

A close-up photograph of a person's eye with a light brown iris. The skin around the eye is covered with numerous small, white, crystallized bumps known as milia. The eye is looking slightly to the right.

What's Happening Under the Surface?

How milia forms and how to safely prevent it

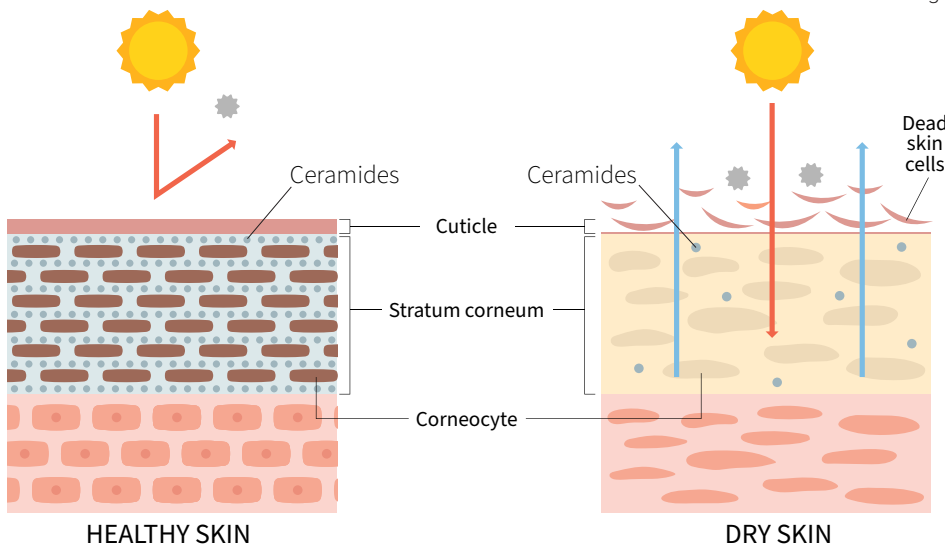
by Lisa VanBockern

CURIOUS ABOUT THOSE CRYSTALIZED WHITE balls under the surface of the skin that just won't extract? They're milia. Once you learn what milia is and realize it's not acne, you may start to recognize it on yourself as well as your clients. You might poke and prod to get those little, hard, white balls to extract, but they won't budge. If you work in a state where lancets are allowed, you theoretically could break the skin and carefully work them out. However, if there are dozens of them, that's quite a feat to attempt to remove so many in a normally scheduled facial. Generally, you'll see milia near the eyes, on the eyelids, and around the periorbital bone; however, you can see them all over the face.

So, is exfoliation the answer to remove milia? In the past, I have tried harsh microdermabrasion, medical-grade chemical peels, and light laser resurfacing. Nothing budged the milia. No matter how aggressive of a treatment, exfoliation was not the answer. That said, we can rule out a case of acne. If it were in the pore, we could extract it. But here's the thing: It's not in the pore; it's under the skin.

Let's start thinking about the root cause of milia and the stratum germinativum, where our cells are born. Our cells have a phospholipid membrane made of water-loving heads and oil-loving tails. It takes plenty of water and essential fatty acids (EFAs) to make up these fresh new cells. EFAs are polyunsaturated

Image 1



fatty acids that humans must ingest because the body requires them for good health, but we cannot synthesize them on our own.

Our cells then work their way up through the layers of the epidermis to shed off in 15–45 days (based on our age). At the stratum granulosum layer (just below the stratum corneum and stratum lucidum), the cells release their contents and flatten out to become the dry, dead skin cells that shed off at the skin's surface. This process is especially important because the contents of the cells create the skin's oil and water bilayers. The bilayer level helps prevent transepidermal water loss (TEWL) by holding water in the skin.

Humans also need those essential fatty acids to make up the oil component at this layer. If our diet does not give us the water and EFAs needed to create healthy cells, and eventually the bilayers, the result presents itself as milia. Image 1 shows unhealthy cells that are not properly aligned and that allow water to evaporate. This also allows foreign invaders to penetrate the skin, leading to sensitivity and redness. After reviewing this image, imagine the thin skin around your eyes that allows TEWL to happen—that's why we tend to see milia around the eyes (although it can happen all over the face).

A Word of Caution

Make sure your clients aren't trying to hack away at their milia at home. Not only is this something that likely won't work, but there's also a risk they could unintentionally cause scabbing, scarring, or infection. And if their milia is near the eyes, this could be particularly dangerous. If they experience an infection, refer them to a physician or dermatologist.

Image 2 shows a diagram of the oil and water bilayers. If someone is missing the water component in the bilayers, the oil will begin to crystallize into small balls under the skin. If we simply add hyaluronic acid, the water continues to evaporate from the skin. Instead, we need ceramides to emulsify the oil and water and hold them together to create this proper balance.

Now that we understand that the root cause of milia is a lack of free water in the skin, we understand we need hyaluronic acid and ceramides to create the balance. So, it also makes sense why we can't scrub off

milia. It's impossible to exfoliate our bilayer system.

Other topical reasons for milia include: (1) heavy eye products that contain too much oil and not enough water and (2) skin that's overly dry due to astringents and no proper hydration after use.

The key to preventing milia is to get enough essential fatty acids and water in our diet and to use gentle exfoliation followed by immediate hydration with a balance of hyaluronic acid and ceramides. Allow two months (or two full cell life cycles) to reset the bilayers. While some milia are permanent, some milia will dissolve and shed off through the natural life cycle of the skin.

Getting to the root cause of milia helps you understand that the answer is water and EFAs. Topically, it's best to use a balance of hyaluronic acid and ceramides. But it's also best to encourage clients to drink plenty of water and eat their EFAs! ☺

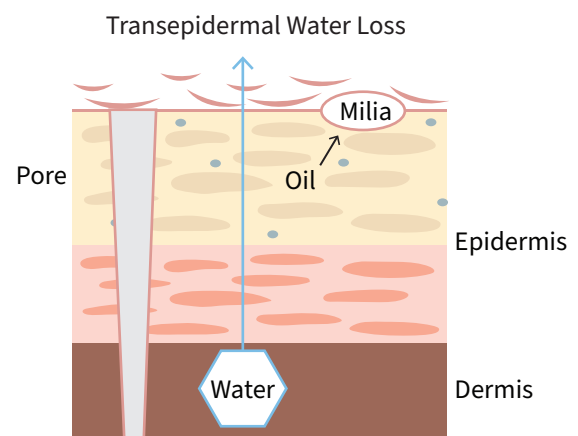


Image 2