5

Hair Loss Treatment History

Since the beginning of recorded history, men and women have searched out cures for hair loss. Over the last 5,000 years, there have been many cosmetic treatments that give the illusion of more hair, a few medical treatments that use drugs to affect the hair follicles, and some surgical treatments that remove bald areas or move hair follicles around. And these are just the treatments that work.

Countless herbal solutions, medical-sounding cosmetics, nutritional supplements, pills, oils, lotions, and shampoos have been advanced, with little or no result. Electric shock devices, ultraviolet light-emitting instruments, LED, laser, and vacuum-cap machines have all been alleged to help stimulate the follicles to grow hair. Even spiritual solutions have been advanced. In fact, prayer may indeed be a better solution than most of the treatments that follow.

What is noteworthy about the history of hair loss treatment is this: despite real advances in genuinely effective cosmetics, medical treatments, and surgical procedures, bogus hair loss solutions continue to be marketed today with astonishing success. Their sales are astonishing, that is. Despite their wild claims, most of the products marketed as hair loss solutions don't have a scientifically measurable positive effect. In other words, they don't stop hair loss or grow new hair. But people are so concerned about hair loss, they want to believe some "miracle cure" will work for them.

3000 BC

Wigs and hairpieces of various sorts were popular among upper class Assyrians, Sumerians, Cretans, Carthaginians, Persians, and Greeks in the Fertile Crescent area of the Middle East. Around this same time period, a compendium of medical knowledge that included prescriptions for hair loss treatment was passed on from generation to generation among Fertile Crescent area healers.

A portion of the Ebers Papyrus the first prescription for hair loss

1553 BC

The Ebers Papyrus, discovered in Luxor, Egypt, is believed to include medical information drawn from the earlier described compendium of medical knowledge which was collected 2,000 years earlier. The Ebers Papyrus is the oldest complete medical text ever found, and it is devoted to treatments for various skin diseases and cosmetic conditions. It includes the oldest known written prescription for treating baldness: a mixture of iron oxide, red lead, onions, alabaster, honey and fat from a variety of animals including snakes, crocodiles, hippopotamuses and lions. The mixture was to be swallowed, after first reciting a magical invocation to the Sun God:

This is a prescription for hair restoration from the Ebers Papyrus

"O Shining one, thou who hoverest above!
O Xare! O Disk of the Sun!
O Protector of the Divine Neb-Apt!"

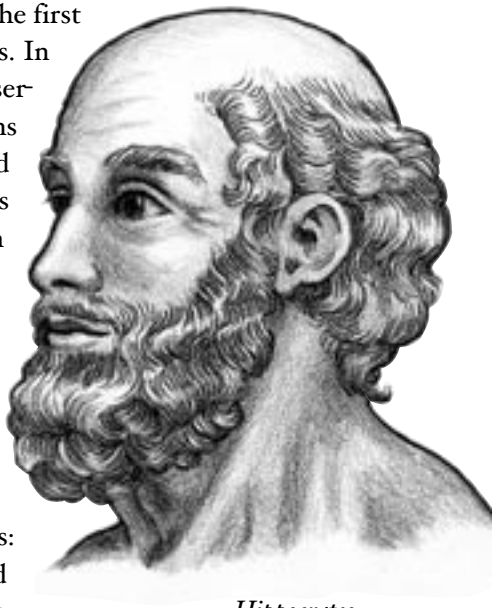
1500 BC

Wigs were popular among Egyptian royalty at this time as well, and a number of elaborate and well-preserved hairpieces have been found in tombs by archaeologists. Many Egyptian wigs were ornate creations constructed of linen fiber as well as human hair, while others made of metal were more helmet-like. As an example of the importance hair played in certain cultures, certain Egyptian royalty also used "facial hair wigs," specifically fake beards, to signify power. Both male and female royalty wore the fake beards.

420 BC

In ancient Greece, Hippocrates, the Father of Modern Medicine, tried many medical solutions for his own progressive hair loss, and he was the first to describe an effective surgical solution to hair loss. One of his medical formulas was a mixture of opium, horseradish, pigeon droppings, beetroot, and various spices that were applied to the head. It didn't work. Hippocrates eventually became so bald that two thousand years later, we refer to extreme cases of hair loss as "Hippocratic baldness."

