

WHAT YOU WON'T HEAR  
FROM DR. GOOGLE

# SKIN DEFENSE

by Rajani Katta MD



Learn the Truth Behind These  
25 Internet Skin "Care" Myths

# ABOUT THE AUTHOR

Dr. Rajani Katta



## About me

- I've been a board-certified dermatologist for over 20 years.
- My advice on skin care and diet has been featured in many magazines and TV appearances.
- I'm an educator, a speaker, and the author of 7 books.
- I was a professor at the Baylor College of Medicine for over 17 years, and now serve on the voluntary clinical faculty of Baylor as well as the University Of Texas at Houston.

## Welcome!

I'm so glad that you're joining me to learn more about preventive dermatology.

Learning the science behind the latest skin trends and myths is so important, especially because we're seeing so much misinformation on the Internet.

Which is a shame, because there are science-backed strategies that CAN be so helpful for your skin health.

In this book, I'm highlighting some of the more common myths and misconceptions that I hear from my patients, along with the real story.

I'm also launching a new podcast called The Dermatology Podcast (fittingly enough!) and my goal is to share with and learn from you. I'd love to hear what topics you're interested in hearing more about.

To suggest topics, please email us at [podcast@kattamd.com](mailto:podcast@kattamd.com).

*To good food and glowing skin,  
Rajani Katta*



# SKIN CARE MYTHS

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# Chapter 1

## Poison Ivy is All Natural

# MYTH 1: ESSENTIAL OILS ARE AN ALL-NATURAL SOLUTION TO MANY SKIN CARE PROBLEMS.

*Fact: Essential oils are one of the most common triggers of allergic skin reactions, especially when used on an impaired skin barrier.*



I've seen essential oils recommended everywhere. Even major online sites are recommending essential oils for their "anti-inflammatory and soothing properties". One magazine said that "essential oils can work wonders on your skin. There are hundreds to choose from." And they go on to say that the benefits range from reducing wrinkles to exfoliating skin to healing scars to clearing up acne.

**Those are some big claims! And they worry me.**

While some essential oils have been helpful in some limited situations, they have to be used very carefully because of their potential for harmful side effects. In fact, essential oils are highly processed chemical compounds, and some can trigger allergic reactions. To make an essential oil, you have to heat the natural plant components. The steam is collected, processed, and the active compounds are then extracted from that steam. (This is why natural essential oils can be so expensive: you need a lot of plant material to get that small amount of compound.)

# MYTH 1: ESSENTIAL OILS ARE AN ALL-NATURAL SOLUTION TO MANY SKIN CARE PROBLEMS.

*Fact: Essential oils are one of the most common triggers of allergic skin reactions, especially when used on an impaired skin barrier.*

As a specialist in allergic reactions of the skin, I can't tell you how frequently I see allergic skin reactions to essential oils. Many of the "fragrances" found in skin care products contain essential oils. If you're applying a product to skin that is damaged in any way, from inflamed skin to just dry cracked skin, you're more likely to develop an allergic reaction to that product.

*Nearly 80 different types of essential oils have caused allergic skin reactions.*

Among this group, the most common triggers include orange oil, tea tree oil, citronella oil, ylang-ylang oil, sandalwood oil, and clove oil.

## The Bottom Line

I love the smell of essential oils, but I tell my patients with sensitive skin to NEVER apply them directly to their skin. That applies for undiluted oils (of course), but it applies even to essential oils that have diluted in a carrier oil.

## MYTH 2: ESSENTIAL OILS ARE "ALL-NATURAL" AND COMPLETELY SAFE.

*Fact: Essential oils have been linked to premature breast development in children as young as 3 years old. It is suspected that in some cases they may act as endocrine-disrupting chemicals.*

The New England Journal of Medicine first reported (12 years ago) the case of 3 boys who developed breast growth coinciding with the use of skin care products that contained lavender oil and tea tree oil. The breast growth (known as gynecomastia) subsided after stopping the use of these products. When the researchers studied components of these essential oils in the laboratory, they found that some were endocrine disrupters. This means that some of these natural chemicals had estrogenic (female hormone) activity and anti-androgenic (anti-male hormone) activity.

In another case, a 3-year-old girl had been regularly bathed with a Calming Baby Bath that contained lavender and chamomile, and then developed breast growth and tenderness.

### **What now?**

There's still a lot we don't know about the long-term effects of using these essential oil compounds on the skin, especially when used on the skin of growing children.

This finally subsided 6 months after stopping the soap.

***A 3-year old girl developed breast growth after being bathed with a lavender baby bath...it finally subsided 6 months after stopping the soap.***

Multiple other reports have now described early breast development in both boys and girls. Over 20 cases were described at a single hospital in Miami. In 16 of these cases, regular exposure to lavender (via soaps, lotions, and essential oils) was suspected to be the case. In all cases, the breast growth subsided within 3-6 months of stopping the lavender products.

## MYTH 3: “NATURAL” DEODORANTS ARE BETTER

*Fact: “Natural” deodorants may trigger allergic skin reactions.*

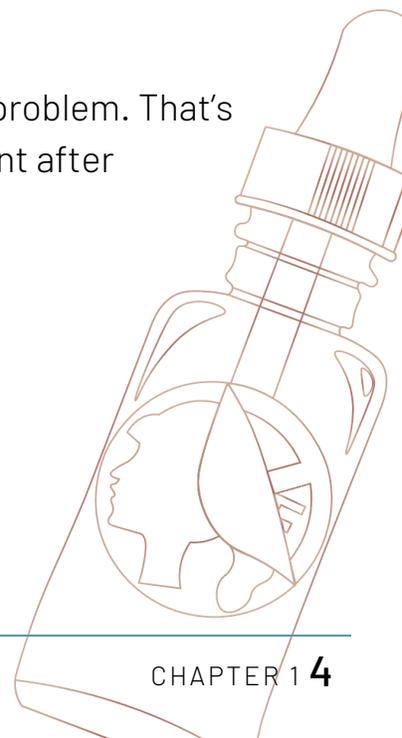
I have been seeing SO many patients with allergic skin reactions to natural deodorants. I don't know when “natural” deodorants became so popular, but they are. I checked out my local Whole Foods, and there was an entire row containing just one brand of deodorant--with 20 different versions of natural fragrances.

I'll admit, they sounded fantastic, but here's the thing: adding fragrance to a deodorant does not make it work any better. You may like that your underarms smell like a tropical garden, but these fragrance additives don't necessarily function any better at removing odor.

*What these added fragrances do is make you far more likely to develop an allergic skin reaction.*

It doesn't matter whether a fragrance is all-natural or synthetic: both types can trigger allergic contact dermatitis. In fact, some types of natural fragrances, such as orange oil, citronella oil, or ylang-ylang oil, are known for being more likely to trigger allergic skin reactions.

For women especially, using fragrances in the underarm area can be a problem. That's because many women shave their underarms, and some apply deodorant after shaving in the shower.



# MYTH 3: “NATURAL” DEODORANTS ARE BETTER

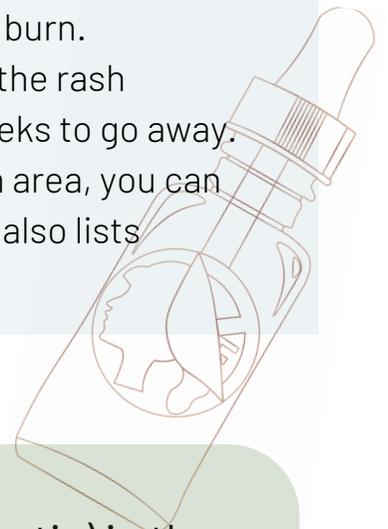
*Fact: “Natural” deodorants may trigger allergic skin reactions.*

## WHY WOULD THAT BE A PROBLEM?

It's because when you're shaving, you create tiny cracks in the skin barrier. Then, when you apply a product on top of those tiny cracks, your immune system is more likely to “see” it. And then your immune system is more likely to perceive it as a threat and start reacting against it. And that's when you develop allergic skin reactions.

Many of my patients haven't suspected their deodorant as the cause of their underarm skin rashes precisely because it IS “all-natural.” Then there's the fact that allergic skin reactions don't occur right away.

It's not as though you put on deodorant and your skin starts to burn. Instead, it takes 2 to 3 days after exposure to a trigger before the rash appears. And once the rash is there, it can take up to eight weeks to go away. For more information about allergic reactions in the underarm area, you can check out my handout ([KattaMD.com/handouts](http://KattaMD.com/handouts)). The handout also lists deodorants that I recommend for those with sensitive skin.



## The Bottom Line

I don't recommend any fragrances (natural or synthetic) in the underarm area, especially if you have a history of sensitive skin or if you shave.

## MYTH 4: OLIVE OIL IS A GOOD EMOLLIENT

*Fact: If you're looking for a natural moisturizing oil, virgin coconut oil is a better choice.*

Olive oil sounds like it should be a great moisturizer. People have been using olive oil in skin care for a long time, and it's still popular in certain countries. However, studies suggest that it may actually be detrimental to the skin barrier.

