

The Myths and Realities of the Aging Face

The abundance of creams, treatments, fillers and surgical procedures can make one's head spin when it comes to deciding how to deal with aging changes of the face. The internet is packed with the latest and greatest discoveries and devices. Unfortunately, most claims of amazing results are far from the truth, and many photographs are digitally altered or show a beautiful twentysomething model.

So what's reality. How do we separate fact from fiction?

First, we need to understand the architecture of the face, and how it changes over time. Think of the face as a solid bed with a thick down comforter covered by a thin sheet. The bed represents the skeletal structure of the face, the comforter is analogous to the muscle, fascia and fat, and the sheet is our skin. When we are young, the comforter is plump and smooth. The sheet is taught and stuck to the comforter.

It is free of any creases.

What happens as we age? Surprisingly, the bed itself (the bones of the face) actually sags a bit. In the facial skeleton, this is due to the normal bone loss that occurs through our aging bodies. There is not much we can do about the bed itself. Most of the changes are in the comforter and the sheet. The comforter deflates and bunches up at the foot of the bed. The sheet gets thinner and shows any irregularity in the underlying comforter. It also develops many creases, folds and stains. Thus, in the aging face, the fat deflates (mostly in the lower eyelids and cheeks), the tissues become lax and stretched which leads to deep creases and droopy areas around the mouth and chin (the foot of the bed), and the skin develops wrinkles and irregular pigmentation.

Now that we have looked at the aging process in simplistic terms, we can think about the various treatment options and see what makes sense and what doesn't. Good medicine involves safe, effective treatments for various conditions. But an even better approach is to begin with prevention. As the saying goes, "an ounce of prevention is worth a pound of cure."

The most important factor influencing the aging changes in our face is our genetic make-up. Unfortunately, this cannot be altered. But controlling other important factors can help keep our faces young. Most of these are obvious: not smoking, avoidance of sun and artificial tanning, and keeping the skin hydrated by drinking lots of water and using facial moisturizers. Interestingly, the combination of sun exposure and smoking are synergistic in their ability to wreck havoc on our faces. Rapid weight loss or weight gain are also detrimental to our appearance. So let's suppose you have done everything possible to prevent your face from aging. But alas, you still want to look younger. What should you do? What works? Let's look at the facts from a biologic approach and see if we can figure out what makes sense.

1. As was discussed above, keeping the skin hydrated and moist is important in maintaining its vitality. Despite claims of miraculous results, skin care products do little more than hydrate the skin. The role of

antioxidants in the progressive damage of the skin's health is well-established, however the efficacy of anti-oxidant containing creams in reversing or retarding this process is largely unproven. These claims are based on poorly-controlled studies done by the manufacturers themselves. So what does this all mean? It's probably not worth spending a small fortune on a moisturizing cream or lotion.

2. There is no way to cause regeneration of the tissues in the face. Nothing has ever been proven to regenerate either fat, muscle, or collagen (the building block of skin). Creams that claim to stimulate collagen production are not backed up with scientific studies. Theoretically, stem cells injected into the face could achieve this goal, but such technology is still years away.

3. As opposed to regeneration, a process termed 'repair' does occur in response to injury. Resurfacing procedures such as lasers, chemical peels, or dermabrasion essentially burn off the outer layers of the skin, resulting in production of new skin at the site of injury. These types of procedures can take some of the creases out of the sheet, but if the comforter beneath it is still bunched up, it will show through the sheet. Hence, only very superficial wrinkles can be removed with resurfacing treatments. An important principle to remember is that the more powerful the resurfacing procedure (e.g. CO2 laser), the deeper the injury. This means a better result, but with a longer recovery period (6-8 weeks) and higher risks (pigment changes, permanent scarring, etc.).

4. Fat or fillers can be added into the face to restore missing volume. This works well for some areas (e.g. nasolabial folds), but not for other problems, such as the vertical lines above the upper lip. Permanent fillers such as silicone are dangerous and should be used with exceeding caution, since any irregularity will be permanent.

5. Botulinum toxin (e.g. Botox) relaxes muscles of expression. This results in less action of the treated muscle, and fewer wrinkles transmitted to the overlying skin. In our analogy, this is akin to smoothing out a small area of the comforter causing the overlying sheet to be smoother as well. It is worth mentioning that years of muscle action will lead to permanent wrinkles in the skin (such as the crow's feet wrinkles around the corner of the eyes). Therefore, after a Botox treatment, the wrinkles will improve but will not be completely gone. This also means that starting Botox early can help prevent these permanent wrinkles from ever developing in the first place.

6. Nothing is as effective or long-lasting as surgery. Common rejuvenation procedures include browlift (forehead lift), blepharoplasty (eyelid lift), facelift and necklift. Surgery can achieve many goals, such as tightening stretched out tissues and repositioning fat, or removing excess skin. These surgical procedures can range from simple excision of excess skin (which will give the bed a smoother sheet), to tightening the entire fascial system of the face (akin to completely smoothing out the comforter). A well-performed surgical procedure should last for years. Surgery can also be combined with other less invasive procedures such as fillers. Resurfacing treatments such as lasers should not be done at the same as a surgical procedure that involves cutting directly underneath the laser-treated areas. It is essential that if surgery is the right choice, you pick a plastic surgeon certified by the American Board of Plastic Surgery. Any physician's qualifications can be looked up on the website of the American Board of Medical Specialties. It will list his board certification status and field of training. A good rule of thumb is

to ask your surgeon what hospital (not surgery center) he has privileges at to perform the exact procedure you are undergoing. Hospitals are extremely strict about granting surgical privileges. A dermatologist may have privileges at a local hospital related to the field of dermatology, but he will NOT be allowed to perform facelifts at that hospital.

In conclusion, aging is an inevitable process that leads to predictable changes in the face. Although, our genetics will have the strongest influence on our appearance as we age, starting a good skin-care regimen early can help us age much more gracefully. There are an abundance of treatments; some safe and well-established, others based on nothing more than hype. Consulting a trained physician experienced in understanding and treating aging changes of the face is the first step to maintaining or achieving a more youthful appearance.