The Aging Face: A Quick Review

Understanding the Aging Process

Facial aging is a continuous process throughout life. Effects may become noticeable in a person's 20's when fine wrinkles, light blemishes, and sun spots begin to appear. Changes in the texture and firmness of skin may also become apparent.

Skin basics

The cells of the epidermis cover and protect the body. Specialised cells promote continual regeneration of the skin. The epidermis has no blood supply, so its health and appearance depends on nutrients that filter from the epidermis and its blood vessels.

The dermis, the middle layer of the skin, contains collagen, nerve endings, blood vessels, and oil and sweat glands. The collagen in the dermis gives structure to the skin, and provides the infrastructure for elastin and hyaluronic acid to be retained. Elastin is responsible for the skin's elasticity and hyaluronic acid retains moisture. More collagen in the dermis enables more elastin and hyaluroninc acid to be present.

The subcutaneous layer, the innermost layer of the skin, is made up mostly of fat which keeps the body warm and absorbs shocks.

Beneath the skin are muscle and bones. The facial bones support the muscle and the skin, giving shape and support to the face. Facial muscles attach directly to the skin, unlike in other areas of the body. This results in more movement of the skin as facial muscles move.

Facial Aging

As skin ages the dermis thins due to collagen loss, reducing its ability to retain elasticity (from elastin) and moisture (hyaluronic acid) Elastin is a protein found in connective tissue that is elastic and helps the skin maintain shape. Hyaluronic acid is a substance found in the connective tissue of the body that cushions and lubricates.

In addition, over time bone deteriorates, becoming thinner and more brittle. This thinning of the face is called volume loss. This causes your face to appear thinner and results in a weaker looking jaw. Osteoporosis can compound these effects, as the bones thin faster.
The face also thins due to fat loss, as well as the movement of fat to other parts of the face. Skin appears looser and sags. The diminished elasticity of the skin reduces it's ability to retain its shape and it does not conform as closely to the contours of the face. Gravity then pulls on both the skin and the underlying fat, and they move down the face. This results in sagging eyelids, bags under the eyes, and jowls.

Causes for aging skin

There are two types of factors in facial aging.: internal (age-related) and external (or environmental). Both factors cause visible and nonvisible effects.

Internal factors are those that happen over time and are caused by genetic factors. This breakdown of cellular structures and processes, reduced bone density and hormonal changes. These factors lead to visible effects, such as wrinkles and folds, fine lines, drooping eyelids, hollowed cheeks, jowls and dry skin. Reduction of collagen elastin and hyaluronic acid, fat loss and redistribution, dermal thinning and bone resorption are nonvisible effects.
External factors are environmental things that have impact on aging, including sun damage, smoking, facial expressions, sleep positions and gravity. Visible effects of these external factors also include wrinkles and folds, as well as rough skin, blemishes, pigmentation and freckles. The nonvisible effects also include epidermal thickening and dermal thinning.

Visible effects
Visible effects are those you can see in the mirror, such as wrinkles, lines, folds, loss of elasticity, sagging skin, skin texture/color changes. The speed at which these changes occur varies depending on environmental factors and genetics.

Wrinkles, lines and folds are initially caused by facial expressions. As skin ages, internal changes to the skin, such as collagen loss, result in deeper and more persistent wrinkles, lines, and folds. They are classified by depth as well as by area of the face, and the appropriate treatment depends on these factors.

Starting as early as the 20's, you may start to develop frown lines in the upper face and fine wrinkles and folds in the mid-face.

In your 40's, frown lines in the upper and fine lines, wrinkles, and folds in the mid-face become more defined and may be joined by some lip thinning, hollowing of eyes and cheeks, and jowls.

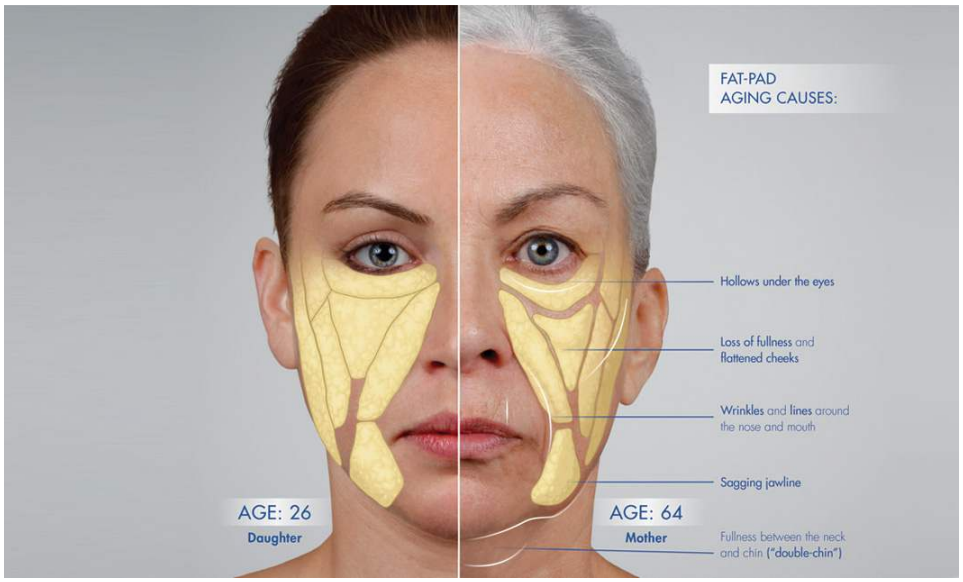
Typically, in the 55+ age range, people present with deep frowns in the upper face; extensive fine lines, wrinkles and folds in the mid-face and more prominent lip thinning, hollowing of eyes and cheeks, and jowls.

