

The anatomy and physiology of the hair : with directions for preventing baldness, removing dandruff, and preserving the natural beauty and softness of the hair / by William Bogle, artist in hair.

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THE
ANATOMY AND PHYSIOLOGY

—OF—

THE HAIR,

WITH DIRECTIONS FOR PREVENTING BALDNESS, REMOVING DANDRUFF, AND
PRESERVING THE NATURAL BEAUTY AND SOFTNESS OF THE HAIR.



BY WILLIAM BOGLE,
ARTIST IN HAIR.



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BOGLE'S

ANATOMY AND PHYSIOLOGY

OF THE SKIN AND HAIR.

THE preservation of the hair, is a desideratum which has long been sought by men of science as of great importance, both as regards health and comfort, as well as personal appearance. What contributes more to comeliness and beauty, than a profusion of soft, silken, flowing ringlets, or auburn tresses? And he who can devise means to preserve and retain, in its original beauty, this important appendage to the head, will confer an inestimable blessing upon mankind, and deserve the lasting gratitude of the community.

Upon this subject I have devoted several years of study, and after careful investigation and thorough research, I have, as I believe, succeeded in inventing a preparation for the hair, which will not only prevent its falling off, but preserve it in a healthy, fresh, and vigorous state. This article I have named the Hyperion Fluid, or Vegetable Hair Composition.

The receipt for making it has been in my possession for some years, and though often requested to prepare the article for sale, I have refrained from doing it hastily, lest it should be considered as but another of the innumerable humbugs which are so often imposed upon the public. I also believed

that I could make various and important improvements upon it, both as to its tonic and stimulating properties, adapted more especially to this variable climate. And, for this purpose, I have spared neither research nor expense in obtaining the object desired. Besides my own study and investigation, I have held a correspondence on the subject with many distinguished Anatomists and Physicians, and I feel confident that I have succeeded in producing an article which will prove to be the *ne plus ultra* of all preparations hitherto known for restoring, preserving and strengthening the hair, and retaining its original beauty, flexibility and softness.

As this is a preparation founded on philosophical principles, it may be proper to accompany the directions for its use with a brief analysis of the anatomy of the skin, the origin, structure and growth of the hair, and the causes of its decay and falling off, in order that the subject may be more fully understood, the principle upon which the Fluid is prepared, and its application made to effect the object intended. And to begin at the foundation, or soil, if we may so express it, from which the hair springs, I will first speak of the ANATOMY OF THE SKIN.

The outer envelope or skin of man consists of four parts—the epidermis or cuticle, the rete mucosum, the corpus papillare, and the corium.

1. *The epidermis or cuticle* is the outermost layer. It is a dry, membranous structure, devoid of vessels and nerves, and is, so far as we know, entirely insensible; a tissue of a somewhat complex organization, connected with the functions of exhalation and absorption; but its vitality is considered to be on a par with that of vegetables. The absence of nerves

renders it insensible. It is colored, exhales and absorbs in the manner of vegetables. The cuticle is probably a secretion from the true skin, which concretes on the surface, becomes dried, and affords an efficient protection to the corpus papillare beneath. It is composed, according to some, of concrete albumen; according to others, of mucus; and is said to be pierced by oblique pores for the passage of hairs, and for the orifices of exhalent and absorbent vessels.

2. The *rete mucosum*, or *mucous web*, is the next layer. It is considered to be mucous, secreted by the papillæ, and spread on the surface of the corpus papillare, to preserve it in the state of suppleness necessary for the performance of its functions. In this rete mucosum coëxists the coloring matter of the dark races. It is black in the African, and copper-colored in the mulatto.

3. The *corpus papillare* is seated next below the rete mucosum. It consists of a collection of small papillæ, formed by the extremities of nerves and vessels, which, after having passed through the corium beneath, are grouped in small pencils, in a spongy, erectile tissue. These pencils are disposed in pairs, and, when not in action, are relaxed, but become erect when employed in the sense of touch. They are very readily seen when the corium or derma, or true skin is exposed by the action of a blister, and are always evident at the palmar surface of the hand, and especially at the tips of the fingers, where they have a concentric arrangement.

4. The *corium*, or *derma*, or *true skin* is the innermost of the layers of the skin. It consists of a collection of dense fibres, intersecting each other in various directions, and leav-

ing between them holes for the passage of the vessels and nerves. It forms a stratum, giving the whole skin the necessary solidity for accomplishing its various ends.

