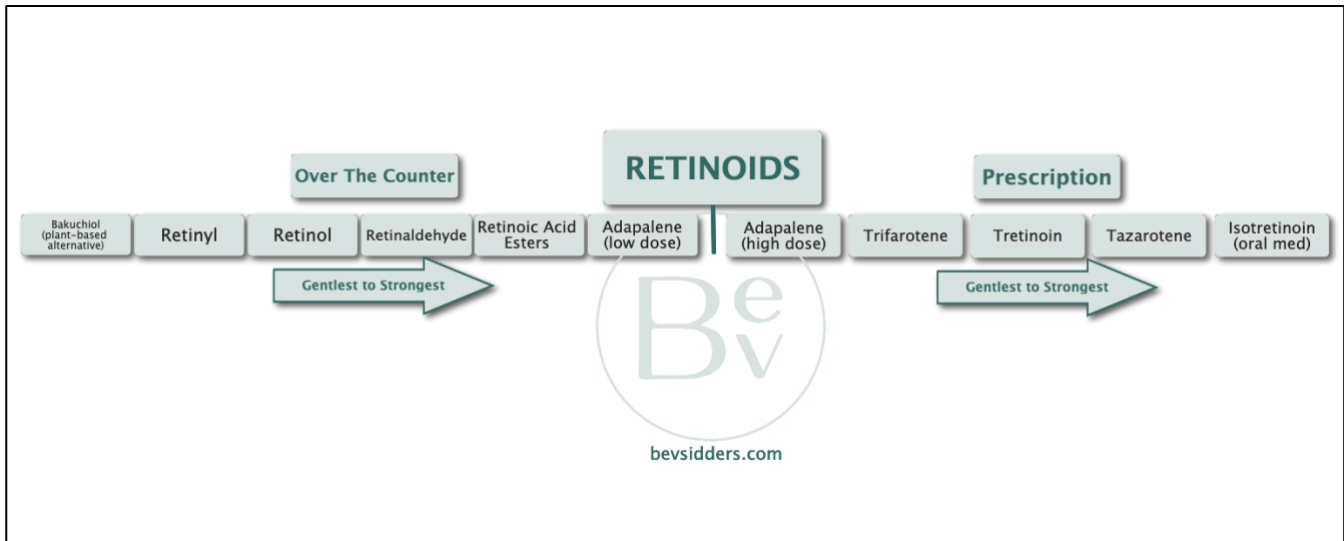


RETINOIDS EXPLAINED

EIGHT TIPS FOR SUCCESSFUL USE



In our second newsletter, we'll discuss the use of retinoids in skincare, the different types, benefits, potential side effects, the "retinization" process, the hierarchy of strengths, and 8 tips for success integration of retinoids into your skincare regimen. With this information, you can effectively discuss your skincare goals with your esthetician and dermatologist (or send this to someone you know may benefit).

When the goal is preventing aging as well as correcting existing damage, virtually all dermatologists and estheticians agree daily retinoid use is the answer. The term "retinoids" refers to vitamin A and the various molecules derived from vitamin A. We hope by outlining the hierarchy of retinoids in this newsletter, that we may clear up much of the confusion around which type of Vitamin A derivative to use.

Broadly speaking, there are two groups of retinoids: those available over-the-counter (OTC) and those that are prescription only. OTC retinoids are broken down into five main categories: retinyl esters, retinol, retinaldehyde, retinoic acid esters and adapalene

(at low doses). Prescription retinoids are also broken down into five main categories: higher strength adapalene, trifarotene, tretinoin (retinoic acid), tazarotene and isotretinoin (oral). A plant-based alternative (bakuchiol) will be discussed later in this newsletter.

Skin can only “make use” of the Prescription entities that are “biologically active” meaning they target retinoid receptors and their cellular renewal and repair magic begins to work right away. The aforementioned OTC retinoids need to be converted to retinoic acid directly on the skin’s surface in order for your skin to reap the benefits. Just be aware, the more steps it takes to convert to retinoic acid, the “weaker” (and therefore gentler) the product will be.

There are plenty of gentler forms available over the counter, for sensitive skin. For certain skin conditions however, a doctor may prescribe stronger treatment formulations. We will discuss all of these below in the “hierarchy of retinoids.”

What are The Benefits of Using Retinoids?

