

Edition 2024 | English



NEXT STEP LIVING LONGER BOOKS

HAIR

**A thing of beauty & a joy forever
An Insight by a Medical Doctor (M.D.)**



Author:

(Prof.)Dr.S. Om Goel, MD/DM (USA)

From family of doctors
from AIIMS, MAMC & Delhi University

MD medicine, USA
DM/Fellowship, USA

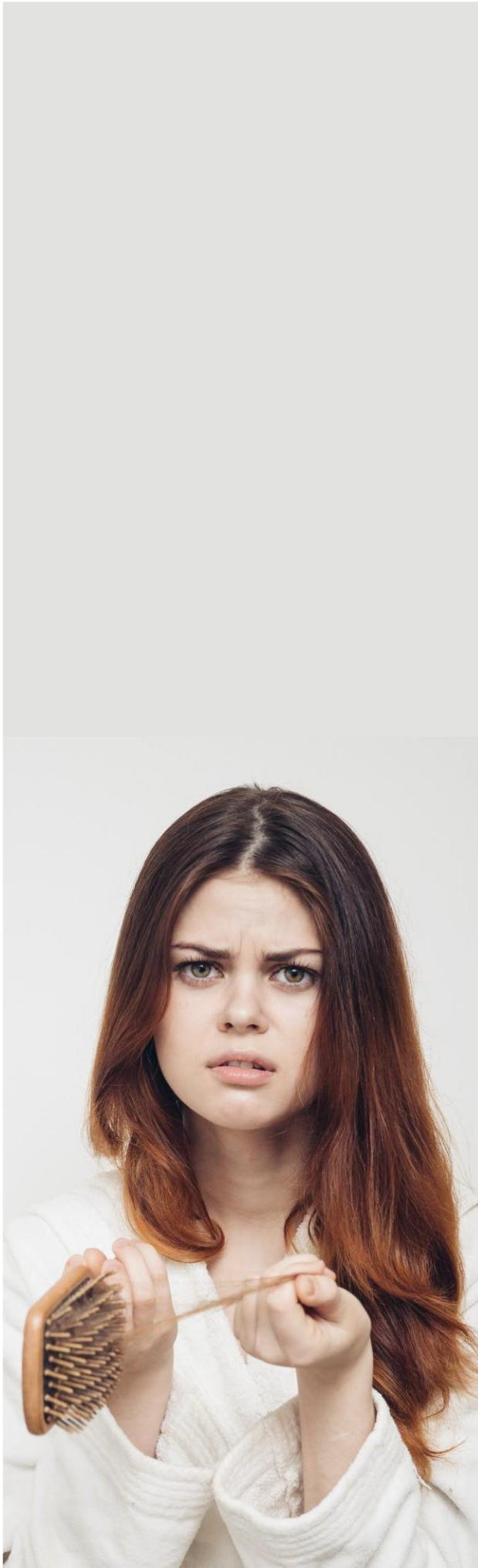


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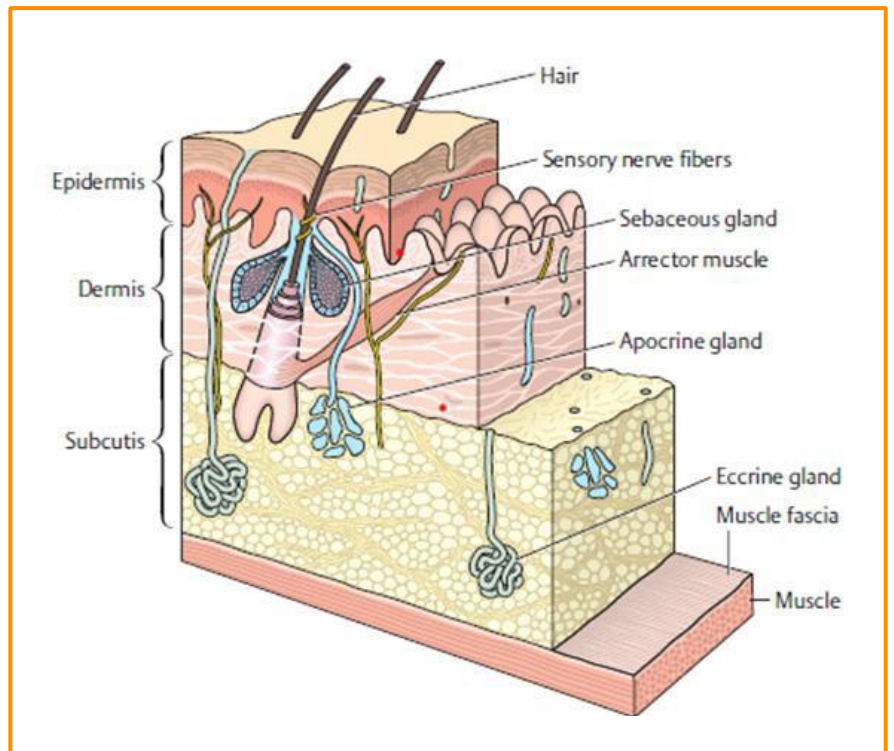
Chapter 1