In a study looking at newborns, the use of olive oil was associated with poor functioning of the skin barrier. In a small study in adults, those who used olive oil twice daily on the forearm actually had more transepidermal water loss than the untreated forearm. (This means that their skin did not hold onto moisture well, indicating that their skin barrier wasn't functioning as well.)

Why would olive oil be harmful to the skin barrier? Laboratory studies have suggested that one of its main components, oleic acid, may be to blame.

### **The Bottom Line:**

If you're looking for a natural moisturizer, avoid olive oil. Coconut oil would be a far better choice.

Coconut oil, on the other hand, contains lauric acid. This natural compound has demonstrated anti-inflammatory effects as well as anti-microbial effects. In studies of premature infants, babies treated with coconut oil had half as much transepidermal water loss.

Olive oil has also gone head to head with coconut oil. And lost.

In a study of close to 50 adults with moderate atopic dermatitis, researchers had them apply either coconut oil or olive oil twice daily for four weeks.

***Coconut oil was the clear winner: this group had more improvement in their skin inflammation, AND had lower rates of harmful bacteria on their skin.***

## MYTH 5: ESSENTIAL OILS AND CITRUS OILS ARE SAFE FOR THE SKIN

*Fact: Certain essential oils and citrus oils can trigger a rash in sunlight.*

I've spoken to the media multiple times about margarita dermatitis. It's a fun name, but a not-so-fun skin rash. In the summer, I see multiple cases here in Houston.

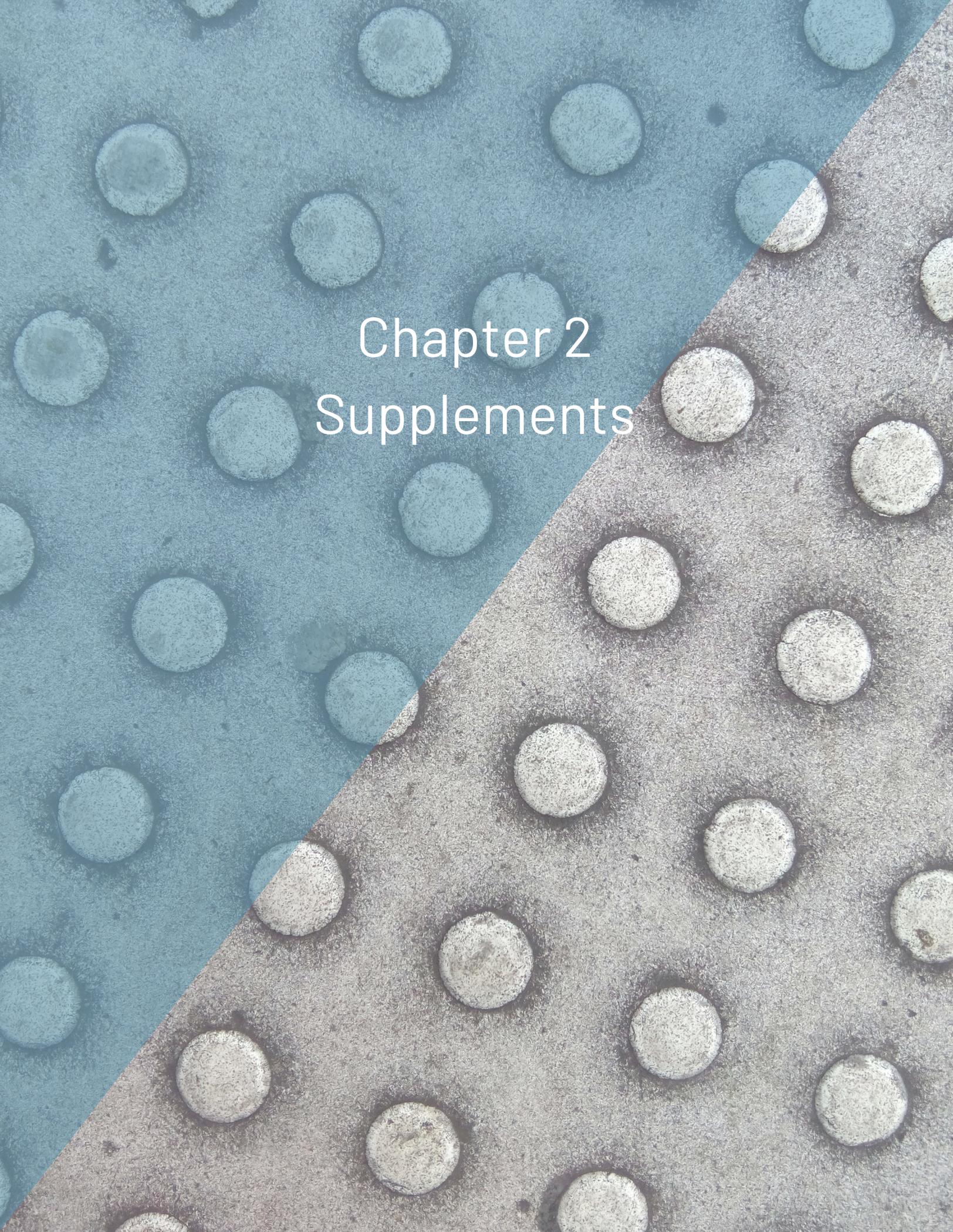
Imagine that you're on the beach, drinking a margarita, and a little bit of lime juice spills on your hand and arm. If you don't manage to rinse it off right away, that combination of lime juice and sun exposure can actually trigger a severe blistering rash. Even worse, that rash can leave a dark mark that lasts for months on your skin.

***This condition is known as phytophotodermatitis. The combination of plant chemicals (phyto) along with sunlight (photo) can trigger a dermatitis (skin inflammation).***

It's not just lime juice either. Other citrus oils can do the same. One notorious trigger is oil of bergamot. This essential oil is derived from bergamot limes, and it used to be very popular in perfumes. (At least until women started noticing rashes that would last for months on their neck, known as berloque dermatitis. Then it became much less popular.) Now I'm starting to see oil of bergamot listed as an ingredient in multiple skin care products again, ranging from rosacea moisturizers to deodorants.

### The Bottom Line

Certain natural oils and juices may trigger a *severe rash in sunlight.*



Chapter 2  
Supplements

## MYTH 6: SUPPLEMENTS ARE SAFE BECAUSE THEY ARE ALL-NATURAL

*Fact: Studies have documented case after case of supplements contaminated with lead, mercury, bacteria, Viagra, and other dangerous substances*



I'm a big believer in natural approaches to anti-inflammatory skin care. But supplements (some of them) are some of the LEAST natural approaches out there. Despite their "natural" halo, supplements are produced in a factory and there's little required oversight. While you would think that they would require FDA approval, there actually is no such thing when it comes to dietary supplements.

In fact, anyone, anywhere can start selling supplements without providing any proof of safety, effectiveness, or even quality. And it's all entirely legal.

And it's become a real issue, from supplements that contain undisclosed pharmaceutical ingredients, to microbial contamination, to contamination with arsenic and lead, to doses more than 1000 x that indicated on the label.

# MYTH 6: SUPPLEMENTS ARE SAFE BECAUSE THEY ARE ALL-NATURAL

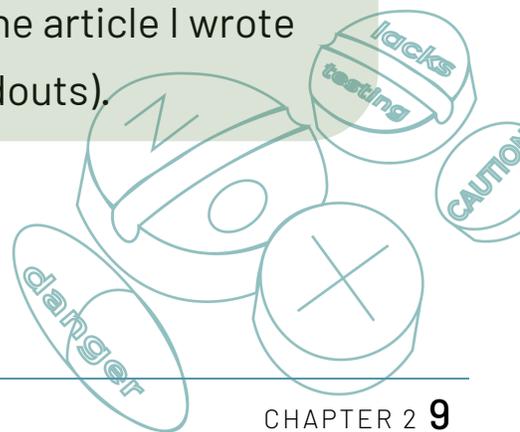
*Fact: Studies have documented case after case of supplements contaminated with lead, mercury, bacteria, Viagra, and other dangerous substances*

This is such a well-known issue that I would never consume a supplement that did not at the very least have a seal of approval indicating that a third-party independent laboratory had tested that supplement for purity of the product and correct dosing. Independent labs providing these verifications include Consumer Lab, US Pharmacopeia, NSF International (National Sanitation Foundation), and UL (Underwriters Laboratories).

One (very important) warning: these seals may tell you about purity and potency, but they don't tell you anything about safety, potential interactions with other medications, or effectiveness. (I'll come back to these other issues later.)

## The Bottom Line

There is no such thing as mandated quality control when it comes to supplements, so it's up to the consumer to look for other signs of quality control, such as independent third-party laboratory testing. If you'd like to learn more about the potential risks of supplements, and the current state of regulatory guidelines, please see the article I wrote for a medical journal ([KattaMD.com/handouts](http://KattaMD.com/handouts)).



