

The Story of Hair

employed by all who treat hair professionally and all who are interested in knowing the truth about their hair, for—how can one judge of loss or gain without a scientific basis of comparison?

CHAPTER XIII

HAIR TREATMENTS

IF, as we have endeavored to point out, hair production is the result of inner nervous activity, and hair depreciation the product of the lowering of our instinctive fires, my readers may, and logically so, complain: "Can we, then, do nothing to save our hair, except by remolding our philosophy of life and our course of existence? That will take generations. Is there nothing we can do now? Are all the hair treating methods and substances of the present day to be considered absolutely without avail?"

We must, with all these persons, plead for a return to sanity and reason. To them we must say: "The case is not altogether hopeless. There are certain things which can be done to save or restore our hair, if done in time and with patience and care. But there are other things which are beyond our control. Whoever desires to treat hair honestly must know his limita-

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tions, and yet add considerably to his present knowledge."

It is physically impossible to obtain an increased hair production on scalp or body by external methods. Proper, honest hair treatment must reckon with this incontrovertible truth. Our hair, being where it is, a sign post of vitality and produced by means beyond our control, does not lend itself to deception. If an increase is desired it can be produced solely by influencing a person's nervous activity. It is, however, possible to prevent a migration or transfer of the hair growth from its favored field—the scalp—to fields where it is not desired or alternatively to bring it back again to where it was before. Indeed, hair can be made to grow on almost any part of the body where there are hair follicles. A broken nose may become a hair-growing nose after cure. Children with infantile paralysis are likely to grow substantial hair covering on the afflicted limbs. A blow on some part of the face or body may subsequently produce a patch of hair on that spot as the result of blood concentration. But where such is the case the hair has always been diverted by the

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processes of nature from the scalp area. The conservative women of the Victorian era had limbs that were practically hair free because of their restrained and confined movement, absence of physical exercise and more attention to the scalp. All the keratin they produced appeared on the proper fields and was not distributed over all the limbs. In our days the athletic female generation is in close competition with man in so far as body hairiness goes, and consequently, often suffers a diminishing scalp growth.

The "specialist" of the old school may continue to practice and prescribe on the basis that our hair is but an epithelial dermal extension. He may reject the theory set forth here and treat his patient with diets and nostrums. But his patients ought to know that these diets and nostrums have no more "scientific" foundation than effect. The number of hair-treating substances already on the market are legion and new ones are constantly being invented. During the last twelve months alone the writer was offered seven "positive cures" for premature baldness. Testimonials were submitted from men who

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were cured and from others who were favorably impressed. However, in each instance we failed to find a logical basis for the employment of the specific chemical combination as a cure. When the shopkeeper sells us plaster of paris to stop a wall from leaking, we know that the plaster has certain adhesive and solidifying properties which make it practical for the purpose for which it was intended, and we know too that the use of that plaster of paris for this purpose has been found to be satisfactory for many years. But we have no such concrete principle nor even experience to rely on in the case of the hair-growers and dandruff cures that are offered us. If the vendor or the "specialist" were to tell us: "In this bottle you have the ingredients of which hair is composed," we might think him naïve and we might laugh, but nevertheless, we would know that if he were mistaken, his was an error honestly meant. Or he might say to us, and arouse our confidence thereby: "In this bottle you will find a skin agitator which will attract the blood and stimulate hair growth." But instead, our hair growing expert prefers to hypnotize us with a munificent offer of "Money re-

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funded and a hundred dollars added if you can prove that our remedy does not grow hair." Of course, one cannot prove that for a hundred dollars. The lawyers and experts would want more than ten times that amount in fees. We try the lotion, we are disappointed, we grumble a little, but so great is our inertia that we merely move along to the next "positive remedy," to be fooled again.

When we come to a substance, such as Mange Cure, long advertised as a hair-grower, we find a typical example of the manner in which humanity has been misled by false and foolish deductions. "Mange" is a malignant cattle disease which brings the cattle's hair and sheep's wool out in patches. Pitch, a tar produce of an adhesive nature, has been found to counteract Mange in animals to some extent. Evidently this is sufficient reason for sheepish humanity to use it on the human scalp, in the form of Mange Cure, in order to prevent "hair from falling." Mange Cure has a vicious effect on the hair structure, hardening it through the accumulation of the ingredients of the "cure."