Hair a thing of beauty & a joy forever!!

Hair is protective function in the mammals and other animals, but to human beings' hair is important.

For women, hair is especially important for their beauty and same applies to men.

We have hair all over the body except our palms and soles.



Chap1Fig1

We **do not** have any hair follicle on palms and soles.

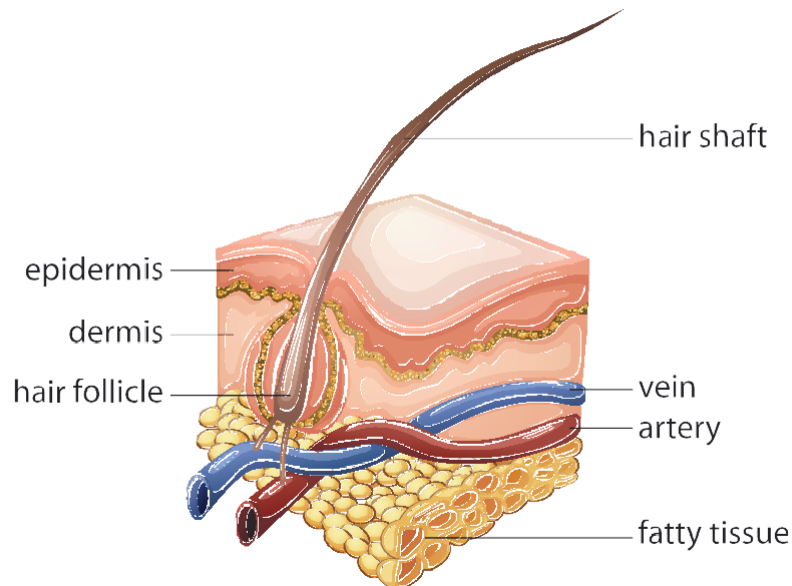
Hair are part of our skin.

1. They are short, noticeably light in color and small.
2. Then we have terminal hair like on our scalp which are thick, long, and darker.

In males, under the hormonal influence, **beard starts growing on the face.**

In **men and women**, hair in **axillary area and the genital areas**, they become longer and change into terminal hair.

Anatomy of Human Skin & Hair



Chap1Fig2

The skin has several components:

- (I) Epidermis,
- (ii) Dermis,
- (iii) Skin appendages
- (iv) & below that is the subcutaneous fat.

Epidermis has

- **Sweat glands**
- **Hair follicles**
- **Sebaceous glands**
- **The nails are in dermis**

Chapter 2

What factors may affect our hair?

What factors may affect our hair?

There are so many factors which can make us lose our hair.

- If we starve ourselves.
- If we are not eating well, or we are not taking enough protein.

(Insight: We can have enough protein from these sources:

1. Soya Paneer
2. Pulses
3. Spinach
4. Pea
5. Almond
6. Cashew
7. Buckwheat (Kuttu))



Chap2Fig1

According to US department of health, men require 3000 calories per day & women require 2000 calories per day.

- If we do not take required calories and protein, then also we start losing our hair.

- Whenever we go through a major illness, our hair starts falling.



Chap2Fig2

- Whenever we face major psychological stress, we lose our hair.



Chap2Fig3

- Whenever we observe weight loss in our body, it can be either because of eating less or spending more on calories, then also we lose hair.



Thyroid Hair Loss

Chap2Fig4

- Iron deficiency
 - Iron is important for the growth of our nails and hair. If we are iron deficient, it will directly affect our hair growth and we might start losing hair.