- **Works well for treating acne as well as aging**
- **Increases and regulates cellular turnover**
- **Promotes exfoliation**
- **Reduces fine lines and wrinkles by increasing collagen synthesis**
- **Inhibits collagen breakdown**
- **Increases elasticity**
- **Improves water barrier function**
- **Fades age spots, pigmentation and melasma discoloration**
- **Reverses the signs of photo-aging**
- **Gives the skin an overall youthful glow**
- **Stimulates the production of new blood vessels in the skin, which improves skin tone and improves sallowness (yellow color)**
- **Smooths rough patches of skin**
- **Allows for better penetration of other topical agents**
- **Helps with re-epithelialization of the skin following an injury**
- **Increases glycosaminoglycan (hyaluronic acid) deposition in the epidermis**
- **Regulates sebum production**
- **Prevents acne/cystic acne, controls oil, unclogs pores**

Using retinoids is arguably one of the most important steps that you can take for overall skin health and anti-aging. Early OTC retinol usage helps delay the aging process, so the best time to start using retinol is your mid-twenties to early thirties (when your cell turnover rate begins to slow), so that you can delay the need for prescription retinoids until your forties or fifties.

If retinoids are so good, why do some people stay clear of them?

There are many reasons - some people believe their skin is too “sensitive,” while others have tried them and discontinued use due to a “reaction.” Still others fear that retinoids are not “natural” and should be avoided. The truth is that retinoids are the common denominator of skin care; and while every skin is different, almost every skin type can benefit from them.

A crucial exception applies to those who are pregnant, trying to get pregnant, or breast-feeding. Vitamin A derivatives have the potential to be absorbed into the bloodstream and passed to the baby through the placenta. Prescription oral isotretinoin (Accutane) does cause birth defects, so please talk to your doctor about all forms of retinoids if you are pregnant or planning to become pregnant.

A few symptoms common to the beginning stages of retinoid use might explain why many people either fear to try them or discontinue their use before they’ve had the opportunity to revel in the improvements. Retinoids initially may cause peeling and some redness, a process called facial retinization which is “part of the process.” Users should be aware that this is normal and even to be expected — peeling and redness are side effects of retinoids working at a profound level to influence gene expression (eventually resulting in enhanced collagen production, smoothing skin, and pigmentation). After two or three weeks, the skin cells adapt to the retinoic acid and begin to tolerate the ingredient. Retinization is discussed further in “Tip 3 for Successful Addition” below.

When people initially experience facial retinization, they often make the mistake of stopping their treatment program, then waiting until the skin gets “better” before beginning again. Giving the top layer of skin time to rebuild can unfortunately initiate another round of redness and peeling which ultimately delays the anticipated therapeutic benefits. Switching to a weaker formula (or alternating use to two to four nights per week) if the discomfort is prolonged or uncomfortable may be a better option.

And now that we’ve cleared that up let’s forge right ahead...

The Hierarchy of Over-the-Counter Retinoids (and one very popular plant-based alternative)

Bakuchiol (plant-based alternative)

The most popular of the “retin-alts” (retinoid alternatives), bakuchiol is one plant-based alternative (derived from the *Psoralea corylifolia* plant), that can provide some benefits

similar to retinoids while being much gentler — though, not quite as efficacious. It can be worth exploring if your skin can't tolerate any of the below over-the-counter retinoids. Without question, it has become quite a buzzy skin care ingredient over the past couple of years.

Retinyl

The least potent form of retinoids, it takes retinyl three steps to convert into retinoic acid on the skin — first converting to retinol and then retinaldehyde before becoming active. These derivatives of vitamin A — which include **retinyl palmitate, retinyl linoleate, retinyl acetate, and retinyl propionate** — are quite gentle, and great for first-time [retinoid] users or people with very sensitive skin.

Retinol

Retinol takes two steps to convert into retinoic acid, converting first into retinaldehyde, making it more effective than retinyl esters.

Retinaldehyde

Retinaldehyde, also known as “retinal” — not to be confused with retinol — is the strongest of the over-the-counter retinoids. One step closer to retinoic acid on the conversion scale, it only takes one step for it to convert and become active, making it more potent than the aforementioned retinyl esters and retinol. However, you can expect it to be gentler than pure retinoic acid.

Retinoic Acid Esters

A relatively new form of retinoids that are thought to fall somewhere between retinol and retinoic acid on the efficacy and irritation scale. The two forms of retinoic acid esters are retinyl retinoate (RR) and hydroxy pinacolone retinoate (HPR), which is more popularly known as granactive retinoid. Unlike other forms of retinoids, RR converts into both retinoic acid and retinol when it interacts with the skin, meaning it offers both instant and delayed benefits as the retinol begins its own two-step conversion process. HPR binds directly to retinoid receptors without having to be converted to retinoic acid.