The principal hair complaint of humanity

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and the source of inspiration of many fake nostrums is premature baldness, a metamorphosis wherein the hair departs from its accustomed place on top of the head, and appears on another part of the body. Certainly, prevention of baldness is better than cure, but as long as men insist upon implying by cutting and singeing that they do not want hair on their scalps, many scalps will respond by permitting the hairs to emigrate to more congenial dwelling places and will refuse to refill the empty follicles. This state of affairs can be foreseen and to a great extent prevented, if parents will use a little discretion during a boy's younger years and allow his scalp hair to grow to a length of from five to six inches instead of cutting it to two inches, thus strengthening the scalp carrying capacity. If the practice of cutting the boy's hair short is continued until he arrives at manhood, he will, if he then desires to wear his hair longer, be making a greater demand on his scalp muscles than they have been trained for. While such is by no means the case with all scalps and while many have strength to spare at maturity, nearly every man has a good chance to become bald as soon as

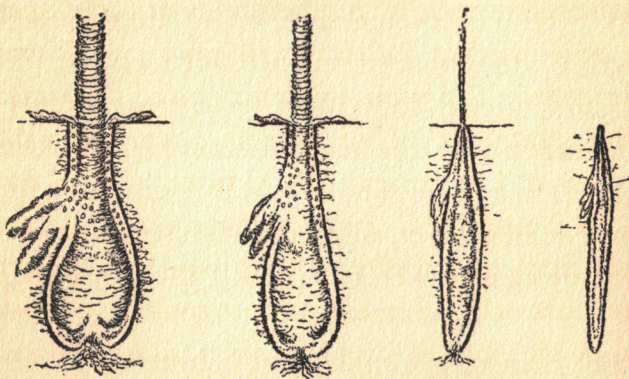
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he demands an addition of an inch or two to his accustomed hair length. When an extra length is suddenly imposed upon weaker scalps, the hairs begin to fall. The first and only immediate thing to do is to give relief to the scalp by cutting the hair again, as short or even shorter than was customary in childhood. But this is only a temporary measure which must be followed by the most strenuous efforts on the part of the afflicted individual to attract a large blood supply to the scalp,—a supply in excess of the flow to arms and legs. By doing this, the young man assures, also, an increased supply of hair substance wherewith to fill the empty hair ducts.

The man who would avoid baldness must also abstain from applying cold water to his head, at all times, preferably, but especially after heating exercises. Many men who have indulged in cold showers all their lives will urge that this form of bathing does no harm to the hair, because their own scalps still have a plentiful covering. These fortunate ones are greatly outnumbered by those who have indulged in this practice only a few times and as a result are now

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practically bald. Where actual baldness has set in, the production of hair on the scalp becomes more difficult because, as the cavity of an extracted tooth closes up and heals, so the hair follicles, if they are kept empty for a time, will close up and block the hair exits even though



HAIR PRODUCTION OFTEN DECLINES THROUGH A FOLLICLE SHRINKAGE WHICH IS DUE TO INSUFFICIENT BLOOD CIRCULATION

the essential substances have been deposited by blood circulation.

The most successful efforts to correct baldness that I ever observed took place in the office of a Swedish masseuse in a Western city. The specialist's treatment was based on the assumption that the hair could be attracted to the scalp

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from other parts of the body by efficient massage. Ultra-violet rays applied daily to the scalp produced a waste and large flakes were shed. The masseuse estimated that by this treatment she could practically renew her client's scalp covering within two months. She claimed that the procedure had the power of attracting hair substances in such quantity as to force open the still-existing follicles and give exit to the hair cells. I personally interviewed five men under treatment. There was no doubt about the success of her treatment on three of the five whom I examined. One of these was a clergyman, fifty-three years of age, who had grown new hairs varying in length between one and five inches on an area of about fifty square inches during a course of treatment extending over a period of almost eleven months. The individual hairs of the new growth were considerably thicker than those of normal growth which fringed his scalp; the color was the same but the texture did not correspond, the new hair being curly and the old, straight. A treatment covering a period of seven months had also given satisfaction to another client who explained to

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me that results had really only begun to show during the last three months. The third case was similar to the second. However, the three men agreed that the early stages of the treatment made them very doubtful and that they persisted in the "cure" only because they had paid in advance a substantial sum of money which they did not care to lose. Nevertheless, they were glad later that they had kept up the treatment. The complete daily treatment consisted of a very strenuous and skilled massage for a quarter of an hour. Vaseline was then rubbed into the scalp, this being followed by a three-minute application of ultra-violet rays, followed by a gentle shampoo which removed all the shed skin or dandruff substances left on the scalp. Whether a cure is worth so much time, effort and money is for the individual to decide, and he must take into consideration, of course, that a better, more logical treatment on a more scientific basis has not yet been discovered.