Hippocrates recorded the first surgical solution to baldness. In his collection of astute observations called the "Aphorisms of Hippocrates," he noted that Persian Army eunuchs guarding the king's harem never experienced hair loss. He noticed that virile "hot blooded" men went bald, but since eunuchs were castrated, they lacked "hot blood," and therefore retained their hair. In Aphorism XXVIII he states: "Eunuchs are not affected by gout, nor do they become



Hippocrates

bald." We now know that it is true that castration before or shortly after puberty reduces testosterone and DHT levels in the blood to such a degree that genetic hair loss is prevented.

Approximately 2,400 years later, in March 1995, researchers at Duke University finally published the same results. The Duke University researchers concluded: "While castration may be a cure, it is not commercially acceptable," (reprinted from The *San Francisco Chronicle*). The search for hair loss cures went on.

44 BC

In ancient Rome, hair continued to be a symbol of power and virility. This presented a problem for Julius Caesar, whose hairline was receding even as his empire was expanding. He developed some cosmetic solutions to his hair loss problem. First he began growing it long in the back and combing it straight forward over his bald spot. Sort of a "comb forward" instead of a "comb over." This didn't seem to work all that well, perhaps because hair gel would not be invented for another 2,000 years. So Caesar then took to wearing a laurel wreath around his head to hide his hair loss. The trademark wreath soon became a symbol of power and virility.

1624

Over 1,600 years later, King Louis XIII of France began wearing a full wig to camouflage his thinning hair. Soon, other members of the court followed his example, regardless of their own hair condition. Wigs became symbols of power. The height, length, and bulk of wigs increased with each

Nobility wearing wigs

decade, and giant powdered wigs soon became the fashion in all French courts.

1660

In England, King Charles II was restored to the throne after his exile in Versailles where he had been exposed to the French wig craze. The English were not to be outdone by the French. Within a short time, more elaborate giant powdered wigs were worn in English courts than had ever appeared in France.

1700S

Upper class American colonists picked up the wig fashion, and by the late 18th century most wealthy people wore false hair to signify their elevated class. However, the American War of Independence and the subsequent French Revolution caused the look of royalty and elevated class distinction to fall out of favor, and wigs pretty much disappeared from the scene.

1800S

This was the heyday of the "snake oil" salesmen, and for the next hundred years bottles of hair loss cures with names like "Mrs. Allen's World Hair Restorer," "Ayers Hair Vigour," "East India Oil Hair Restoration," "Skookum Root Hair Growth," "Westphall Auxiliator," "Imperial Hair Regenerator" and the ever popular "Barry's Tricopherous" were sold to hopeful buyers seeking a cure for their hair loss from "modern medicine."

A hundred years later, "snake oil" cures for hair loss continue to be marketed, except now they're sold by beauty salons and barber shops, by mail, cable television, over the Internet, and with great success to listeners of talk radio programs. The names of the products have changed to things like Helsinki Formula, Foliplexx, Revivogen, Nioxin, Kevis, and Fabao to name just a few. The same outlandish performance promises fool vulnerable consumers.

Amazingly enough, Barry's Tricopherous, which was founded in 1801, was still being sold in Central America as late as the 1970s when a bottle was discovered for sale in a Honduras pharmacy. It

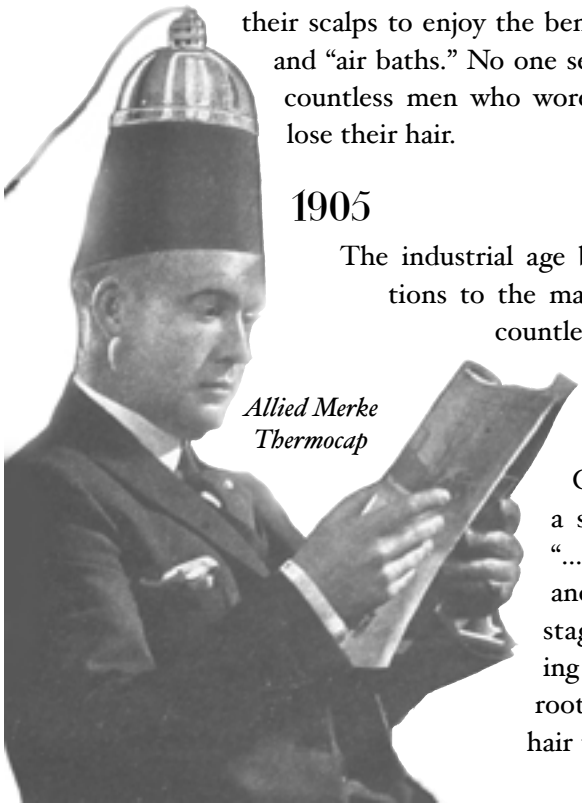
is now part of my collection of bogus hair loss remedies. The label states: "Guarantees to Restore the Hair to Bald Heads and to Make it Grow Thick, Long and Soft." The bottle contains alcohol, water, and coloring.