# MYTH 7: VITAMINS ARE ALL NATURAL, SO VITAMIN SUPPLEMENTS ARE ALL-NATURAL AND COMPLETELY SAFE

*Fact: Some vitamin supplements may actually INCREASE your risk of cancer.*

Vitamin supplements are becoming increasingly popular, but it's easy to forget that they can be dangerous. Some contain vitamin doses that are 2500% of the recommended daily value. That is NOT natural. And it may not be safe.

***In fact, some vitamin supplements have been linked to an increased risk of cancer.***

One article by CBS News summarized this research well. If you're not deficient, you need to be careful with supplements such as beta-carotene, vitamin E, selenium, vitamin B12, and others.

One well-done study showed that vitamins B6 and B12 could markedly raise the risk of lung cancer in smokers. In this study, the long-term use (for 10 years) of vitamin B6 and B12 supplements (at high doses) increased the risk of lung cancer in men.

It didn't just increase their risk by a little: in some cases, these supplement consumers were 4x as likely to get lung cancer!

And lest you think that high dose supplements like these aren't all that common, know that we found many of these supplements on the shelves at local retailers. Some were marketed for "energy" and this one below, with 2500% of the RDA of vitamin B6, was marketed for hair loss.



Amount / Serving	% Daily Value
Vitamin A (as retinyl palmitate)	5,000 I.U. 100%
Vitamin C (as ascorbic acid, rose hips)	200 mg 333%
Vitamin E (as d-alpha tocopheryl acid succinate)	50 I.U. 167%
Thiamin (vitamin B1) (as thiamine hydrochloride)	30 mg 2,000%
Riboflavin (vitamin B2)	50 mg 2,941%
Niacin (as niacinamide)	50 mg 750%
Vitamin B6 (as pyridoxine hydrochloride)	50 mg 2,500%
Folic Acid	400 mcg 100%
Vitamin B12 (as cyanocobalamin)	50 mcg 833%
Biotin (as d-biotin)	2,000 mcg 667%
Pantothenic Acid (as calcium d-pantothenate)	50 mg 500%
Calcium (as calcium carbonate, calcium d-pantothenate)†	200 mg 20%
Iodine (as potassium iodide)†	225 mcg 150%
Zinc (as zinc amino acid chelate [rice protein based])†	15 mg 100%
Selenium (as selenium rice chelate [rice protein based])†	50 mcg 71%
Copper (as copper rice chelate [rice protein based])†	1 mg 50%
MCA (methylsulfonylmethane)	600 mg
L-Methionine (free form)	250 mg
Horsetail Extract (stem)	100 mg
L-Cysteine (as L-cysteine hydrochloride)	100 mg
Inositol	50 mg
MSA (para-aminobenzoic acid)	50 mg
Choline (from 50 mg choline bitartrate)	21 mg

## The Bottom Line

The dose makes all the difference, and high doses of even natural vitamins may have some serious risks.

## MYTH 8: SINCE ANTIOXIDANTS ARE SO HELPFUL IN PROTECTING THE SKIN FROM SUN DAMAGE, ANTIOXIDANT SUPPLEMENTS MAY BE HELPFUL IN SKIN CANCER PREVENTION

*Fact: High-dose antioxidant supplements such as vitamin C, vitamin E, beta-carotene, and selenium have NOT been shown to be helpful in skin cancer prevention. In fact, some studies have indicated a HIGHER risk of skin cancer with these supplements.*

Researchers were really excited about a particular “skin cancer prevention” supplement. The ingredients included vitamin C, vitamin E, beta-carotene, selenium, and zinc. Each of these ingredients worked great in laboratory and animal studies at cancer prevention. And all are found naturally in certain foods.

Researchers hypothesized that using them at higher doses would help them work even better. Unfortunately, the study had to be stopped early.

*After an average of 7.5 years, women who took the supplement pill every day actually had a higher rate of skin cancer than the women who weren't taking any supplement at all.*

Why in the world would this “natural” supplement be so harmful?

It's because of the Goldilocks Principle. We now know that when it comes to vitamins, minerals, and other nutrients, the guiding principle shouldn't be that “more is better”. It should be “the right dose is better.” In other words, not too low (that's what we call deficiency). And not too high (which may lead to toxicity).



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This issue first showed up on my radar when I wrote an article for a medical journal on antioxidants and skin cancer. Basically, the correct dose of antioxidants appears to be the dose found in nature. In other words, the dose you get from whole foods (such as fruits, vegetables, spices, and tea) seems to be ideal.

*high-doses of antioxidants may actually increase the risk of cancer*

When you go too high, as with some antioxidant supplements, those same nutrients can actually become "pro-oxidant" and start to cause MORE damage.

### The Bottom Line

Nutrients need to be consumed at the right dose. While consuming a diet rich in fruits and vegetables may help prevent cancer, taking high-dose antioxidant supplements may actually increase the risk of cancer.

## MYTH 9: PROBIOTIC SUPPLEMENTS ARE SAFE AND THEY ARE AN ALL-NATURAL APPROACH TO BETTER GUT HEALTH

*Fact: In some people, probiotic supplements may increase the risk of death.*

The most all-natural approach to better gut health starts with the food that you eat, especially prebiotic foods (which are naturally rich in fiber). Unfortunately, much of the internet advice about gut health seems to focus on the use of probiotic supplements. When it comes to probiotics, though, it is definitely buyer beware. The benefits of probiotic supplements have not been proven for many health conditions, and for some there's far more marketing than science. There's also the risk of serious side effects in some cases. An article from the New York Times has a great summary of some of these issues.

### *"Probiotics have to be approached with caution"*

First of all, the supplement industry is unregulated, which means anybody anywhere can start selling probiotic supplements without demonstrating safety.

Second, probiotics have to be approached with caution. Probiotics are actually live microbes. In some cases, consuming these live microbes have been linked to an increased risk of death, such as in premature infants or in those with medical conditions such as pancreatitis. (If you'd like to learn more, there are some great videos on this topic from NutritionFacts.org)

### **The Bottom Line:**

Research is ongoing, as some probiotic supplements have shown promise in the treatment of some conditions. But before you reach for a bottle off the shelf, understand that there are a lot of different types of probiotics, and in some people they carry serious risks.

## MYTH 10: SUPPLEMENT LABELS ARE REQUIRED TO LIST ANY RELEVANT FDA WARNINGS

*Fact: There is no such requirement. For example, the FDA issued a major warning that biotin may interfere with lab tests for heart attacks, thyroid function, and other tests. Our investigation, though, found that hardly any of the biotin-containing supplements on store shelves listed this on their label.*

### *Why would that be a problem?*

Biotin has become a very popular ingredient in skin, hair, and nail supplements, but the FDA has issued an important warning.

The doses of biotin used in many supplements have been shown to interfere with laboratory tests. Some of these tests are used in the ER, such as a test used to diagnose heart attacks. Others are used in your doctor's office, such as to diagnose thyroid problems. If you're taking biotin when you get your lab tests done, you could end up with serious errors in your lab tests.

And although biotin has become a popular ingredient in the big business of beauty supplements, it's important

to know that it's probably not helpful for most people.

Supplements may help those with biotin deficiency, but biotin deficiency itself is quite rare. In terms of skin, hair, and nails, there's hardly any published research on the use of biotin supplements for hair loss in those with normal biotin levels.

### *Caution*

If you decide to take a skin, hair, and nail supplement that contains biotin (despite the limited evidence for benefit and the rarity of biotin deficiency), make sure your doctor knows about it (and the dose you're taking) before any lab testing.

# Chapter 3

## Internet Skin Care Advice



## MYTH 11: AMAZON IS A GREAT PLACE TO FIND SKIN CARE

*Fact: Amazon is not a store. It is a flea market. I (almost) never buy my skin care from Amazon or any other flea market retailers.*

If you haven't had a chance to read the New York Times article on Amazon yet, it's definitely eye-opening. It's about the rise of counterfeit and damaged goods being sold on Amazon, and although the article is focused on books, it has a great discussion of Amazon's policies.

Another article from Allure reported on the rise of counterfeit makeup and how it's reaching sellers like Amazon. This quote sums it up nicely: "Every dermatologist is seeing counterfeit products," says Farris, who tells me that even her savviest patients fall prey... "It's almost impossible to tell you're getting a fake. The bottles are the same; the writing is the same." ... Counterfeiters have infiltrated Amazon."

### *"Counterfeiters have infiltrated Amazon"*

Why is Amazon particularly suspect? From the New York Times article, "Amazon takes a hands-off approach to what goes on in its bookstore, never checking the authenticity, much less the quality, of what it sells. It does not oversee the sellers who have flocked to its site in any organized way. That has resulted in a kind of lawlessness."

### *The Bottom Line:*

There's more, but the bottom line is that I rarely trust any online retailers who utilize third-party resellers, whether that's Amazon, Sears.com, Ebay.com, or others. [The only exception I make is for manufacturers who are the only authorized sellers.]

