Structure of the Hair
(...and the best way to destroy it)

When you think of a hair, if you're like most people you probably think of it simply as this strand that comes out of your head or body (often in unwanted places), and maybe it has a little ball on the end sometimes, right? Well, it turns out that the simple hair is rather more complex then that.

Below the surface of the skin, each hair has it's own little biological machine running making sure that hair is getting produced properly. If anything happens to that hair, or if it's completed it's lifecycle, that little machine gets right to work making another hair. Sometimes, it makes them even stronger ***link to waxing/shaving myth***. But what does that machine look like? What are all different parts and what do they actually do?

Hair Shaft - This is the part of the hair that you actually think of as "hair". It has three parts - the cuticle (thin outside layer), the cortex (thin middle layer), and the Medulla (the core).

Arrector Pilli - Ever get goosebumps? Of course! And for that, you can thank our good friend, the arrector pilli muscle. This muscle joins the skin to the hair follicle, and allows it to move the hair perpendicular to the skin. When this happens, the follicle starts to protrude slightly, and the effect is a tiny bump on you skin where the hair is - a goosebump!

Follicle - Think of the follicle as the cavity or sac that holds the hair in place. It's a pre-existing opening on the skin, so when we insert a needle for electrolysis, we're not breaking through the skin. Instead, we are taking advantage of an existing opening that the hair has already created for us.

Root Sheath - The hair has both an outer and an inner sheath - a kind of soft skin coating, if you will. When we introduce a current, the root sheath (which is full of moisture) will often coagulate and become white and spongy (much like an egg white). While a visible root sheath is not required to be removed when treating a hair, they often coat the hair upon removal, and give your electrologist a great deal of satisfaction :)

Papilla - Made of of connective tissue and a vascular loop, this is one of our primary targets when destroying a hair. The vascular loop is what allows the nearby bloodflow to nourish the hair. In effect, it is feeding the hair. If we wipe this out, the hair doesn't receive any nourishment, and it can't grow back :)

Bulge - Remember our old friend the Arrector Pilli Muscle? The goosepump muscle? Well he's worth a second mention because the part that connects the muscle to the hair follicle is called the bulge, and it's job is to add the stem cells required to grow new hair to the follicle when the time is right. We like to kill this part of the hair too.

Sebaceous Glands - these are located next to the hair follicle and produce sebum. We'll be going a little more in-depth with sebaceous glands ***a little later. ***

And that's the basic structure of a single hair! Whew...that's a lot of information for something so tiny! But what is the most effective way to kill it?

That's where electrolysis comes in. A skilled electrologist is going to have two targets in each follicle. The papilla is the primary target. Just like generals in wars try to cut off the supply chain of the enemy, so too do we want to cut off the hair from it's primary food source - blood. Since the papilla is the last stop on the line, if we remove it entirely, then even if there are stem cells around to grow, they won't even get the chance without adequate nourishment, and so they simply die. Secondly, we are going to target the bulge. The bulge is where the stem cells, or "eggs" of a new hair will be coming from. Once they start feeding, the hair will start to grow all over again.

It's not always possible to destroy 100% of both the bulge and the papilla simultaneously without damaging the surrounding skin, but after 1-3 treatments by a skilled electrologist, and that particular follicle will quickly lose it's ability to reproduce any more unwanted hair forever!