THE LONG AND THE SHORT OF IT

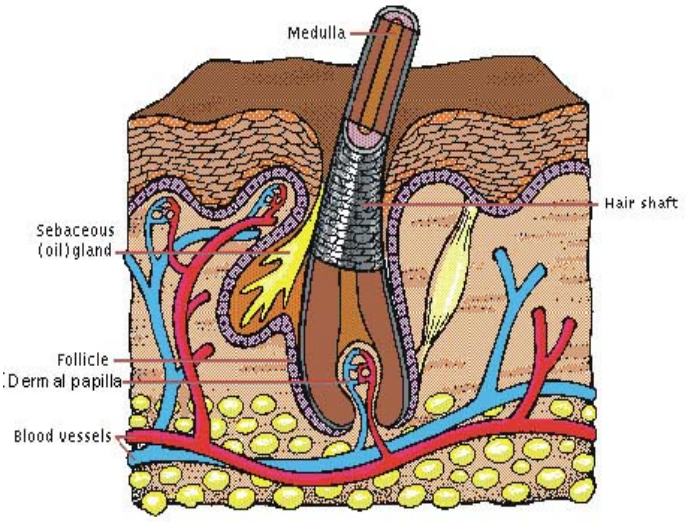
Although our hair has *long* outgrown its original function as an insulator for the body, our society places huge importance on hair - amongst other things, we judge people's attractiveness in terms of their hair. We here at the Irena offices are sure you are all familiar with what shampoo and conditioner suits your hair, or what style flatters your features. We are doubly sure that you all spend a lot of time, attention and money on your hair -whether it be a weekly visit to the hairdresser or simply expensive hair products!

However, do any of us actually know how hair is structured or how it grows? Probably not.....so today we are going to find out.

The main building block involved in the construction of hair is a protein called Keratin. This same protein forms the outer layer of our skin and our nails; it is a strong structural protein.

The hair itself lies both above and beneath the skin. In the part that we can see above the skin, each individual hair can be divided into 3 separate layers: the medulla or inner layer (only present in larger, thicker hairs such as those on your scalp); the cortex or middle layer (which is what gives your hair its colour and texture); and finally the thin colourless outermost layer (known as the cuticle) which protects your hair.

Below the surface of the skin lies the root of the hair, enclosed within the hair follicle. At the base of each follicle is found the **dermal papilla,** which has a rich blood supply that nourishes new hair. What is particu-



larly interesting about the dermal papilla is that it has been found to be sensitive to androgens (testosterone-like hormones), and more recently, sensitive to oestrogens too. In fact, androgens are to some extent responsible for the regulation of hair growth in the scalp. In people who suffer from androgenic alopecia (often referred to as male pattern baldness), the androgens cause the hair follicle to become progressively smaller, and thus the hairs become finer.

Types of hair on the body

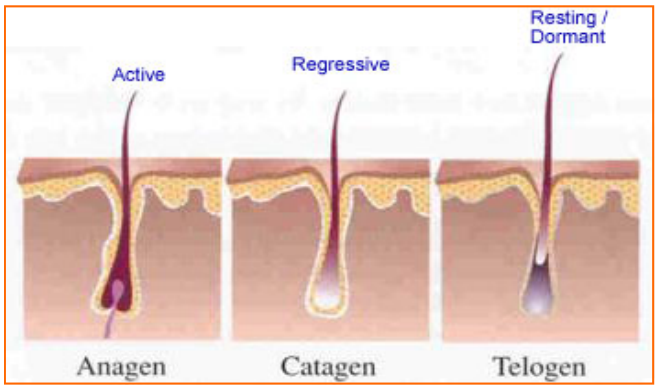
There are 3 different types of hair on the body:

Terminal hairs: the thick, coarse pigmented hairs that we find on our scalps.

Vellus hairs: these are present all over the body, apart from the palms of our hands and the soles of our feet. It is these hairs in the armpit and pubic regions that change into thicker terminal hairs at puberty.

Lanugo hairs are slender, downy fetal hairs that grow in the 2nd trimester of pregnancy, and are usually shed by the time of birth; prematurely born babies are often still covered in these hairs.