Adapalene (low dose)

Adapalene is a novel chemical entity (FDA approved in 2016), which behaves similarly to tretinoin, is as effective as other retinoids, and causes less irritation. Adapalene does not need to be converted to retinoic acid before it becomes active. It's available both over-the-counter and in prescription form (Differin), and the few OTC products on the market are all very reasonably priced. Adapalene decreases inflammation and prevents new acne from forming, which is why it's a superstar ingredient for treating acne.

The Hierarchy of Prescription Retinoids (Retinoic Acid)

Adapalene (high dose)

(See above) It's available both over-the-counter and in prescription form (Differin).

Trifarotene (newest)

FDA approved in 2019, it is the first topical treatment specifically studied to treat both facial and truncal (chest, shoulders and back) acne. **It's the only retinoid that's FDA approved for large surface areas of the skin, including the chest, shoulders, and back.** It is unique in that it selectively targets the gamma retinoic acid receptor, which is the most common retinoic acid receptor found in the skin. If adapalene hasn't been working for you, consider this one the next step up — it's more potent than adapalene, but less potent than tretinoin.

Tretinoin (most popular)

Commonly known as Altreno, Atralin, Avita, Retin-A, Refissa and Renova, it's one of the most popular and more powerful forms of retinoic acids for topical use. That means it also comes with side effects. When you start using it, expect to see mild flaking, dry patches, mild redness, and perhaps a purge of acne lesions. Introduced slowly, with application of the product two-to-three times per week (instead of every day) and applying it in conjunction with a non-comedogenic moisturizer can help acclimate the skin to the product more quickly and easily. Renova and Refissa are the least irritating. NOTE: Refissa contains mineral oil, so if you are prone to acne opt for Renova. People with very dry skin usually tolerate Renova better than Retin-A and generic tretinoin. Talk to your doctor about the best form for your skin.

Tazarotene (strongest)

Also known as Tazorac, this is the strongest of the topical retinoids. Tazarotene binds to both the beta and gamma retinoic acid receptors in the skin. It's used to address concerns such as acne, psoriasis, and photo damage of the skin. It works to treat acne and psoriasis by slowing skin cell overgrowth and decreasing skin cell inflammation. It's also been shown to tighten skin, even out pigmentation, and smooth fine lines. Tazarotene can be especially drying — even more so than tretinoin. It's available in various formulations such as creams, foams, and gels, gels being the most irritating.

Isotretinoin (oral medication)

Commonly known as Accutane, this oral form of retinoic acid is the most potent of all retinoids — thus, it's often reserved for more severe and resistant forms of acne. When taken orally, it permanently reduces oil gland size and oil gland production. Since it's a much more intense medication, its side effects include dry skin, eyes, nose, and lips, and muscle aches. Bloodwork is checked monthly to make sure the patient is tolerating the medication and to ensure women using it are not pregnant as it can cause birth defects.

Eight Tips for Successful Addition of Retinoids to Your Skincare Routine

While every skin type has its own idiosyncrasies, almost all types can benefit from retinoids. Here are some tips to make your retinoid journey successful, even if you've had trouble in the past. And when in doubt, consult a trusted dermatologist or esthetician for guidance. They'll be able to steer you towards the clear, healthy skin you've always wanted.

1. USE THE RIGHT TYPE

If you have sensitive skin you might want to start with an OTC retinol, which is slower-acting and less irritating than prescription retinoic acid. Since retinol must convert to retinoic acid the trade-off (less irritation thus slower manifestation of results), can benefit those who have experienced prior problems with prescription retinoids. Retinaldehyde is another OTC retinoid that is very effective.

2. START WITH A LOW DOSE, THEN WORK YOUR WAY UP

Retinoids come in various percentages, starting at 0.025%, 0.04%, 0.05% and finally, 0.1% (the strongest). You might think that starting higher will get you results faster, but high strength Retin-A can easily irritate skin. Because it can take some time for the skin to become acclimated to retinol, sensitive or not, consider building up tolerance slowly. Work your way up to higher strengths; consider mixing with a nighttime non-comedogenic moisturizer or start by using it two nights weekly and increasing to nightly as tolerated.