1850S

During the Victorian era in England, a popular hair loss treatment was cold India tea applied to the scalp, followed by a vigorous rubbing of the balding area with fresh lemon juice. This hair loss treatment would probably be better to sip on a hot day than apply to the scalp. It didn't grow hair.

1900S

The wearing of hats by nearly all men in urban areas around this time was blamed for causing hair loss. Anti-hat advocates urged men to let their hair follicles "breathe" and to allow their scalps to enjoy the benefits of "sun baths" and "air baths." No one seemed to notice the countless men who wore hats who did not lose their hair.



Allied Merke Thermocap

1905

The industrial age brought new inventions to the marketplace, solving a countless number of life's little problems. In St. Louis, the Evans Vacuum Cap Company marketed a suction device that: "...exercises the scalp and helps to circulate stagnant blood, feeding the shrunken hair roots, and causing the hair to grow..."

1920S

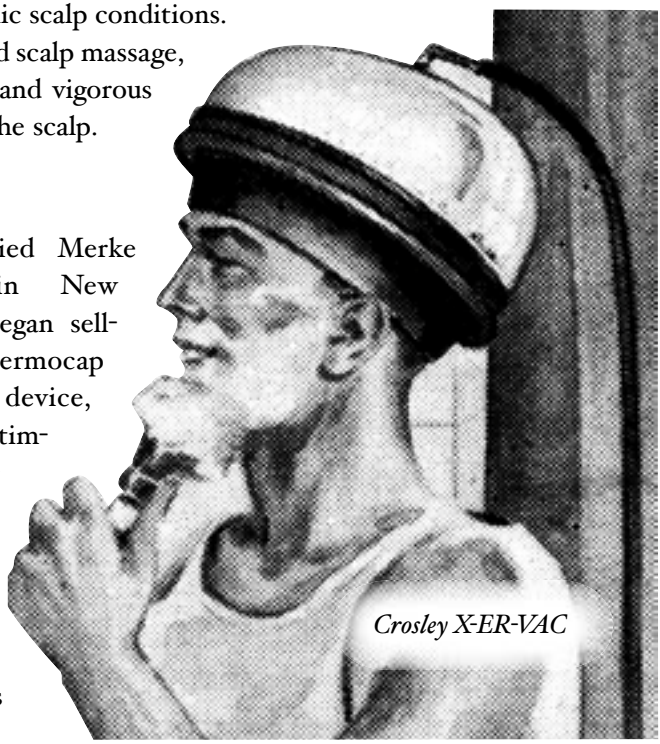
People still suffered from hair loss, and modern science continued to work on this problem. Devices using the miracle of electricity started to replace mechanical hair restoration machines. In the United States, exotic gas-filled clear glass combs with names like "Master Violet Ray" and "Super Marvel" glowed with purple light as they generated an electric charge. The electrified comb was raked across the scalp to stimulate hair growth. Amazingly, some of these devices continued to be sold until the 1950s.

1922

In his book, *Hair Culture,* health advocate Bernarr MacFadden wrote: "There is more quackery rampant in connection with hair and scalp care—both by the medical profession and by drug and lotion manufacturers—than there is in any other specialty ever devised for the exploitation of ailing humans." He then went on to say that most hair loss is caused by lack of physical vigor and unhygienic scalp conditions. He prescribed scalp massage, hair pulling, and vigorous brushing of the scalp.

1925

The Allied Merke Institute in New York City began selling the Thermocap Treatment device, claiming to stimulate circulation, cleanse clogged-up pores, and nourish dormant hair bulbs



Crosley X-ER-VAC

with heat and blue light from a special actinic quartz ray bulb. The quartz ray treatment took only fifteen minutes a day. Along with the Thermocap device, the complete Treatment included the Merke Tonic, Merke Dandruff Treatment, and Merke Shampoo Cream.