## MYTH 12: CHARCOAL SKIN CARE PRODUCTS HELP DRAW OUT OIL AND IMPURITIES, DETOXIFYING YOUR SKIN

*Fact: Charcoal works through a process called adsorption, which is much weaker than magnetic forces. It doesn't "draw out oil and impurities" from your skin. It mainly just works as a mild physical exfoliant.*

Have you seen the ads for charcoal cleansers and masks? They sound amazing. Many claim that activated charcoal works like a magnet, "pulling up oil and toxins from your skin and from deep inside your pores."

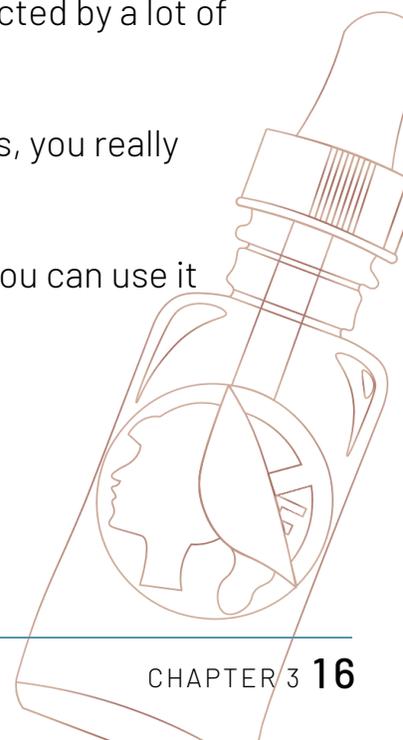
I doubt it. If you look at the science behind how activated charcoal actually works, *it doesn't seem likely that a charcoal skin cleanser could do that.*

That's because activated charcoal works by a process called *adsorption*. This is defined as the "phenomenon in which a solid substance attaches other substances to its surface without covalent binding."

In other words, liquid or gas molecules become attached to the solid surface of the activated charcoal. How do they become attached? Not through magnetism, but rather by weak intermolecular forces. And these forces can be impacted by a lot of different factors, including distance and *contact time*.

Because of these weak forces, and the impact of these other factors, you really can't claim that adsorption "works like a magnet."

The one thing that charcoal CAN do is abrade the skin. That means you can use it as a mild physical exfoliant.



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But would I choose it over other exfoliating ingredients? Probably not. If you're looking for exfoliation, you can use physical exfoliation (like a gentle scrub) or chemical exfoliants (such as glycolic acid and salicylic acid). We know, from many years of experience, that glycolic acid and salicylic acid are very effective exfoliating ingredients. We also know how different concentrations of these ingredients are likely to affect your skin. Because of that long experience with these chemicals, I'd be more likely to reach for glycolic acid or salicylic acid if I was looking for an effective exfoliant.

### The Bottom Line

There's no evidence that charcoal is actually able to draw out oil and impurities from your skin. It seems to work mainly as a physical exfoliant. (If you're looking for exfoliation, though, there are plenty of other options.)

For more on charcoal, please see the blog post I wrote on the subject.

## MYTH 13: VITAMIN C SERUMS HELP ERASE WRINKLES

*Fact: There are far better over-the-counter and prescription skin care ingredients that work to diminish the appearance of wrinkles. (Although Vitamin C may be helpful in other ways.)*

Vitamin C is an especially popular skin care ingredient right now. Research studies have found that it can help your skin in some ways, but also that it's probably over-hyped in other ways.

### Where does Vitamin C excel?

- It provides an extra layer of protection against free radical damage.
- It boosts the protective effects of sunscreen.
- It helps prevent freckles and dark spots by running interference with melanin-producing cells and the enzymes that produce melanin.

### Where is the hype stronger than the science?

- We just don't have strong evidence that topical vitamin C actually firms up collagen in those who consume a healthy diet.
- Topical vitamin C is not the best choice for erasing fine lines and wrinkles.
- Topical vitamin C isn't the best choice for erasing dark spots.

### Vitamin C Has Long Been Known To Be Critical For Healthy Skin

We've actually known for centuries about the importance of vitamin C for skin health. Centuries ago, sailors were at high risk for scurvy, a disease caused by a deficiency of vitamin C in their diet. Without enough vitamin C, sailors would develop a whole slew of problems, including bleeding gums and wounds that just wouldn't heal. That's because vitamin C is a critical component in the production and maintenance of collagen.

That's one of the reasons that researchers have looked so closely at vitamin C as an anti-aging ingredient in skin care formulations.

# VITAMIN C: BEFORE REACHING FOR SKIN CREAM, MAKE SURE YOU ARE GETTING ENOUGH VITAMIN C IN YOUR DIET

Your skin is under siege every minute of every day, from UV radiation, smoke, and pollution, to other forces. These forces all act to increase the production of free radicals.

*Free radicals are molecules that contain an unpaired electron, and they're very dangerous to the lipids, proteins, and DNA in your skin.*

Your skin, thankfully, has wonderful systems in place to fight these free radicals. That's why your skin contains plenty of antioxidants, including vitamins C and E.

Of course, these antioxidants are constantly being used up. But that's what mealtime is for: the foods that you eat provide a consistent supply of these important chemicals.

The antioxidants found naturally in certain foods make their way from your digestive system, to your blood supply, and from there to the tiny blood vessels that supply your skin. They then diffuse into the epidermis and dermis, where they protect your skin from free radicals. That's the "inside-out" approach to skin protection.

Research has documented that an extra dose of antioxidants from your skin care products can also help replenish your skin's supply.

# HYPE ALERT: ANY STUDY OF TOPICAL VITAMIN C AND ITS EFFECTS ON COLLAGEN NEEDS TO LOOK AT DIETARY INTAKE

Which brings us to one of the major unanswered questions with vitamin C in skin care. If you're getting plenty of vitamin C in your diet, does using it topically actually increase the vitamin C content in your skin? Good question, and we still don't know for sure.

On the other hand, if you're NOT getting enough vitamin C from your foods, then that extra dose from your skin care may actually help. And this may be where all the hype about vitamin C originated.

In one study, topical vitamin C was used on the forearm, and then levels of a marker of collagen production were measured via skin biopsies. While the topical vitamin C did seem to increase the production of skin collagen, there was a major caveat.

This increased collagen production was seen much more in the women who consumed the lowest levels of vitamin C. In the women who were already eating plenty of vitamin C-rich foods, that extra dose from a skin care product just didn't make that much of a difference.

## The Bottom Line

The first step in skin care starts from the inside: you need to ensure a diet that's naturally rich in antioxidants. That's the foundation of glowing, radiant skin.

Vitamin C products in your skin care products may add some extra benefits, but they won't work to erase wrinkles. To learn more about the science behind vitamin C in skin care, please see the blog post that I wrote on the subject.

# MYTH 14: YOU NEED TO START BOTOX IN YOUR 20S TO PREVENT WRINKLES

*Fact: Toxins like Botox have a very limited range of wrinkle prevention.*

I've had several patients in their 20s ask me if they should start getting Botox injections. It turns out that this is one of those popular "*wrinkle prevention*" suggestions on the internet.

Would I recommend it though? For a few individuals, maybe. But it definitely doesn't make my top 10 list of wrinkle prevention strategies.

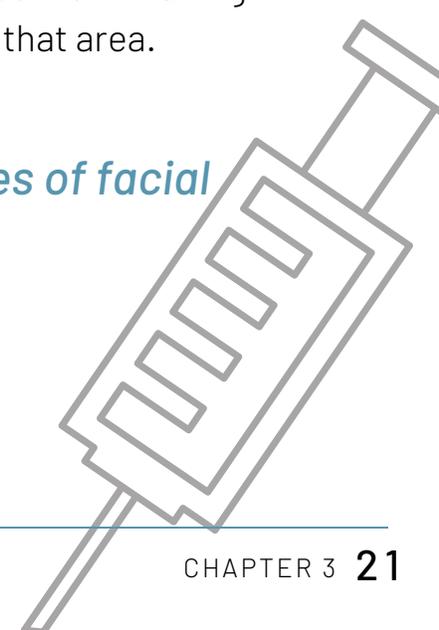
Here's why:

When injected into a specific muscle group, Botox (the brand name for botulinum toxin) paralyzes those muscles. It's commonly used in the glabella region, which is the area on your forehead between your eyebrows. A lot of people, when they frown, get two vertical lines in that one area. Those "frown lines", for some people, can contribute to an angry or older look.

And it turns out that your mother was right—if you keep making that face, it will freeze like that. In other words, if you keep making an expression over and over again, then you will eventually develop deep wrinkles in that area.

Botox works because it paralyzes those muscles. Which keeps you from making that expression. Which keeps you from developing deep wrinkles in that area. Can you guess where I'm going with this?

*Botox doesn't do anything for your other muscles of facial expression.*



# MYTH 14: YOU NEED TO START BOTOX IN YOUR 20S TO PREVENT WRINKLES

*Fact: Toxins like Botox have a very limited range of wrinkle prevention.*

So, if you're only worried about frown lines on your glabella, then you're set. But Botox in your forehead isn't going to do anything for your crow's feet, or your marionette lines, or your smile lines.

Botox is also not going to help you with those fine lines and wrinkles that develop elsewhere on your face, and it certainly won't prevent sagging skin and loss of elasticity.