Chap2Fig5

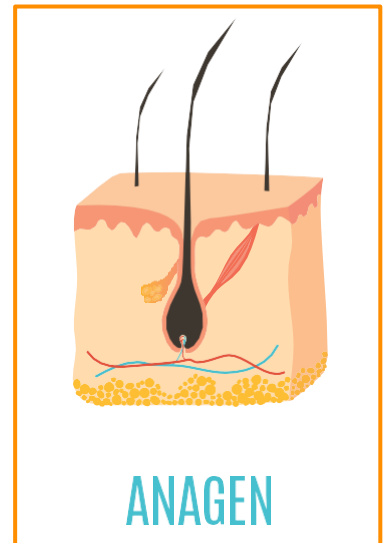
Chapter 3

Hair Growth and phases of Hair follicles

FACT: 90% of hair on our head are in growth phase.

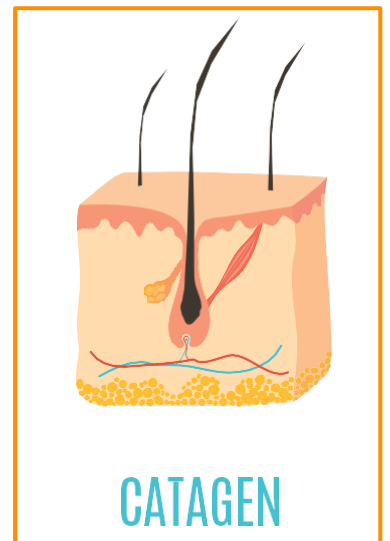
The phases of the hair follicles are described below:

- Anagen phase: the phase of hair growth.
The anagen phase which is the growing phase where most of the hair grow in length and this can last for several years.



Chap3Fig1

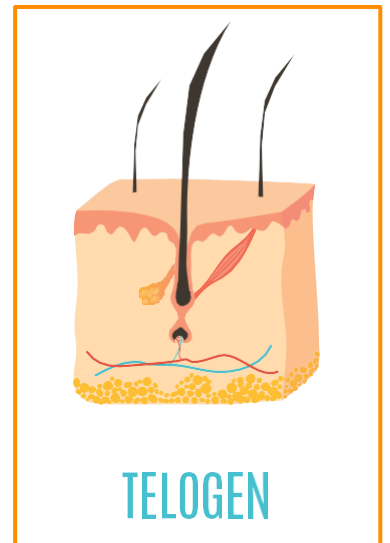
- Catagen phase: the transformation phase.
In this phase the hair growth kind of slows down and the hair follicle becomes smaller.



Chap3Fig2

- Telogen phase is the resting phase.

It lasts for 2-4 months. At the end of this phase hair detaches from the hair follicle and shed away. After this hair starts growing and it pushes off the old hair then old hair falls off.



Chap3Fig3

Normal hair loss

It is normal to lose 50 to 150 hair per day

The hair grows at the rate of 0.3 mm per day and duration of Anagen ranges from two to six years.

Eyebrows' hair grows at the rate of 0.1 mm per day and the Anagen (the growth phase) lasts for two to three months.



Chap3Fig4

Chapter 4

How many types of hair follicles do we have?

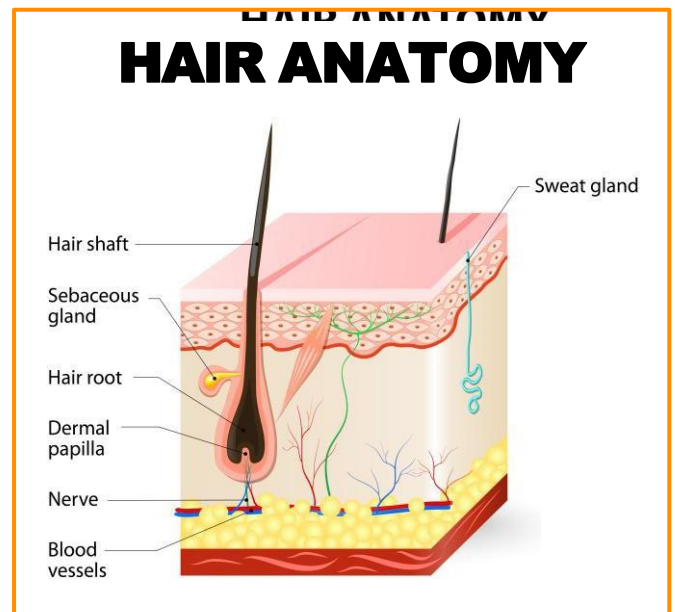
How many types of hair follicles do we have?

We have two major types of hair follicles on our human body.

1. Terminal hair follicles

Terminal hair is found on

- Scalp,
- Eyebrows,
- Eyelashes.