1936

In Cincinnati, the Crosley Radio Corporation diversified a bit from radios, and offered an electric scalp vacuum device claimed to be a "Therapeutic Method for Hair Growth" and called it the X-ER-VAC. It was available for home, local clinic, barbershop, and beauty shop use.

1939

In Japan, dermatologist Dr. Shoji Okuda, published in the October issue of the Japanese *Journal of Dermatology* his method for using hair transplant grafts to replace hair lost from the scalp, eyebrow, mustache, and pubic hair areas. This was the first published account of the modern hair transplantation technique, and it worked! Dr. Okuda removed hair follicles from the back of his patient's heads, and transplanted the grafts to new locations to give the look of having more hair. His work went largely unnoticed in the West because of World War II.

1952

Dr. Norman Orentreich, a dermatologist in New York City, was doing a study on vitiligo, a skin pigment disorder. His study involved transferring patches of skin from one part of a patient's body to another. It was noted that a skin graft taken from a hair bearing area, when placed in a non-hair bearing area, continued to grow hair at the new site. Soon after making this observation, Dr. Orentreich placed ten punch grafts bearing hair on the front part of the scalp of a patient with severe frontal hair loss. The grafts continued to grow hair in the new location. Dr. Orentreich reported the successful results of the first hair transplant procedure performed in the United States in a paper submitted to the *Archives of Dermatology.* The reviewers of that journal said the reported results "were not possible" and rejected the paper.

1959

Dr. Norman Orentreich was finally able to publish his "donor dominance" theory in the New York Academy of Sciences Journal, popularizing and refining the full size graft hair transplantation technique. The basis of his theory was that plugs of hair follicles taken from the back of the scalp would grow when moved to the front or top of the scalp because those hair follicles were genetically programmed to keep growing hair. It was the particular hair follicles that mattered, not the location on the head. This concept became the foundation for the entire field of hair restoration surgery. For the next twenty years, full-size grafts were the standard technique for hair transplants.

1960s

Despite scientific evidence that genetics was the cause of pattern hair loss, other theories continued to be presented by people whose hair loss solution happened to cure the particular theorized cause. Scalp tightness, for example, was advanced as the reason for hair loss, and surgical procedures to "loosen the scalp" with incisions were performed.

Late 1960s

The miracle of modified acrylic fiber allowed mass-produced wigs that had the look of human hair to be constructed by machine and sold inexpensively. Soon a whole range of wigs, hairpieces, and other "hair supplements" were introduced, and they were even sold at Tupperware-style "wig parties" in suburban areas.

1968

At age twenty-seven, Sy Sperling got his first hairpiece. He was so thrilled with the success of his new look that concealed a receding hairline, he decided to make non-surgical hair replacements his career. He created Hair Club for Men, marketing "weaves" which were hairpieces attached to the naturally growing hairs around the edges of the bald area. Hair Club for Men grew to become the largest hair replacement company in the world, establishing a research department to make improvements to non-surgical hair appliances.

1969

In the United States, I began my residency training with Dr. James Burks, one of the first doctors to perform hair transplants on a regular basis in the United States. During my residency, I performed hair transplantation procedures every week for three years.

1970S

The "Bald is Beautiful" movement enjoys a brief moment in the spotlight. Bald actors and celebrities such as Yul Brynner and Telly Savalas, appear on TV and in movies with completely bald heads, a concept almost unheard of previously.

1976

Since the 1920s, skin tumors and injured areas of the scalp were removed surgically using a procedure called a "scalp reduction." In this procedure, the damaged tissue was cut out and the edges of the surgical wound were carefully sewn back together in a manner that left only a very small scar. In 1976, doctors Martin Unger and Walter Unger submitted for publication to the *Journal of Plastic and Reconstructive Surgery* an article titled "The Management of Alopecia of the Scalp by a Combination of Excisions and Transplantation." The article described a method of removing healthy, but hairless, scalp tissue from a patient to simultaneously lift up the fringe of permanent growing hair along the sides and back of the head, while making the bald area needing transplants smaller. The article was rejected as "representing nothing new." However, alopecia reductions (bald scalp reductions) soon were regularly performed along with full-size graft hair transplant procedures, because they allowed for increased hair density with full-size graft procedures.