That's why wrinkle prevention in your 20s should always start with far more powerful tools.

One of my favorites? Big sunglasses. A lot of my friends in their 40s are dealing with crow's feet, which are the fine lines and wrinkles that develop at the edges of your eyes when you smile. Big sunglasses keep you from squinting, which means you're not using those particular muscles (which means *wrinkle prevention*). Those big sunglasses also provide protection against the damaging effects of UV radiation, which is especially harmful to the delicate skin around your eyes.

My other favorites include facial sunblock, wide-brimmed hats, and dietary strategies that help protect your collagen.

## **The Bottom Line:**

Toxins only paralyze the muscles in which they're injected, which means they have a very limited range of wrinkle prevention.

# MYTH 15: 10-STEP BEAUTY ROUTINES WILL GIVE YOU BEAUTIFUL GLOWING SKIN

*Fact: For some people, 10-step beauty routines will give them raw, red, irritated skin. And for some people, that raw skin can later lead to allergic skin reactions.*

I specialize in the treatment of allergic skin reactions. And I can't tell you how many women I've treated over the years with allergic reactions to their makeup. And they all have the same question: *why?!*

Here's the thing about allergic skin reactions: you're not born with them. They develop over time, and they can develop at any age. I've had patients develop allergic skin reactions for the very first time in their 80s.

And it doesn't have to be a new product, either. You can develop an allergy to a product that you have been using (in some cases) for decades.

While we can't always pinpoint the reason why, we do know that there's one major risk factor. And that is an impaired skin barrier.

***"Any product you put on top of an impaired skin barrier can result in activation of the immune system and, ultimately, an allergic reaction."***

When you're dealing with an impaired skin barrier, any product you put on top of it is more likely to be exposed to your immune system. When that happens, your immune system may start to consider that product as a threat. That can result in activation of the immune system. And, ultimately, an allergic reaction and skin rash.

Why would you develop an impaired skin barrier? For some people, they have a genetic tendency to a weaker skin barrier.

# MYTH 15: 10-STEP BEAUTY ROUTINES WILL GIVE YOU BEAUTIFUL GLOWING SKIN

*Fact: For some people, 10-step beauty routines will give them raw, red, irritated skin. And for some people, that raw skin can later lead to allergic skin reactions.*

For others, though, their skin care regimen is at fault. Products such as harsh soaps or alcohol-based toners can start to strip away the skin's natural oils and its protective skin barrier. Chemical exfoliants and physical scrubs can do the same. And 10-step beauty routines, which may layer on ingredients such as alpha-hydroxy acids, retinoids, salicylic acid, vitamin C, and other compounds, are notorious culprits.

In fact, even the proponents of 10-step Korean beauty routines are starting to pull back, as outlined in an article in Allure magazine.

## What does this mean for me?

More is not necessarily better. Rather, the ideal skin care regimen is all about balance and personalization. The products you choose should be tailored to your own skin type and your own skin care concerns. For more on how to create your own regimen, please see my blog posts that outline my own approach.

*"I became a firm believer that skin is really smart. It does know how to function by itself, and skin care should be there to support skin's natural functionality, not to overtake what skin could do."*

*-Liah Yoo, NYC-based YouTube star and founder of Korean skin care brand KraveBeauty*

The background of the slide is a photograph of a rock face, possibly a canyon wall, showing various geological textures and colors. The colors transition from a cool blue-grey on the left to a warm orange-red on the right. The rock surface is uneven, with cracks and different mineral deposits visible.

# Chapter 4

## The Price of Beauty

# MYTH 16: MICRONEEDLING IS A SIMPLE AND SAFE PROCEDURE

*Fact: As with any procedure involving needles, there are always risks, including the risk of infection.*

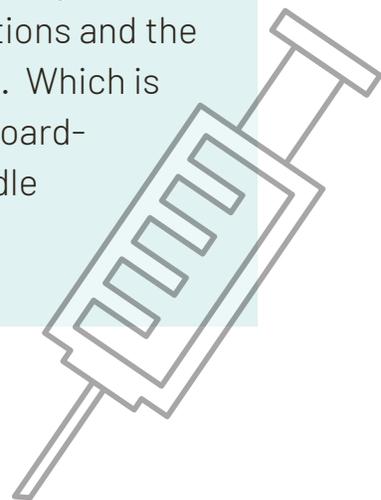
Have you seen the report of HIV transmitted by microneedling during a salon session?

Microneedling is gaining in popularity, and it's being performed by top aesthetic dermatologists all the way down to local salons.

While it has shown some impressive benefits (more on that later), this procedure involves multiple tiny needles piercing the skin. That means that there are real potential risks. In this case, two individuals contracted HIV following a microneedling procedure at a salon. In another case, a patient used a home microneedling device over a viral skin infection, and then used it on her face, in the process spreading the virus to her face and causing a rash.

## TAKE ACTION

Whether it's microneedling, tattooing, or piercing, make sure you (or your child)(or your parent) understands the risks of blood-borne infections and the need for meticulous adherence to all of the guidelines on sterility. Which is why, if I were to have this done myself, I'll be consulting with my board-certified dermatology colleague who uses sterile disposable needle cartridges.



## MYTH 17: HOME BEAUTY DEVICES ARE SAFE

*Fact: You need to treat home beauty devices with the same care and caution as any device used in a salon.*

Home microneedling devices are starting to surge in popularity. But these devices can damage the skin barrier, and they need to be used carefully.

Any time you damage the skin barrier, your skin is more prone to developing irritation. It's also more prone to developing new allergic reactions to any products that are used on top of that damaged skin barrier.

And it's not just irritation or allergies. Your skin is also more vulnerable to infections. In one reported case, a patient used a home microneedling device over a viral skin infection, and then used the device all over her face. That device spread the virus to her face and caused a skin infection and severe rash.

*Even when they're advertised for home use, home beauty devices need to be used with caution.*

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## MYTH 18: FILLERS ARE USED SO COMMONLY THAT GETTING THEM DONE AT MY LOCAL MEDI-SPA SHOULD BE JUST FINE

*Fact: The potential complications from filler injections can include severe side effects such as skin necrosis, permanent scarring, and even blindness. That's why it's so important to ask the right questions before letting someone approach your face with a syringe full of filler.*

# I'm Turning Purple!

The headline of this CBS News report is certainly eye-catching, but it's a real risk. In fact, it's something that my dermatologist friends see on a regular basis: complications from fillers. Complications from fillers are a real concern. That's why those who are properly trained in the procedure are always aware of facial anatomy and proper injection technique.

And they are especially trained on what to do when a complication arises. Because anytime you're dealing with a medical procedure such as filler injections, there's always a risk of side effects and complications, even in the most highly trained hands.

In this report, "Sherry" had Botox and filler done, and within minutes she knew something was wrong. (You really need to see these photos—she was actually turning purple.) It turned out that the filler had been injected into a blood vessel, but the clinic's medical director was 40 minutes away. And that was a huge problem.

## She's not a rare case, unfortunately...

My dermatologist friends will sometimes get phone calls from frantic patients. They've developed a complication from a filler, and the injector didn't know how to handle it. Some of these patients were told that all they could do was to "see your dermatologist."

## CAUTION

Injections of fillers are medical procedures, and they carry real, tangible risks. As with any medical procedure, make sure you know exactly who is doing the injecting, how they were trained, and all of the potential risks and side effects. Finally, make sure you ask exactly how they handle any of those potential risks if they occur.

If a filler is ever accidentally injected into a blood vessel, the treatment involves immediately injecting an important medicine: a compound that immediately starts dissolving that filler. Every minute counts, because the damage caused by the filler can create permanent skin damage. Improper filler injections have even resulted in stroke and blindness.

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*...the filler had been injected into a blood vessel...*

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In Sherry's case, it took hours before the doctor finally arrived with the skin-saving medicine. Although Sherry ultimately recovered, she said that she was left with damaged blood vessels and skin discoloration.

## MYTH 19: GEL NAIL POLISH AND DIP POWDER ARE SAFER THAN ACRYLIC NAILS

*Fact: All of these fake nails are based on the same chemical compounds (acrylates), and all have the potential to cause nail damage or allergic reactions*

I didn't realize how popular fake nails had become until I started asking around, and then realized that everybody from my teenage daughter to my girlfriends were using them.

Of course, nobody calls them fake nails anymore. But it's important to realize that shellac nails, gel nails, dip powder, solar nails, acrylic nails, and others are *all based on the same underlying technology*: the use of acrylate chemicals.

These chemicals started out, and are still used, in dentistry. They're used as dental adhesives, to bond teeth, and to make crowns. They spread from dentistry to the nail industry, and became popular in acrylic nails. These same chemicals are now used in shellac nails, gel nail polish and in dip powder nails.

And that's where some of the problems may arise. A great article in Vox described in detail the process of how these chemicals are applied and how they are removed. These acrylate chemicals come in different forms (liquid, gel, powder) but they all have one property in common: the ability to harden (or "cure") into hard plastic.