Chap4Fig1

2. Vellus hair follicles

Vellus Hair is found on the rest of the hair bearing areas.

During puberty, Vellus hair which are exceedingly small starts growing in certain parts of the body.

like the genital area

and axilla, vellus areas are stimulated and they change into terminal hair.

Every two to three months the resting hair fallout and allows new hair to grow in its place. So, once again let me mention, 90% of our hair grows at any time.

While 10% enter in a resting phase.

Chapter 5

Hair loss is usually very closely related to the hormonal imbalance.

Female hormones are important for hair.

Birth Control Pill

In women, Hair loss is closely related to the hormonal imbalance.

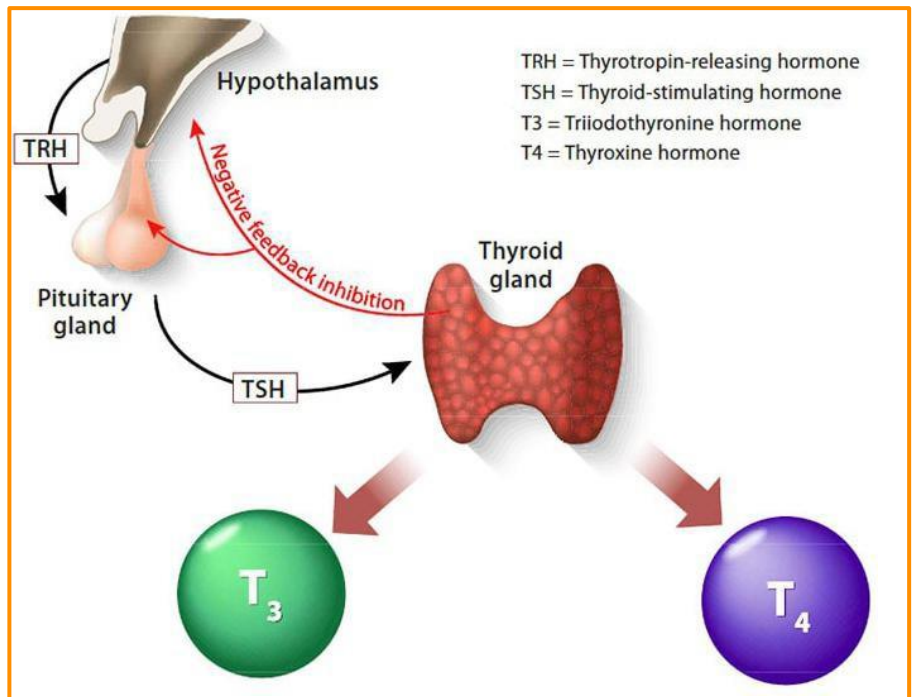
If we are taking **birth control pills** and we stop consuming it, then there will be hair loss.

If we have a **miscarriage or stillbirth** it will lead to the hormonal changes & can **result in hair loss**.

Same thing is **with abortion**, body is going through the hormonal changes and ultimately this **leads to the hair loss**.

Thyroid hormones

Thyroid disorders are pretty much involved in each and everything. They help in development and maintenance of hair follicle. Follicles are small pockets under the skin from which hair grows. Severe or prolonged hypothyroidism or hyperthyroidism may result in hair loss.



Chap5Fig1

Chapter 6

Why do women lose hair post pregnancy?

Why do women lose hair post pregnancy?

During the pregnancy, our estrogen level increases. Estrogens are helpful to keep the hair in the growing phase and stimulating the growth of the hair.

During the pregnancy, woman should expect full luxurious hair.

Once again, I want to mention that after pregnancy when body adjusts to hormones, then the hair which was in the resting phase starts falling & this happens around three months after delivering baby and within six months to one year it recovers completely.



Chap6Fig1

Almost 40% to 50% of the women who are pregnant they do lose hair, but it is temporary.

Chapter 7

What we can do to prevent hair loss?

We can do few things,

- One thing is we should maintain proper **balance of hormones**.
- Anything which can tighten the hair and can **pull and stress** on the hair can made them lose.
- Diet is particularly important. **Minerals and vitamins** are especially important.
- It is recommended that shampoos and conditioner should contain **biotin and silica** that keep the hair healthy.

Some of the vitamin supplements which do affect the hair growth are:

- Biotin.
- Vitamin C.
- Vitamin E.
- Zinc.
- And iron is particularly important for the health and growth of the hair.



Chap7Fig1