearable around the clock. You sleep in them just as you would with real hair.
- You shampoo and wash your system just like you would with real hair.
- I make your hair system with the best materials in the world. You can expect your system to last 4 to 7 years.
- I custom make your system for you from scratch so you know it will look like your real hair.

Visit our website at [www.farrellhair.com](http://www.farrellhair.com) to schedule a free consultation. We have salons and tour stops all over the world and can meet with you soon after you schedule your appointment.

Remember—this will be a real consultation, not some fancy sales pitch to get your business.

In the meantime, if you have any questions at all please don’t hesitate to call me at 877-787-4247 or, if you are outside the US, at +001-323-934-3040.