The woman of middle age, whose skin begins to sag under the chin and whose hair assumes a faded, drab appearance, has a particular hair complaint to make which bears some similarity

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to the masculine tragedy of baldness. She recalls that once upon a time her hair was thick, long and beautiful while now it is lifeless, thin and most unattractive. To arrive at the roots of her problem, we must delve into many aspects of her existence. While we enjoy good health, we are apt to forget the inevitable march of time and the forming into ripe fruit of the early seed; the purposes and activities of life change with advancing years. The woman of middle age has often nothing but the daily routine to look back to and forward to. No rich hopes, no active desires, no keen ambitions. The patients of this class are recruited from all spheres of life. The hair production of the millionaire's wife may deteriorate like that of her servant, for hair production is one thing which money cannot buy. The woman to whom this occurs may have dedicated herself mentally to the production of fat, the fuel from which hair is produced if sufficient nervous activity is available to burn it, or she may be on the downward grade altogether. Immunity might be given to the yet-hopeful spinster, the aspiring widow or the forceful leader of society, who still have

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purposes to be achieved which keep them restlessly going. The self-satisfied woman relies too much on the easy things of life and the niceties—face cream, scalp cream—rather than common sense. If she sincerely desires to improve her hair, she will have to change her way of living in order to prevent the hair from deteriorating, to try to shake off her mental sloth and physical ease and find some new purpose in life to keep her spirits youthful and alive.

The hair loss of another class of patients may be attributed to senility. Persons who are worn out by worry during middle age or before, do not live but merely exist, held up by the social apparatus of their class. Their hair must necessarily deteriorate for the will to live has become a routine within them.

The writer, who has a normal head of hair, made an interesting experiment in hair treatment during his fifty-fourth year. For a period of thirty days, his hair was vigorously brushed twice daily for two minutes and high frequency current was applied for five minutes. Prior to the treatment, the monthly shedding of hair averaged 750, all coming from the top of the

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head as could be seen by the length of the hairs. During a treatment of thirty days the hair shedding increased to 822, or an increase of about ten per cent, of which, however, approximately eighty-five hairs were shorter and apparently came from the back and sides from which parts a previous fall had not been noticed. In addition to these 822 hairs, substances were collected amounting to .39 grams which upon analysis showed:

Water	0.011
Fat	0.158
Dust	0.011
Skin	0.210

A lapse of one month and the treatment was again repeated for thirty days. During this month 919 hairs were shed, practically all of the longer, or top section. An increase in other matter was also observed, as follows:

	<i>Grams</i>	<i>Grains</i>	<i>Per Cent</i>
Weight .....	.400	6.17	....
Water .....	.014	.21	3.5
Fat160	2.47	40.0
Ash (dust)012	.19	3.1
Skin (by difference) ..	.214	3.30	53.4
	.400	6.17	100.0

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The fourth month was permitted to elapse without treatment but on the fifth month it was again resumed. During this month the shed hairs amounted to 868 which showed a decline from the second month of treatment but the other collected matter increased to:

	<i>Grams</i>	<i>Grains</i>	<i>Per Cent</i>
Weight .....	.441	6.80	....
Water012	0.18	2.72
Fat172	2.65	39.00
Ash (dust)010	.15	2.27
Skin (by difference) .	.247	3.81	56.00
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	.441	6.79	99.99

We note here a generally increased activity of the scalp as the result of the treatment, with the outstanding features, as the above table shows, of an increased hair loss and increased dandruff production (fat) and more shed skin. However, the increased hair loss was made up by new hair though this was not a result of the treatment, as the fall and renewal of hair on this particular head had been going on consistently for many years. Other experiments on similar lines brought similar results and the hair shed-

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This 24-year-old woman collects from her scalp per week 525 fallen hairs of 28 inches length, which makes 27,290 fallen hairs per annum. Her 28-inch long hair represents 5 years' growth during which time she lost 136,450 hairs.

In weight her total hair elimination per annum is 12½ cubic inches weighing 136 grams.

The actual number of hairs on her head are about 110,000.

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ding invariably increased as well as the production of dandruff. It may be a surprise to the many who characterize dandruff as a disease of the scalp that its production increases as a result of stimulating hair treatment. This is logical, in that, if agitation of the scalp attracts greater blood supply and produces greater activity on the hair beds, the sebaceous glands must be favorably affected with equal force and must produce more fat.

Collections made from a head of a woman twenty-four years of age with a hair production of five and one-half ounces per year, whose scalp has a carrying capacity of twenty-eight-inch hair (which was cut but twice, once at the age of four and once at the age of fifteen, and now has a total hanging weight of one and three-quarters pounds)—with scalp and health in perfect condition, shows the following averages: The total monthly hair loss by shedding is 2250 or 27,000 per year. The number of hairs on this head is approximately 109,000, so that the hair renews itself about every four years. The other substances obtained from this head carefully separated from the fallen hairs consisted of:

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	<i>Grams</i>	<i>Grains</i>	<i>Per Cent</i>
Weight (less hair and lint)992	15.28
Water084	1.28	24.08
Fat . . . . .	.580	8.96	233.68
Ash (dust) . . . . .	.032	.48	12.88
Skin (by difference) . . . . .	.296	4.56	119.36
	992	15.28	400.00