These four strata constitute the skin, as it is called; yet they are all comprised in the thickness of two or three lines. The derma, or true skin is united to the structures below by cellular membrane, and this, with the layers external to it, forms the common integument.

Having thus described the structure of the skin, we are led naturally to the consideration of the **PHYSIOLOGY OF THE HAIR**, which is an appendage to it, and may be regarded as a vegetation from the surface of the body. The roots of the hair are in the form of bulbs, taking their origin in the cellular membrane. Around each bulb there are two capsules, the innermost of which is vascular. The bulbs are larger in proportion as the hair is young. The hair itself consists of a horny, external covering, and a central part called the marrow or pith. When we take hold of a hair by the base with the thumb and fore finger, and draw it through them from the root towards the point, it feels smooth to the touch; but if we draw it through from the point to the root, we feel the surface rough, and it offers considerable resistance. It is therefore concluded that the hair is bristled, or consists of eminences pointing towards its outward extremity.

The color of the hair is singularly different in different races and individuals. Some attribute this to the fluids contained in the pith. Vauquelin analyzed the hair, and found it to consist chiefly of animal matter, united to a portion of oil, which contributes to its flexibility and cohesion. Besides

this, there is another substance, of an oily nature, from which he considers the color of the hair to be derived. He also found this coloring matter of the hair to be destroyed by acids, and suggests that when it has suddenly changed color, and become grey in consequence of any great mental agitation, this may be owing to the production of an acid in the system which acts upon the coloring matter. But this is mere hypothesis, as is also the theory of Dr. Bostock, who attributed the cause to "the sudden stagnation of vessels which secrete the coloring matter, while the absorbents continue to act and remove that which already exists." Our knowledge is limited to the fact that a sudden and decided change in the whole pileous system occurs after great or prolonged mental agitation. But a similar, though more gradual change is produced by age. Lepelletier ascribes the change of color to two very different causes. *First*, to defective secretion of the coloring fluid, without any privation of nutrition. In this case the hairs may live and retain their hold, as we observe in young individuals:—and *secondly*, to the canals, which convey the fluid into the hair, being obliterated, as in old age. The same cause, acting on the nutritious vessels of the bulb, produces, successively, privation of color, death, and loss of these epidermoid productions. According to other physiologists, the seat of the color is in the horny covering of the hair. The exact relations between the cuticle, the rete mucosum, and the hair, are not known. It is not determined whether the layers are simply perforated by the hair in its passage outwards, or whether they furnish its coats as it proceeds along. There is often, however, an intimate re-

relationship between the color of the hair, and that of the rete mucosum. In the opinion of Dr. Good, the color of the hair is derived from the rete mucosum, which secretes a very compound material for this purpose, a part of the occasional ingredients of which are iron, sulphur, lime, a grayish green, and a blood-red, oil. In the silvery white, or glossy hair of young persons, the nutritive matter is, perhaps, the rete mucosum, in its purest and most uncolored state. Grey hair, Dr. G. thinks, is produced in two ways. In one there is no coloring material whatever, except, apparently, a small portion of the sulphur, and in this case the hair is directly hoary, or of a yellowish, rusty white. In other circumstances, the rete mucosum, or nutriment of the hair, is loaded with calcareous matter, but deficient in its proper oil, and hence the hair is somewhat whiter, but of a dead hue, harsher and coarser, very brittle, and apt to fall off from the roots.

Having thus investigated the opinions of the most eminent writers upon the Physiology of the Hair, we find them severally conflicting in their opinions; and with all due deference to each, in his theory, according to my own *practical* research, I have found it to be as follows.

The hair, as before stated, is a vegetation of the body, taking its origin in the celular membrane, consisting of a horny external covering, receiving its nutriment or life from the vessels and nerves intersecting the corium, and constituting, along with the coloring fluid proceeding from the rete mucosum, the central part, or marrow and pith, which gives vitality, flexibility and color to the hair.

GREY HAIR is caused in many ways. The hair has been

known to turn grey in one night, by mental anxiety or deep-seated grief, which centres in the heart, blanches the cheek, and makes the color forsake its proper channel, so that when the system resumes its usual vocation, the hair being of so delicate a structure, it seldom finds its proper passage back to the hair; hence, anything that estranges the coloring matter from the hair, is the cause, or basis, of grey hair. But I agree with Lepelletier, that the color may forsake the hair without affecting its nutrition. How many heads do we see bountifully supplied with hair, yet perfectly grey. Grey hair in old age, is generally caused by the contraction of the skin, or by the canals for the passage of the fluid being obliterated. Examine a hair of this description with a powerful microscope, and it will be seen notched like an old tree. Thus, knowing the disease, we can with more certainty arrive at the cure. The ingredients contained in my Hyperion Fluid are peculiarly adapted to this purpose, both on account of their tonic and stimulating qualities, and thoroughly cleansing the pores of the skin of scurf and dandruff, causing a healthy action in the blood vessels, nerves, &c., which feed the hair, making nature discharge her proper functions without any impediment, and thereby preventing both baldness and grey hair.