Loss of collagen, fat and water, as well as sun damage and stress in increasing amounts cause this progression of the visible effects of facial aging.

Collagen Loss — a primary factor in facial aging
As aging progresses, more wrinkles and fine lines appear, and they deepen over time. Your skin continues to change in texture and color, and begins to sag. These processes continue throughout your life. They are a result of the aging of the skin, the reduction in collagen, and the underlying structures such as bones.

Facial aging can cause you to think differently about yourself resulting in emotional and psychological changes, causing some people to become depressed and insecure.

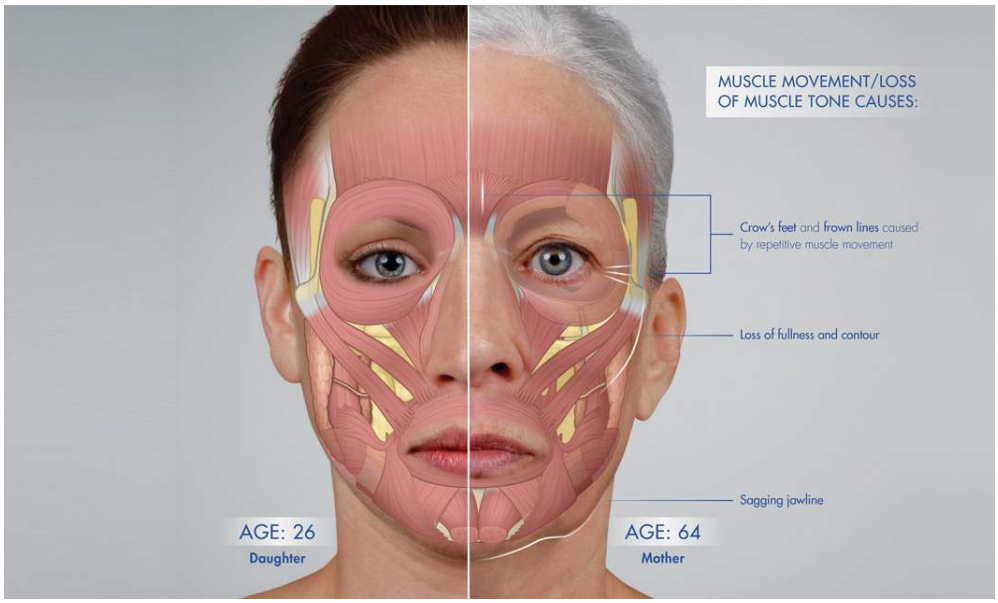
Fat pad Loss



Fat-pads are located below the skin's surface and help to provide volume, facial contours, and fullness.

As we age, fat-pads get thinner and descend. As a result, our face may not look as round and firm as it did in our youth. Hollows can form beneath the eyes, drooping skin can cause deeper lines around the nose and mouth, loose skin can result in a sagging jawline, and fat can accumulate beneath the chin, resulting in fullness between the neck and chin ("double chin"). The loss and downward movement of fat-pads can also make the face appear deflated and sunken in the cheek area.

Muscles and Aging



Our facial muscles lie beneath our facial fat-pads. They are in repeated motion as we eat, laugh, smile, and frown.

As we age, loss of facial fat, combined with gravity and repetitive muscle activity, can lead to deep wrinkles in the face. As a result, crow's feet form at the outer corners of our eyes, and creases form between our brows.

Facial muscles also get weaker over time. The loss of muscle tone and thinning skin can give the face a loose, sagging appearance. Our jawline loses its contour, and our profile becomes less defined.

Bones and Aging

Facial bones provide the foundation for muscle, fat-pads, and skin. This bone structure is what gives us our unique facial shape and contour. A youthful bone structure has full and high cheeks—as shown in the triangle of youth—and defined brow bones and less sunken eye areas.

With age, we experience facial bone loss. This type of bone loss changes the dimensions and contour of our face, causing areas around our eyes to get larger, a decrease in the angle of our brow bone, and a less sculpted jawline.

What is the triangle of youth and the inverted triangle?

Lines and wrinkles are signs of aging, but aging also occurs beneath the skin. Signs of aging exist at every layer of the facial structure,

Triangle of Youth

In our youth, facial features are defined and well contoured. This is commonly described as the triangle of youth..which is a bit confusing because we think it looks like an inverted triangle.

As aging occurs, the triangle becomes referred to as inverted.

Inverted Triangle

Generally, as we age, facial bone changes, soft tissues (like muscles) fall due to gravity, and skin sags and droops downward. Facial fat-pads shift, while the fat-pads beneath the chin can increase in prominence, causing fullness between the neck and chin, also known as a "double chin." The effect of the lower face getting fuller can be described as the pyramid of age. Aging is also unique to each individual. Genetics play an important role in aging. As such, how your mother ages can provide a glimpse into how your face may change over time. Other factors like sun exposure and diet can play a role in determining when aging begins—and how fast it progresses.