Hair grows as cells at the base of the hair follicle divide, and as these cells are pushed upwards they become keratinised and undergo pigmentation.



However, hair growth is not constant - in fact our hair grows in cycles, divided into three succinct phases:

A) The ANAGEN or GROWTH PHASE, when the hairs are actually growing. This lasts between 2 and 6 years, and 85% of the hairs on your body are currently in this phase of the cycle.

B) The CATAGEN or TRANSITIONAL PHASE follows the anagen phase, lasting around 2 weeks. During this time the hair follicle shrinks by about 80%, the lower part of the follicle is destroyed and the dermal papillae breaks away to rest.

C) The TELOGEN PHASE is 5-6 weeks long and during this time HAIR DOES NOT GROW! Between 10% and 15% of your hairs are currently resting right now. When this rest time is over, the hair re-enters the anagen phase as the dermal papillae and the hair follicle rejoin and a new hair begins to form. This new hair will dislodge the old one (if it has not already been shed) and hence the cycle continues, the total quantity of hair remaining the same.

TYPES OF BALDNESS

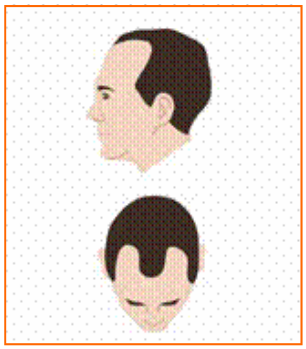
1. Alopecia Areata

This common cause of hair loss occurs mainly on the scalp and is known to be an autoimmune condition whereby the body attacks its own hair follicles. It is the T-lymphocytes

(part of the body's cellular immunity) that attack the follicle, causing the hair to stop growing and enter the telogen (rest) phase. About 90 days later when the resting phase is over, the hair falls out. New hair will only grow when the T-cells stop attacking. There is no specific medical treatment for this condition, but treatments that encourage new growth or that discourage the immune system are sometimes used. (More detailed information on this condition is available.)

2. Androgenic Alopecia

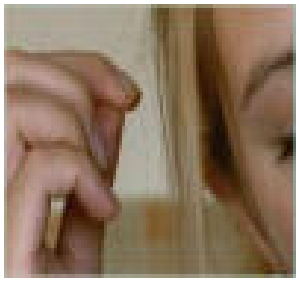
This accounts for 95% of all types of baldness, and although it is often referred to as male pattern baldness, it affects both men **and** women. It is caused by an excess of one of the male hormones, a derivative of testosterone, **dihydroxytestosterone.** The various treatments that are currently available either have an anti androgenic effect **or** they inhibit the hormone that converts testosterone into dihydroxytestosterone. (More detailed information on this condition is available.)



3. Anagen Effluvium

This is sudden hair loss due to chemicals, medicines or radiation. It is usually temporary and hair growth returns to normal when the treatment stops. (More detailed information on this condition is available.)

4. Self Induced Hair Loss



Trichotillomania is continuous pulling or plucking of one's own hair. Treatment is usually psychological counselling.

Traction Alopecia is loss from hairstyles that continuously pull on the hair. The hair will usually re-grow when the style is changed.

(More detailed information on these conditions is available.)

5. Telogen Effluvium

This is hair loss following sudden emotional or physical stress which causes the hair to enter the resting (telogen) phase prematurely. Hair stays in the resting phase for 3 months and is followed by a large amount of hair shed.

The most common causes are childbirth/ miscarriage; starting/stopping the oral contraceptive pill; extreme weight loss/gain; or severe emotional distress. (More detailed information on this condition is available.)

Irene Stein's products can alter the progression of your hair loss, and may even change grey hair back to it's original colour.

Irene has been working in the field of natural health for over 30 years and has a wealth of experience in numerous health conditions.

Over the years, almost by chance she discovered the amazing effects that the Irena formulation and the Stabilised Oxygen have on hair re-growth through observing numerous customers, including herself.

At 64 Irene still has a full head of hair, untarnished by grey! Coincidence? We think not.

Irene is always happy to help her customers, so if you would like further information on how these products can benefit you, please call her on +972(0)9-950 9850 / +972(0)545 305 125
UK customers 07831-641199
Or email her at— irenest@netvision.net.il