

Anti-Aging: Why Retinols Work

Out of all of the “anti-aging” ingredients available on the market today, retinoids are the only ones scientifically shown to work on a molecular level.

Retinoids refer to prescription-strength ingredients like tretinoin or tazarotene. These have 25 years of scientific evidence to support their effects. Retinol is the gentler “cousin” of retinoids, and this is what is found in over-the-counter products. These are not as strong and therefore don’t deliver the results of a prescription-strength cream, but they also have scientific evidence to show they work.

Retinoids are still the most highly recommended by dermatologists since it’s the only ingredient proven without a doubt to improve the cellular function of aged and photodamaged skin. It helps to improve skin texture, wrinkles, and diminish brown spots. Overall, it gives the skin a healthy glow. In my office, when I see a new patient in consultation, I can always tell if they’ve been using retinoid for years; their skin has a certain luminosity that only comes from the long-term use of a retinoid.

Retinoids work on a molecular level because skin cells contain retinoid receptors that help regulate certain functions. With age and sun damage, these functions deteriorate. The regular use of a retinoid helps to normalize these functions. Retinoids improve skin texture and reduce dark spots by speeding up skin cell turnover that slows down as we age. They reduce blackheads and minimize pores, both of which worsen with too much sun exposure. But the most powerful effects of retinoids are on collagen, the building blocks of the skin. Retinoids have a dual effect here: They not only help to decrease the amount of collagen breakdown from sun exposure by preventing the rise of an enzyme called collagenase, but they also help to stimulate the production of new collagen.

Since retinoids are the most powerful anti-aging ingredient available, they are recommended for almost every skin type. However, they can be very irritating. Therefore, it’s best to start slowly with a non-prescription retinol containing cream.

Retinol is the less-aggressive form of prescription-strength tretinoin and also has scientific evidence to prove its effectiveness. These creams are best started once every other night, a small amount used for the whole face. If too much is used, it increases irritation, not effectiveness. It’s important to use a moisturizer while the skin gets used to the retinol (usually takes about 2 weeks) as dryness can be a problem. Newer formulations of products have controlled delivery systems and special emollient ingredients to help reduce irritation. The use of a sunblock is

mandatory in the morning because these products will make the skin slightly more sun sensitive.

Retinoids and retinols are best used at night because they are photo-inactivated, meaning direct sunlight will break them down and make them less effective. The most effective over-the-counter products contain 1% retinol (but no less than 0.5%).

As a prescription, I like tretinoin 0.05%. When I see patients in my practice, I typically get started with an over-the-counter retinol product, then slowly increase the strength over time until they are using a prescription.

There is no reason to be too aggressive at first because that may lead to excessive irritation and, many times, the person may stop using the cream (when all they really needed was a longer amount of time for their skin to get used to it). The best way to use retinoids is over years and decades!