1978

In the United States, for the first time in 5,000 years, a medication has been scientifically proven to reduce the rate of thinning hair and help grow back hairs that have been lost. Minoxidil, a medication taken in pill form for treating severe high blood pressure, was discovered to have this beneficial "side-effect" in some patients.

Clinical trials were established to prove to the U.S. Food and Drug Administration the safety and effectiveness of this promising hair loss treatment medication, but it will be years before the manufacturer can advertise it as a treatment for hair loss. In the meantime, I developed a topical formula containing minoxidil that I applied to my own scalp and prescribed for certain patients.

1979

In San Francisco, I initiated complaints to the FDA, FTC, and California Department of Consumer Affairs against artificial hair implant "clinics," where synthetic fibers were surgically placed into the scalp tissue of "patients." The "patients" at these "clinics" were hoping for a permanent solution to their hair loss, but instead every customer suffered massive scalp inflammation, which often required surgical removal of the affected area, leaving them with unsightly scars as well as less hair. Initially, there was no response from the government agencies, and one bureaucrat even accused me of trying to "stifle competition". Frustrated with government agencies, I went to the news media. The San Francisco Chronicle sent a reporter to the clinic "under cover." The resulting expose revealed that the clinic's "doctor" had no medical license. Criminal charges were filed and the clinic closed. Soon after this incident, artificial hair implants became illegal in California. Five years later, the FDA would ban artificial hair implantation in all states.

1979

Drawing attention to the significance of hair, bald-headed female celebrities begin to appear in the media, including and actress Sigourney Weaver in the movie Alien (1979), and later, singer Sinead O'Connor on her album The Lion and The Cobra (1988).

1980S

In the field of hair transplant surgery, full-size grafts ("plugs") are replaced first by minigrafts and then soon after by micrografts. The new technique of micrografting allows patients to avoid the "under construction" look, and achieves a more natural overall result than most full-size graft procedures.

1984

The United States Food and Drug Administration (FDA) bans synthetic fiber implants, a type of surgical hair restoration procedure where thousands of strands of fibers were implanted in the scalp to simulate the look of real hair. Although the fibers were similar to surgical sutures used by doctors to stitch up wounds, within a short period of time they would cause bumps, inflammation, infection, scars, and even more hair loss.

1988

Minoxidil lotion is the first medication approved by the FDA for treating hair loss. It is sold by prescription only in a two percent solution under the brand name Rogaine.

1988

Dr. Bob Limmer, a dermatologist and hair restoration surgeon practicing in Texas, has his surgical team use stereo microscopes rather than less powerful magnifying glasses while preparing micrografts. The more powerful magnification helps his team to preserve naturally occurring clusters of hair follicles in the donor tissue. This advance in micrografting reduces cutting and the risk of graft failure, while producing grafts that grow more naturally than arbitrarily cut single-hair, two-hair, and three-hair grafts. In 1991, Dr. Limmer publishes an article in Hair Transplant Forum International describing what would become known as follicular unit micrografting.

1989

The FDA restricts all non-prescription hair creams, lotions, and cosmetic products from making medical claims that they can grow hair or prevent baldness. Manufacturers respond by altering their advertising slightly to make medical-sounding claims without actually stating that the products can grow hair.

1990

Another generic medication called finasteride is shown to reverse hair loss, and it is even more effective than minoxidil in preventing

baldness. The U.S. FDA originally approved finasteride as a treatment for enlarged prostate glands. New clinical trials begin to test this medication's safety and effectiveness as a hair restoration treatment.

1990S

More bald-headed male celebrities are seen in the media, including basketball superstar Michael Jordan, and Star Trek Next Generation's Captain Picard, portrayed by actor Patrick Stewart.

1991

Hair Club for Men introduces a unique method of eliminating hairpiece "weaves," by using an adhesive to attach the hair appliances directly to the scalp. Glued-on hairpieces soon become the industry standard.

1993

The electric shock method of "awakening" hair follicles never seems to go away. This time a Canadian company called Current Technology Corporation develops a machine that uses low-level electric shocks to treat bald heads. They call the therapy ElectroTrichoGenesis. This electroshock treatment has not been proven to work any better than the electric comb of 1920

1994

In San Francisco, I start taking a low dose of finasteride once a day to preserve my own hair.

