

## **Skin background**

The epidermis is the outer most layer of the skin acting as the body's protective armour. The epidermis itself is comprised of three principal layers with the outermost layer being entirely represented by dead cells known as the Stratum Corneum.

At the base of the epidermis, and above the dermis, is a 'basal layer' of living cells that divide and migrate towards the Stratum Corneum. As they migrate they change their characteristics and become more elongated and drier. The middle layer of the epidermis, called the squamous layer consists almost entirely of keratinocytes, which are composed of a substance known as keratin which functions as the protective material of the skin.

At Olathe OBGYN we use the state of the art SmartPeel Skin Exfoliation system which uses the principle of kinetic disruption of the Stratum Corneum to stimulate the production of new, living cells at the basal level. Stimulation of the basal layer causes cellular turnover, which also stimulates a reaction at the level of the dermis in the form of vasodilation, which in turn improves skin elasticity and texture. The result is a fresher, healthier looking skin with an enhanced surface quality. The time for cell renewal and migration to the Stratum Corneum averages a 16-20 week cycle. As we get older the cell regeneration process takes longer. Poor health and a variety of environmental factors also have a major impact on the regeneration process.

When the skin is exposed to excessive sun, the Stratum Corneum responds to the 'insult' by becoming thicker in order to protect underlying layers. A great deal of what we think of as a natural aging process is really caused by sun damage. Many people have beautiful skin at age eighty while others are severely sun damaged by age forty. Wrinkling, fine lines on the surface, irregular discoloration and a degeneration of fibers of collagen in the uppermost portion of the dermis are all evidence of sun-damaged skin.

Aging skin can impact younger individuals not just those in their mid to late years. It is estimated that 80% of the damage caused by UV is achieved by age 20.