*...applying and removing nails can cause serious damage to your nail plate...*

The process of applying the nails, and then the process of removing the nails, can in some cases cause serious damage to your nail plate. (Your nails may need to be buffed or filed before application. And while some types of fake nails can be soaked off with acetone, others, such as certain gel nails, need to be drilled off.)

## MYTH 19: GEL NAIL POLISH AND DIP POWDER ARE SAFER THAN ACRYLIC NAILS

*Fact: All of these fake nails are based on the same chemical compounds (acrylates), and all have the potential to cause nail damage or allergic reactions*

Another problem that I see in my clinic is women who have developed allergic reactions to the acrylate chemicals used in these fake nails, whether from gel, shellac, acrylic, or dip nails. This is a real problem, because once you're allergic to acrylates, you have to be careful with all potential acrylate exposures. I advise my allergic patients that they can't get any more fake nails of any type due to the risk of red, blistering skin rashes, and even the risk of permanent nail damage. It's also a problem because these chemicals are used so widely in dentistry that it can be a real challenge the next time you have to have a filling or a crown done.

### TAKE ACTION

Before you have any nail procedures done, make sure you talk to your nail technician and ask questions.

*"Ask about their filing techniques, how they plan to get the things off when you don't want them anymore, which products they're most comfortable using, and how they clean their tools."*

*-Cat Ferguson, Vox*

## MYTH 20: “NATURAL” AMMONIA-FREE HAIR DYES ARE BETTER AND SAFER IF YOU HAVE SENSITIVE SKIN OR GET RASHES FROM HAIR DYES

*Fact: The vast majority of allergic reactions to hair dye are due to a chemical called para-phenylenediamine (PPDA). And many “natural” and ammonia-free hair dyes contain this chemical.*

I am seeing an epidemic of allergic reactions to hair dye. It’s probably because we’re being exposed to the chemicals in hair dye more than ever before. Some of my patients have been coloring their hair for 40 years or more.

Many of my patients have been referred to me after they develop rashes on their hairline and face, in some cases after coloring their hair. Some, suspecting hair dye, have turned to ammonia-free hair dyes or “natural” hair dyes.

The ammonia-free part may help a little bit, because ammonia is irritating. But ammonia is not the trigger of the allergic reactions. And the “natural” part doesn’t help at all, because that word isn’t regulated at all.

In fact, many of the natural hair dyes that I see on the store shelves contain the same chemical that’s the main trigger for allergic reactions:

***para-phenylenediamine (PPDA).***

If you suspect an allergy to hair dye, you should avoid any dyes that contain this chemical. If you’d like some hair dye options that are free of PPDA, you can see my list ([KattaMD.com/handouts](http://KattaMD.com/handouts)).

If you do suspect an allergy, please be really, really careful. If you’re allergic to PPDA, and you keep coloring your hair, know that *these reactions tend to worsen over time*. Some patients have even ended up in the hospital due to the severity of their hair dye allergy.

### The Bottom Line

If you suspect you might be allergic to hair dye, don’t fall for the “natural” label or the ammonia-free label and think you’ll be OK.

The image features six slices of oranges arranged on a light green background. The slices are positioned at the top left, top right, middle left, middle right, bottom left, and bottom right. The central text is white and reads "Chapter 5" on the first line and "Skin and Diet" on the second line.

Chapter 5  
Skin and Diet

## MYTH 21: COLLAGEN SUPPLEMENTS HAVE BEEN PROVEN TO PROMOTE YOUNGER SKIN

*Fact: The research on collagen supplements is minimal, so buyer (and wallet) beware.*

Walk into any Whole Foods, Target, or even just your local grocery store, and lately it seems as though they're all selling collagen supplements.

I don't know when collagen supplements first began their meteoric rise, but it seems as though everyone on the Internet is now selling or promoting them.

And that shocks me, because...

*...the science behind them is so minimal.*

There was a recent medical journal article on all of the human studies that had been done on collagen supplements in dermatology. There was a grand total of just **11 studies**. And they were all different. They used different types of collagen, at different doses, for different skin problems. And they used them for anywhere from four weeks to six months. And also concerning: **a number of them were funded by the manufacturer of the collagen being studied.**

Safety is a concern also. On the one hand, I think it's a wonderful business model to take cow skin and bones, pig skin and bones, chicken skin and bones, and fish skin and bones, and grind them up and put them in a bottle and sell them for a lot of money. (One of the supplements we investigated at Whole Foods actually listed all four animal sources of collagen in one product.) Great business model!

On the other hand, that also makes me nervous. I've looked at a lot of these bottles, and some of them don't have ANY information on where their collagen is coming from. The supplement industry is notoriously unregulated, and I don't know what kind of quality control these particular supplements are using. Are they really making sure they're only using low-mercury fish? Some manufacturers may test their final product, but not all of them do.

# MYTH 21: COLLAGEN SUPPLEMENTS HAVE BEEN PROVEN TO PROMOTE YOUNGER SKIN

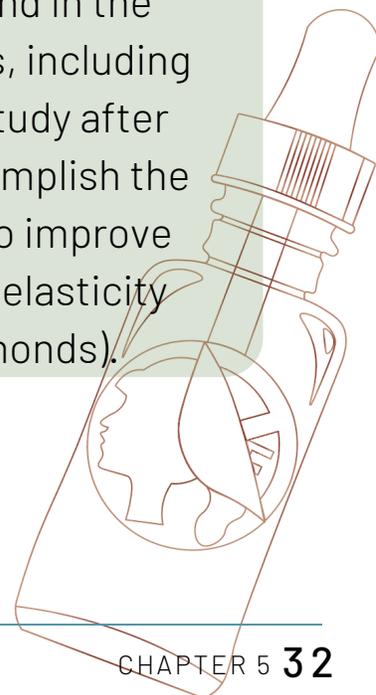
*Fact: The research on collagen supplements is minimal, so buyer (and wallet) beware.*

All of which might be worth it anyway, IF collagen supplements provided amazing skin results. But here's the thing: in looking at the studies, I haven't found any results that blow me away, even in the studies funded by the manufacturer.

Yes, some have reported a decrease in transepidermal water loss. But that's also been reported with healthy fats from foods. Some have reported improved elasticity. But that's been reported with olive oil. Some have reported an improvement in wrinkle depth and volume. But that's been reported with almonds.

## The Bottom Line

I don't take collagen supplements myself. One, the reported results just aren't that impressive. Two, I am risk-averse when it comes to cosmetic products with unproven claims, and I still have questions about the long-term safety and quality control of the collagen itself. (Do I really know that any cow brains or nervous tissue found in the final product are completely free of all infectious organisms, including those that cause mad cow disease?) And three, I've seen study after study demonstrating that whole food approaches can accomplish the same reported outcomes: whole foods have been shown to improve transepidermal water loss (flaxseed oil, fermented foods), elasticity (olive oil), and even wrinkle depth and volume (hello, almonds).



## MYTH 22: THE RIGHT BLOOD TEST CAN SHOW YOU WHETHER FOOD ALLERGIES ARE CAUSING YOUR ECZEMA.

*Fact: There are different types of food allergies, which means that there is NO single blood test or skin test that can be used to make a diagnosis.*

**Food allergy may be a trigger in some patients with eczema. It is rarely the only trigger.**

Can food allergies make eczema worse? The short answer is yes, but it's rare for food allergies to be the ONLY cause of eczema. What's more common is that people with eczema are more prone to developing allergies of all types. In some cases, but certainly not all, food allergies may make their skin condition worse.

*At this time, we believe that there are three main types of food allergies that may cause or worsen eczema. There are other types of food allergies as well. Some of these result in "immediate" reactions, while others result in delayed reactions:*

- When most people think about food allergy, they think of peanut allergy. You eat a peanut, and within minutes your lips start to swell. You may even have problems breathing. This type of reaction is known as anaphylaxis. Anaphylaxis is also known as immediate type, IgE-mediated allergy. It is triggered by certain antibodies in your body.
- There is also a type of food allergy known as a delayed eczematous reaction. After eating a particular food, a patient experiences a flare of their eczema. This flare may take up to 48 hours to appear.
- Another type of food allergy is systemic contact dermatitis. This reaction is caused by T cells, and may occur anywhere from 6 to 72 hours (or even longer) after eating a trigger food. One example occurs in people allergic to fragrance additives in their skin care products. Some of these patients will react to foods such as tomatoes, citrus, and cinnamon.
- There are other types of food allergies as well.

## MYTH 22: THE RIGHT BLOOD TEST CAN SHOW YOU WHETHER FOOD ALLERGIES ARE CAUSING YOUR ECZEMA.

*Fact: There are different types of food allergies, which means that there is NO single blood test or skin test that can be used to make a diagnosis.*

**You will need to discuss with your doctor the best type of test for your suspected food allergies.**

There are several different types of food allergies, which means that there are several different tests. It also means that blood tests, skin prick tests, or patch tests may not be enough. Sometimes a food challenge in a doctor's office will be recommended.

**Skin prick testing and blood testing must be interpreted carefully.**

If your blood tests are positive, they must be interpreted carefully. You still may not have an actual food allergy. (Food allergy testing only tests for immune system sensitivity to foods. A lot of people can still eat foods that their immune system recognizes, and never have an actual allergic reaction.)