SCURF and **DANDRUFF** are formed from the perspiration, and for want of a healthy action to throw it off the head, in consequence of which, it remains on the skin, covers the pores, and forms scurf and dandruff, attended with headaches and baldness, for the prevention of which observe my directions accompanying the Hyperion.

BALDNESS, OR LOSS OF HAIR, is caused generally by fevers, want of healthy action in the blood vessels, nerves &c., which supply the hair with life and nourishment, or by the destruction of the root. Baldness is also often caused by neglect to treat the hair properly, and in time ; also by want of brushing and cutting it regularly, and often ; and more frequently by a practice which cannot be too much deprecated, viz : wearing the hat at all times. Nothing can be more hurtful, nothing more destructive to the hair, as it causes the head to be over-heated, relaxes the nerves, and by preventing a proper passage to the perspiration, forms a thick, clammy, coated skin or scurf over the epidermis or cuticle, which covers the pores, stops the circulation of the blood, and, besides being injurious to the system, causes, perhaps, more baldness, than all other diseases together.

Baldness caused by fevers, ought to be strictly attended to in season, as by want of a little timely attention, many have been obliged to deplore the loss of a good head of hair. After a fever, the hair falls off, but a good head of hair may assuredly be restored by attending to the following directions. *First*, cut the hair short and often, using the Hyperion according to directions on the bottle. *Secondly*, shave the head. This is the last, but most certain resort, and is invariably practised by the most eminent Physicians in Europe. The first thing the Physician orders is to have the head shaved. Indeed this ought always to be done, for when the head is shaved, the Hyperion has a double action, as it not only has free scope to penetrate through the skin to the bulb or root, but also through the tube of the hair, and is certain both to save the old and

bring forth new hair, more healthy and luxuriant than the original.

Ladies are not, constitutionally, so subject to baldness as gentlemen, but are often troubled with thin and broken hair.

Great care is therefore necessary to preserve and promote the growth of a good head of hair. The most fashionable ladies of Europe seem to be aware of this, and devote the most particular attention to their hair. They have it cut off at the points, and otherwise properly arranged by an experienced artist; hence their fine heads of hair, and why they so seldom resort to the perruquier. Ladies should change the parting or seam of the hair, frequently, and rub it with the Hyperion, as baldness is often caused by over-straining the hair in those places.

Hereditary baldness is often thought to run through families, and to be inevitable. To this I demur, and maintain that where proper attention is paid to the head in time, no one need be afraid of baldness. Of course, those who are liable to hereditary baldness, require more attention to their hair than others; but if proper care be taken, they seldom need fear becoming bald.

Where the head is bald, the hair may, in some cases, by proper attention, be restored; but when the baldness is of long standing, and the roots of the hair are gone, nothing will ever restore it, and it is the height of folly to suppose otherwise, the advertisements of quacks to the contrary notwithstanding.

But I repeat, and maintain, that where the hair is properly attended to in season, no one need ever be afraid of baldness, which may be prevented from the cradle upwards, by attending to the directions, accompanying each bottle of Hyperion.

In this variable climate, the hair ought to be properly and carefully attended to, more especially during the summer, as perspiration is so copious, and the blood so over-heated, that the former rots the hair, and the latter relaxes the skin.

More hair is lost in one month of hot weather, than in six of cold.

With regard to bathing the head in water, there are various and conflicting opinions ; but after long experience and careful examination, I have found the following to be the result.

Bathing the head in salt water, when continued for some time, makes the hair coarse, has a tendency to rot it, and makes it fall off. Before bathing, by rubbing the hair with the Hyperion, it will resist the action of the salt. Rain water is the purest and best for bathing the head, it being free from minerals ; but even this I cannot recommend too often, as it dries, and is apt to change the color of the hair, the experiments and effects of which I can show on my own head.

In conclusion, eschew the fine tooth comb, soaps, oils, pomatums, or any animal grease ; keep the head cool, clean, in a healthy state of action, with frequent cutting of *each* hair, and let baldness never give you a thought.

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