1995

In an attempt to simultaneously solve the artificial hair appliance problems of secure attachment and easy removal for hygiene, Dr. Anthony Pignataro, a New York cosmetic surgeon, develops the snap-on hairpiece. In the first part of this new method of hairpiece attachment, surgical-quality titanium sockets are screwed through the scalp into the skull and allowed to fuse with the bone over a period of three months. Then, small gold-alloy snaps are screwed into the sockets. The snaps mate securely with attachments formed into the underside of a custom-made hairpiece. I advised my patients to avoid this pro-

cedure due to the risk of a life threatening infection. Osteomyelitis (bone infection) of the skull and retrograde infection into the brain are real possibilities with this procedure.

1995

The FDA approves two percent Rogaine lotion as an over-the-counter drug, meaning it can now be sold without a prescription. Generic versions of minoxidil lotion become available in concentrations up to five percent, and are sold in supermarkets and drugstores.

1995

In the United States, micrografting evolves into Follicular Unit Micrografting and becomes the new state-of-the-art method of hair transplantation. The key to this technique is to identify and preserve the natural clusters of hair follicles from strips of donor tissue, minimizing cutting and risk of damage to the limited supply of donor follicles. In addition, the grafts are kept chilled and moist during all stages of the procedure to further reduce graft failure. I develop several improvements to instrumentation used in Follicular Unit Micrografting, including using cool fluorescent transillumination and a disposable clear vinyl cutting surface with stereomicroscopes during graft preparation.

1995

I am astonished to see artificial fiber implant procedures again advertised as the ultimate solution to hair loss by Ivari International in national magazines such as *Harper's Bazaar.* Their innovation—called the Intra Dermic Micropoint—is a supposed improvement over the knotted fibers used in the past. The innovation appears to be some sort of bead that is surgically implanted into the scalp to anchor each implanted hair. The procedure is illegal in the United States because of severe immune response reactions, so patients who visit the Beverly Hills or New York City clinics of Ivari International are flown to Paris for treatment. The cost of the procedure starts at $60,000.

I immediately contacted the Attorney General's office and filed another complaint. Included in the complaint was a copy of the

February 3, 1979 San Francisco Chronicle article in which I was quoted as follows: "Whether they use real hair, synthetic fibers, and stick it straight in or knot it, it just can't work. There is no known substance that can go through the skin and remain there that won't allow bacteria to migrate down and cause an infection."

1998

Finasteride becomes the second prescription medication approved by the FDA as a hair loss treatment. It is sold in pill form under the brand name Propecia. This medication now makes it possible for men in the early stages of hair loss to keep the hair they have, and even gain back some hair that was recently lost. Eighty-five percent of men stop losing their hair while taking Propecia.

1998

In Canada, a company markets a laser-light treatment that promises to stop hair loss and stimulate hair. With just two thirty-minute sessions twice-weekly, along with regular use of their own branded shower head filter, shampoo, conditioner, and nutritional supplements, they claim that seventeen of eighteen patients in their study showed absolutely no further signs of hair loss, and fifteen of eighteen people showed signs of new hair growth.

2002

A Portland, Oregon firm offers balding men and women the service of storing samples of their hair in a basement room for an annual fee, in the hopes that in the future a cure for baldness will require a hair sample. A staff writer for the *San Francisco Chronicle* interviewed Dr. Alexa Bower Kimball, a dermatologist at the Stanford University Medical Center, and asked if she could think of any reason why someone should bank a sample of his or her hair. Her answer: "Not off the top of my head."

2000–2005

Hair cloning (culturing stem cells from the patient's hair follicle, stem cell transplants, hair multiplication and scalp impregnation therapy are all terms for harvesting hair stem cells for the purpose

of transplanting an endless supply of new hairs. All these techniques have been improved upon in the past five years and some doctors have offered potential patients the opportunity of being on a "waiting list" for the procedure when it is approved. Gene therapy to correct androgenetic alopecia has been found to be possible, but it will take years of experience before it will be safe to use on the public. More on this in Chapter 18: Future Hair Loss Treatments.

Today

Currently, the most effective cosmetic treatments for hair loss are wigs and hairpieces, which work regardless of the cause of the hair loss. The most effective medicines for androgenetic alopecia (hereditary pattern hair loss) are Propecia for men, and a combination of spironolactone and hormone therapy for women. The most effective surgical procedure for pattern baldness is follicular unit micrografting.