3. PREPARE YOUR SKIN BEFORE STARTING

[A study, "Facilitating Facial Retinization Through Barrier Improvement," by Draelos ZD, and Ertel KD \(2006\),](#) showed the following: "Improving the stratum corneum barrier function before beginning topical tretinoin therapy and continuing use of a barrier-enhancing cosmetic moisturizer during therapy facilitates the early phase of facial retinization and augments the treatment response." The barrier cream the

researchers used contained a mixture of vitamins (niacinamide, panthenol, and tocopheryl acetate – vitamin E). They advised continuing with the barrier cream while using the retinoid.

Our [CE Ferulic](#) serums contain tocopherol as well as panthenol. This serum is a great first step to add to your morning routine to start preparing your skin. [EltaMD PM Therapy](#) is a great choice for a niacinamide-based barrier cream for the evening. It contains 5% niacinamide as well as tocopheryl acetate.

4. SET UP A ROUTINE. HOW MUCH DO I USE?

You can start off every other or every third night and work up to every night but be consistent. “When I prescribe a retinoid, I recommend that patients use it twice a week for two weeks. Then, most patients can use it every other day or even daily,” says Heidi A. Waldorf, associate clinical professor at Mount Sinai Medical Center in New York City.

“For the first two weeks, apply a retinoid every third night,” says Leslie Baumann, MD, director of the Cosmetic Medicine and Research Institute at the University of Miami. “If your skin isn't irritated, ramp up to every other night for two weeks. Not dry or flaky? Go for it every night.”

A pea-sized amount is all that is needed per application. Go a bit lighter around the nose and mouth, since those are the flake-prone areas. Don't be scared about putting it around your eyes - it's perfectly fine to apply it right on the crow's feet. “Studies have shown that people who apply retinoids right up to the eyes get best results,” says Jonathan Weiss, an Atlanta dermatologist. “And if you get it in your eye it may sting a little, but it won't do any harm,” says Weiss.

Retinoids are NOT a spot treatment. If you are acne-prone, you might be tempted to put a large amount on a breakout but it could burn your skin and make it look even worse. Just spread the pea-sized amount all over in a thin layer and let the medication work its magic.

5. ONLY USE RETINOIDS AT NIGHT

There are a couple of reasons to confine usage to nighttime. First, UV rays break down the vitamin A in retinoids, making it less active, so using it in the morning is counterproductive. Second, heat from the sun can contribute to erythema, or redness, and if you are already experiencing redness on account of facial retinization, heat might exacerbate your discomfort.

Summer is actually a good time to start a retinoid: Humidity makes your skin less likely to dry out as it adjusts. Of course, apply SPF30+ physical blocker (zinc oxide and/or titanium dioxide) sunscreen daily, as diligently as you always do, because

retinoic acid can thin the outer layers of the skin by about a third, making skin more susceptible to sunburn.

6. BE PATIENT

It's not an overnight process for anyone, and depending on the type of retinoid you use, the condition you are treating and the condition of your skin, you should be prepared to wait at least eight to twelve weeks before you start to see significant changes. Are you afraid your skin will look worse before it gets better? Retinoids can cause dryness, redness, and flaking—but if you ease in, you can avoid a rough transition.

7. ORDER OF APPLICATION

This question comes up all the time: "Must I always apply retinoids to dry skin?" This is the one area where there tends to be conflicting theories and recommendations. There is no evidence in the scientific literature I've seen that shows damp or wet skin exacerbates sensitivity. I'd like to make the case that "moisturized" skin is not "damp or wet" and retinoids often spread better if applied after a moisturizer or mixed with a moisturizer. Dr. Obagi recommends using his facial "blender" cream along with retinoic acid, which helps the product spread.

BevTip: I personally apply my [growth factors](#) and [niacinamide-containing moisturizers](#) after cleansing and toning the face then the retinoid; this allows the pea-sized amount of retinoid to spread better. Lastly, I apply a [heavier moisturizer](#) or [jojoba serum](#), after the retinoid. [<https://bevsidders.com/collections/bevs-skincare-routine>]

8. USE CAUTION WITH OTHER ACTIVE INGREDIENTS.

Other topical acid serums/creams—including glycolic, salicylic and lactic acids—should NOT be used at the same time as your retinoids; however, you may use them in the morning if your skin can tolerate them. Also use any vitamin CE serum treatments in the morning. Hydroquinone and azelaic acid prescriptions CAN be used at nighttime with retinoids for treating pigmentation issues.

Reference

[Draelos ZD, Ertel KD, Berge CA. Facilitating facial retinization through barrier improvement. *Cutis*. 2006 Oct;78\(4\):275-281. PMID: 17121065.](#)