We call this a false positive test, and that's why it's so important to speak with your physician about what your allergy testing means for you.

Regardless of what type of allergy I'm suspecting, I always recommend starting with a food diary. And remember, some types of food allergies may take up to 48 hours before they start to affect the skin.

### The Bottom Line

Testing for food allergies can be very complicated. It depends on what kind of food allergy you're looking for, and what immune system pathway is involved. My handout provides more information on how we approach a possible food allergy, and what tests may be useful.

## MYTH 23: IF YOU HAVE INFLAMED SKIN FROM ECZEMA, THEN YOU NEED PROBIOTIC SUPPLEMENTS

*Fact: If you have inflamed skin, then you need good microbes living in your gut. We just don't know if probiotic supplements will help with that in every individual. We DO know that prebiotic and probiotic foods are likely to help.*

Study after study has found that the microbes living in your gut play a big role in your skin health and in your overall health. From obesity to anxiety, research has demonstrated that...

*...having plenty of good microbes living in your gut has some impressive benefits.*

How do you encourage the growth of more good gut microbes? The most important factor is feeding them the right foods. (They eat what you eat.) That means prebiotic foods such as plenty of [vegetables](#). Probiotic foods such as cultured and fermented foods may also be beneficial.

Unfortunately, that message has gotten lost.

***Many internet articles don't talk about good gut microbes.***

Instead, they talk about how you should "start taking probiotic supplements". But it's not quite that easy.

## MYTH 23: IF YOU HAVE INFLAMED SKIN FROM ECZEMA, THEN YOU NEED PROBIOTIC SUPPLEMENTS

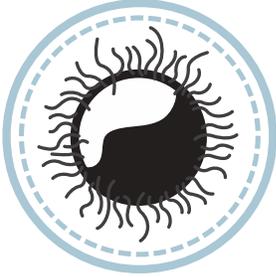
*Fact: If you have inflamed skin, then you need good microbes living in your gut. We just don't if probiotic supplements will help with that in every individual. We DO know that prebiotic and probiotic foods are likely to help.*

I'm waiting for the results of more studies, because probiotic supplements do seem promising in some cases. Specifically, certain types of microbes given for the right medical conditions may have some benefits. When it comes to atopic dermatitis, for example, there have been studies suggesting that synbiotics (which are a combination of probiotic supplements and prebiotic supplements) may help in the treatment of atopic dermatitis in adults and children over the age of one year. But here's the thing: the studies that have been done have shown that some people responded really well, and others didn't respond at all. And to make it more complicated, the studies to date have used different types of microbes, at different doses, and for different durations.

### The Bottom Line

Having good microbes living in your gut can have many skin benefits, which is why I focus on prebiotic foods (lots of vegetables) and probiotic foods (fermented and cultured foods). I'm also looking out for the latest research on probiotic supplements. But at this time there are still so many questions in my mind that I don't recommend a particular probiotic supplement.

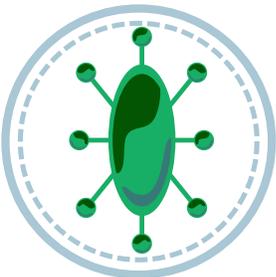
# HOW PROBIOTICS AND "GOOD" GUT MICROBES ACT TO HELP THE SKIN



Probiotics help to counter the "bad" bacteria in our guts [also known as "pathogenic" bacteria]. These pathogenic bacteria have been linked to several chronic diseases.



Probiotics have anti-inflammatory effects. In a study in mice, taking an oral probiotic bacteria helped to calm down T-cell mediated skin inflammation.



Probiotic bacteria produce certain substances, called metabolites, that have effects of their own. In a laboratory study, these metabolites were able to combat the formation of collagen-damaging reactive oxygen species.



Probiotics help protect the lining of our gut. They've also been shown to help our skin barrier. Use of an oral probiotic helps improve the function of the skin barrier, and helps reduce skin sensitivity.

## MYTH 24: FRIED GREASY FOODS ARE THE MAIN FOODS TO AVOID IF YOU HAVE ACNE.

*Fact: When it comes to acne, it's not the grease you have to worry about: it's the white bread, the white rice, the white pasta, and the sugar.*

It kind of makes sense: you eat greasy food and your skin gets more greasy. But that's not the way it works.

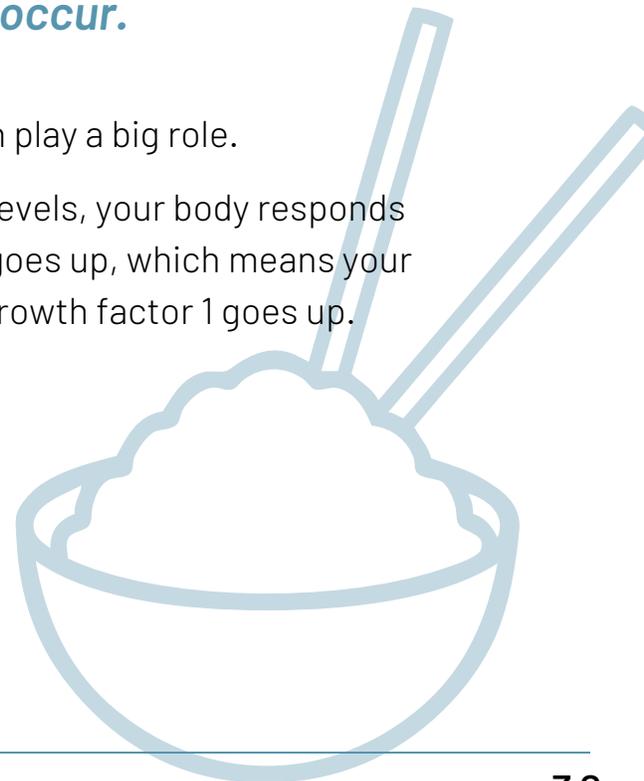
In fact, the biggest triggers for acne are not greasy at all: white bread, white rice, white pasta, and white sugar.

Research has now demonstrated that foods such as these, which act to raise your blood sugar levels, can play a role in some people with acne.

***It's important to emphasize that there are a lot of different potential triggers for acne. For some people, it's genetics. For many teenagers, it's related to the hormonal changes that occur.***

For some people, though, the foods that they eat can play a big role.

Whenever you eat foods that raise your blood sugar levels, your body responds with a cascade of hormones. Your blood sugar level goes up, which means your insulin level goes up, which means your insulin-like growth factor 1 goes up.



## MYTH 24: FRIED GREASY FOODS ARE THE MAIN FOODS TO AVOID IF YOU HAVE ACNE.

*Fact: When it comes to acne, it's not the grease you have to worry about: it's the white bread, the white rice, the white pasta, and the sugar.*

This last hormone may not be one you've heard of before, but it's an important one. Higher levels of this hormone set off a chain of events, which ultimately leads to the skin inflammation that causes red inflamed bumps and pustules on the face. It can also lead to more oil production on the face and even enlarged oil glands.

Many people don't realize that *sugar is such a problem*. In fact, when we did a survey in our clinic, we found that only 16% of our acne patients described sugar as a potential acne trigger.

My website ([SkinAndDiet.com](http://SkinAndDiet.com)) lists more information on the foods to avoid if you have acne, as well as more information on how to keep blood sugar levels stable.

### The Bottom Line

When it comes to the foods to avoid when you're dealing with acne, pay close attention to sugar and refined carbs.



## MYTH 25: EVERYONE WITH SKIN INFLAMMATION (INCLUDING FROM ECZEMA, PSORIASIS, OR ACNE) SHOULD GO GLUTEN-FREE

*Fact: Some patients with skin inflammation may benefit from gluten-free diets, while others won't be helped at all.*

Gluten is not inherently inflammatory, and it doesn't cause any problems at all in the vast, vast majority of people. Think about it: there are billions of people across the world who eat bread and still have great skin.

But the reason it is often mentioned in blog posts is that there are SOME individuals who benefit from avoiding gluten. How can you find out if you're one of those?

- **Eczema/atopic dermatitis:** Some patients with eczema have an allergy to wheat. Although it is a small percentage, if you suspect it's a trigger, then I recommend starting with a food diary. Pay attention to the 48 hours prior to any skin flares, because sometimes food allergies can take that long before they cause a flare of eczema.
- **Atopic dermatitis with GI symptoms:** For adults with atopic dermatitis and irritable bowel syndrome, a gluten-free diet may be recommended. That's because some cases of IBS are due to gut dysbiosis, an imbalance of the microbes that live in your gut. Studies have found that patients with atopic dermatitis have a higher risk of these gut microbe imbalances, and therefore may have a harder time processing gluten.
- **Psoriasis:** If you have psoriasis, and you have symptoms such as abdominal pain and diarrhea, then you may need to be tested for gluten antibodies. In one study, about one in seven psoriasis patients had these antibodies. These patients were the only ones helped by going gluten free.