In this case we find a very high percentage of sebaceous fat which is normal for all female heavy hair growers. This woman's scalp seems still to be in the developing stage and increasing in strength indicated by her statement that her hair was gradually growing longer, which means, of course, that the muscular scalp was still increasing in strength. Our subject's falling hairs have been saved for years and her regular hairfall began at the age of nineteen. (It will be remembered that the hair was cut short at fifteen.) Since then she lost from her scalp 135,000 hairs, weighing over two pounds, all of which was renewed again between the ages of nineteen and twenty-four. This case represents an average procedure on the heads of women who let their hair grow naturally during childhood. In Germany, where formerly the cutting

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of women's hair was forbidden by law, many tons of hair were collected from daily combings for commercial purposes. Statisticians have claimed that thirty million German females would lose hair to the extent of 11,250,000 pounds per annum, which is at the rate of six ounces each. However, this estimate is, no doubt, one-third too high.

An interesting experiment was made on the heads of three women, aged twenty-five, thirty-five and forty-five, respectively, who had never had their hair cut. They were chosen in order to ascertain the value of hair cutting. Patches—about two inches square—were shaved off on the back of each of the heads in such a manner that the overhanging hair covered the bare sections. The length of hair grown on these heads in twelve months' time was between five and one-half and six inches, some hairs being as much as three-eighths of an inch longer than others. The hairs were then measured and compared with those which had not been cut. They showed a decline in thickness of three per cent. The three patches were then shaved once more and measured again twelve months later when

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the growth was slightly more uneven and several hairs were found to be below five inches and with fewer than in the previous year reaching six inches. Another loss of one and one-quarter per cent in hair thickness was also noticed on the newly grown parts. Above all, the results indicated the effect of the relief afforded to the shaven scalp section and showed, too, that while the general growth had kept up, the shaven sections had declined to produce hair of the former quality.

Loss of color is another very prevalent complaint. While there are occasional cases of loss of quantity, in which hair responds to treatments, this cannot be said of hair which has lost its color—that is to say, has turned white. Yet the deceptions practiced on the afflicted are astounding. I have examined prescriptions or preparations submitted by clients and found the called-for ingredients to be rosewater, resorcin, quinine, and one per cent of nitrate of silver. Unsuspectingly, the person, who otherwise would have a horror of dyes or restorers, applies this or other concoctions. In a week or two she actually finds her hair getting darker. Some

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time later, when she thinks her trouble cured and discontinues the application of the lotion, she discovers, to her dismay, the new hair growing in white. Another trial produces another "cure" on a similar basis and a week or two later the hair has again assumed something approximating the greatly cherished normal color. While there is little harm in the use of a small percentage of silver on the human scalp, hair so treated, after some years, gradually assumes a greenish tint which in turn becomes jet black under certain treatments to which women may subject their hair.

In view of the principle involved we must unequivocally deprecate the value of such hair treatments as are purely chemical and external unless they are employed in conjunction with massage of the scalp or with the use of the various light rays and electric currents which have for their purpose the stimulation of the circulation. It is well for every person below thirty years of age to submit his scalp once or twice a year to regulation massage treatments of two or three weeks' duration with two vigorous applications per day. So much is needed to keep

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the scalp follicles in producing condition. After all, inconvenient as such treatments may appear to be to the person who still has his full head of hair, they amount in exertion to much less than that used in a woman who has thirty-inch long hair to comb and dress daily. It is the heavy hair grower who keeps his limbs the most hair-free. Ladies of the mid-Victorian age brushed their hair from ten to fifteen minutes daily with a traction effort amounting to between sixty and one hundred pounds. The traction effort of the man or bob-haired woman of the present day rarely amounts to over two or three pounds per day which is entirely insufficient to attract all the hair the body produces to the scalp area.

CHAPTER XIV

DANDRUFF AND OILY SCALPS

As the tiny hair workshops—the hair papillæ—located within the deepest scalp layers, produce hair cell after hair cell, another functionary—the sebaceous gland—situated in the depths of the scalp and next to each hair papilla—produces fat. There is a duct leading from the sebaceous gland to the hair follicle through which the sebum, as this fat is called, flows into the follicle, where it is absorbed by the newly constructed horny hair cells. As the hair cells are gradually pushed above the surface of the scalp this fat hardens into a waxlike substance. The sebaceous gland does not always meet the exact requirements of the hair. Sometimes, it produces less than the hair can absorb, in which case the hair loses some of its natural gloss. Very often, on the other hand, the gland produces more fat than is necessary and the overproduction is forced through the follicle to the surface