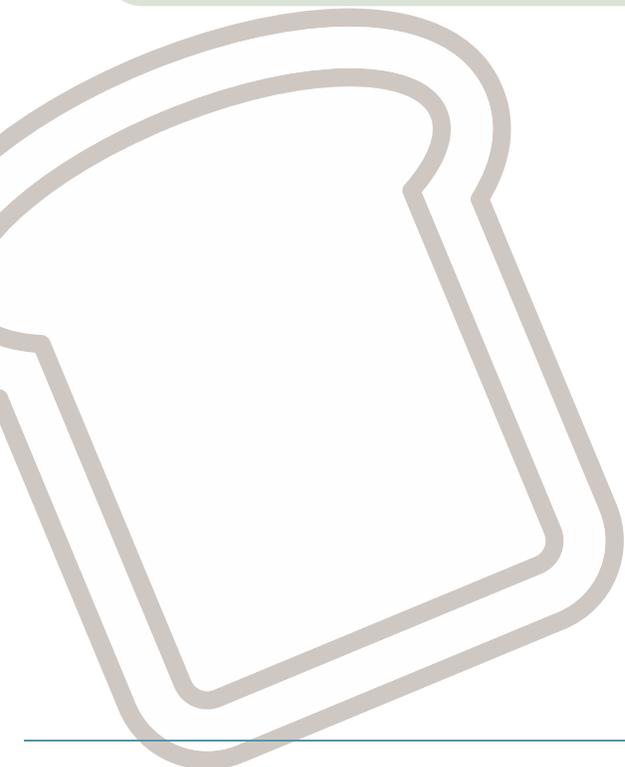
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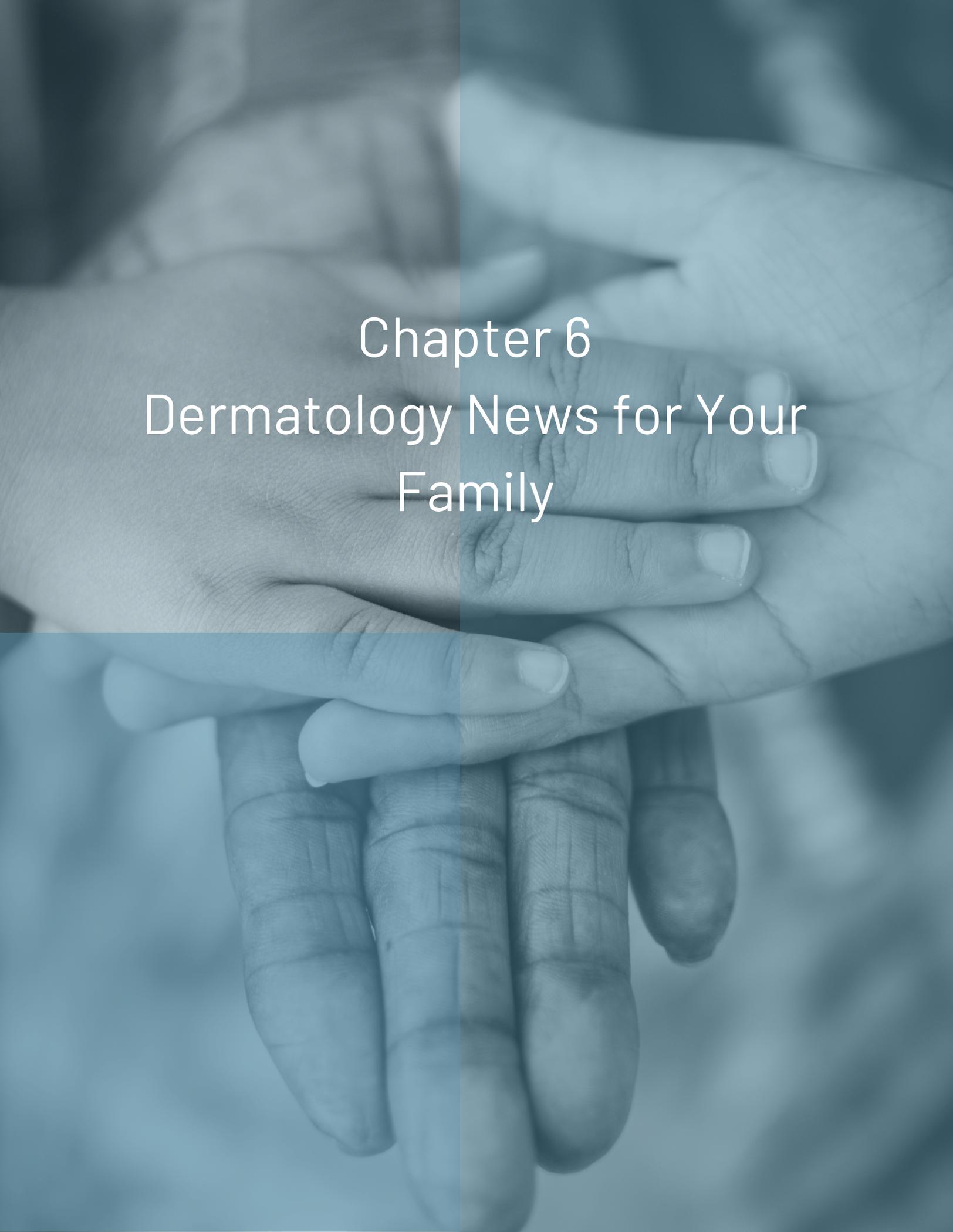
*Fact: Some patients with skin inflammation may benefit from gluten-free diets, while others won't be helped at all.*

- **Acne:** Researchers haven't found any link between acne and gluten. However, they have found a strong link between acne and processed carbohydrates. That may explain why some patients with acne notice an improvement when they eliminate gluten: they may actually be eliminating sugar and processed carbs.

### The Bottom Line

Before you go gluten-free, talk with your doctor about whether it may help for your particular skin condition, and find out if you should undergo testing first.





Chapter 6  
Dermatology News for Your  
Family

# MYTH 1: HOMEMADE SLIME USING WHITE GLUE IS A SAFE CRAFT FOR CHILDREN WITH ECZEMA

*Fact: Children with sensitive skin or open cuts should avoid direct contact with homemade slime (if made with household or craft glues).*

Those of us who specialize in allergic skin reactions are starting to see reactions in children who've been playing with homemade slime. A common recipe for homemade slime uses Elmer's glue, and a recent research article found that many glues contain a preservative called MI (methylisothiazolinone). This particular chemical is known for being a frequent cause of allergic skin reactions.

*So...*

If your child has sensitive skin or open cuts, they should avoid direct contact with glue.

## MYTH 2: IF YOU WERE VACCINATED AS A CHILD, YOU'RE STILL PROTECTED FROM MEASLES

*Fact: If you're between the ages of 30 and 62, you may still be at risk for measles (even if you were vaccinated as a child)*

The news report about a 43-year old Israeli flight attendant in a coma due to measles was so wrenching. Although she was vaccinated as a child, it's believed that she contracted measles either in New York or on an international flight.

Many people don't realize that you can still get measles, EVEN if you were vaccinated as a child. If you're between the ages of 30 and 62, then you may be at risk.

Why are those particular age groups considered at higher risk? It's because the vaccine available at that time may not have been fully effective.

There are measles hot spots right now all across the US.

Those who travel internationally may also be accidentally exposed, since measles is so highly contagious. As a health care worker, I've already had my

blood test to check for measles immunity. (And luckily I'm still immune.) If you're interested in learning more, there's a great summary from the Baylor College of Medicine:

***"The grey zone is for adults born between 1957 and 1989 who likely received only one MMR vaccination or possibly a first-generation vaccine that was less effective than the current one.***

***For those individuals, the CDC is recommending that if you are in a high-risk category (see below) you should learn your measles immunization status either by testing to determine if you have measles antibody titers, or simply getting vaccinated with the MMR vaccine through your physician or pharmacy. High-risk groups include healthcare providers, international travelers or those living in an area where measles transmission is underway."***

## MYTH 3: TAKING AN ANTIHISTAMINE LIKE DIPHENHYDRAMINE (BENADRYL) EVERY NIGHT TO HELP YOU SLEEP IS FINE.

*Fact: If you're older, taking Benadryl for months at a time may not be a good idea (due to the link between Benadryl and dementia)*

Benadryl (and certain other antihistamines) may be a short-term godsend for those with itchy skin from conditions such as eczema or hives. BUT we no longer recommend them for long-term use in older adults because they may increase the risk of dementia.

That's because antihistamines such as diphenhydramine (brand names include OTC Benadryl), hydroxyzine (prescription only), and others have what are known as anticholinergic effects. These effects can result in short-term side effects, such as drowsiness and dry mouth. They can also result in long-term side effects: we now have evidence that they're associated with an increased risk of dementia in older individuals.

In an important study, taking medications with anticholinergic effects for the equivalent of 3 or more years was associated with a 50% higher risk of dementia (as compared to taking the medication for 3 months or less.)

*So...*

If you, or an older family member, are taking antihistamines such as OTC Benadryl, it's important to speak to your physician about how long you can/should stay on it, as well as alternate treatments.

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