Are You Afraid of Using Topical Steroids?

Q&A

1. **Can eczema be treated without topical steroids?**
    - Yes, mild cases can be treated with moisturizers and avoidance of common triggers. Some prescription NON-steroidal medications are also available for mild cases and can be effective for many. Most other moderate to severe cases of eczema require more effective treatments and may require the use of topical steroids and some other new systemic nonsteroidal biological medications.
2. **What impact do topical steroids have on darker skin?**
    - Darker skinned patients with eczema tend to be more commonly affected by a process called post-inflammatory hyperpigmentation or hypopigmentation. These changes in the color of skin are not typically due to the topical steroid, but instead the uncontrolled inflammatory process that exists in the skin of patients with eczema. Once the eczema is better controlled, these changes in skin color abate over time and will take on the color and texture of normal skin.
3. **Are there any side effects of prolonged use of topical steroids?**
    - There are many POTENTIAL SIDE EFFECTS OF TOPICAL STEROID USE. Most of the well-understood and experienced side effects of steroids occur with ORAL AND/OR SYSTEMIC use of steroids and NOT from the proper use of TOPICAL steroids. Under proper guidance and monitoring, these side effects with topical steroids can be further minimized and/or avoided. Improper use of topical steroids can RARELY lead to skin thinning, excessive hair growth, increase in blood vessel appearance, decreased bone growth, acne, rosacea, endocrine suppression, or ocular changes.
4. **Which areas are most sensitive to thinning of the skin from topical steroid use?**
    - The most common areas that are most sensitive to thinning from overuse/improper use of topical steroids would include the face, eyelids, underarms, intertriginous areas, and or groin.
5. **Are skin tags common with chronic eczema?**

- No, skin tags are not commonly seen in chronic eczema. These should be evaluated by your local dermatologist.

6. **Is topical steroid withdrawal (TSW) something you should worry about?**
   - Topical steroid withdrawal (TSW) is a poorly understood potential medical problem. At this time, it is unknown if this represents a true medical problem or not. Better controlled studies are needed to validate this possible issue and understand its cause and further its potential treatment.
   - TSW is typically described as a worsening of one's eczema after days or weeks of having clear skin and the recent discontinuation of high dose topical steroid use. It has not been reported in pediatric patients and typically is reported in adult female patients. Some report that the rash that develops may be worse than the initial eczema one was experiencing before the use of topical steroids.
   - Many dermatological experts do not believe TSW is a real medical condition, but instead a worsening of one's eczema from improper control. With that proper understanding, this condition typically requires chronic treatment for most patients. It is also important to realize that patients with atopic dermatitis may experience periods of clear skin and then suddenly a worsening of their skin for a number of reasons. It is much more common to see a worsening of one's eczema as a secondary to exposure to common triggers than to attribute one's worsening eczema to a steroid withdrawal. Many of the common reasons to see a worsening of eczema include: an improper reduction of topical steroid use, improper overuse of topical steroids, or exposure to other external/internal factors (stress, allergens, irritants, infection, hormonal influences, chemical allergy, and or food allergy exposure, etc).
7. **How does thinned skin heal from steroid use- my daughter's legs are so splotchy from using steroids.**
   - Sometimes the splotchy skin appearance is not due to thinning of the skin from the use of the topical steroid, but instead, from an issue called post-inflammatory hyperpigmentation. In most cases, the splotchy skin appearance is reversible with the proper use of directed eczema treatments and the ongoing control of the underlying eczema.
8. **Are topical steroids safe to use in children?**
   - Most, if not all, research on the prolonged use of topical steroid use in children has been very reassuring about its safety. However, there are case reports of significant local and/or systemic side effects from the use of topical steroids in all ages. Please understand the risk of side effects from TOPICAL steroid use is much less than the risk of these issues from ORAL systemic corticosteroid use. Side effects from the proper use of topical steroids in children and infants are very rare occurrences. Some of those documented adverse effects from topical steroid use are:
     - Suppression of the hypothalamic-pituitary-adrenal axis
     - Iatrogenic Cushing's syndrome
     - Growth retardation in infants and children
     - Ocular: Glaucoma and loss of vision
     - Avascular necrosis of femoral head

9. **Some people say long term topical antibiotic use in the aron compound will cause resistant bacteria… is this true?**
    - There is a small chance of inducing the emergence of resistant bacteria with the prolonged use of the topical antibiotic in the aron compound. The goal of using a topical antibiotic in the aron compound is to eliminate from the skin pathogenic forms of bacterial infections, especially Staph Aureus, which is a major contributor to uncontrolled eczema in many patients. The benefit of using a topical antibiotic typically far outweighs the risk associated with its use. Once control is achieved, we are able to eliminate the use of the topical antibiotic from the aron compound. Initially with its use, we are able to obtain much better results in the majority of our patients with uncontrolled atopic dermatitis by including the topical antibiotic as opposed to not using it. In the end, we are able to use less amounts of topical steroids and less potent topical steroids while still obtaining better results than if we used a topical steroid by itself.
10. **There are several trials going on regarding prurigo nodularis. Are those biologics safe and effective?**
    - At the present time, none of the currently available biologics are FDA-approved for that problem. We are waiting on FDA approval- particularly for Nemolizumab, an investigational humanized monoclonal antibody targeting the interleukin-31 receptor alpha subunit. It achieved rapid and clinically meaningful improvement in both itch and skin lesions of severe prurigo nodularis in a phase 2b, randomized trial.
11. **What if a child cannot wean off of applying Aron Regimen Level 3 every other day without itching?**
    - Unfortunately, eczema is a chronic problem and there is currently no cure. For some children, chronic treatment may be needed to control the condition. As long as the child's condition is monitored, there should be no issue with the long-term use of the compound. Sometimes we may need to utilize a different moisturizer and/or change the topical steroid in the Aron compound to allow for less frequent applications. I would recommend following up with your eczema provider for further detail regarding how to reduce the frequency and/or level of medication that is utilized.
12. **What are the chances of kids outgrowing eczema?**
    - Research shows that 1 in 5 children (20%) do not outgrow eczema.
    - Regarding risk factors for more persistent/chronic disease include:
        - Most studies found there was a greater risk for persistence with more severe disease at the time of the initial diagnosis.
        - Most studies found NO relation between the persistence of atopic dermatitis (AD) and sensitivity to allergens, as reflected in skin-prick testing and/or antigen-specific IgE.
        - Silverberg and colleagues note that while they found disease severity, older age of onset, and female gender as risk factors for persistent AD, they also determined that 80 percent of childhood AD did not persist beyond 8 years, and less than 5 percent persisted 20 years after diagnosis.

- Reference: *Persistence of atopic dermatitis (AD): A systematic review and meta-analysis; August 2016 Volume 74; Issue 4;*

13. **Are there any foods that you suggest patients eliminate while trying to control flare-ups?**
    - Food allergy is typically NOT the main culprit/cause of eczema- especially in adult patients. Children are more likely to suffer from food allergies in general. In children, common food allergens would include: dairy, egg, wheat, soy, peanut, and tree nuts. BUT note that most children with atopic dermatitis (AD) DO NOT have significant food allergies contributing to their AD. A consultation with a local allergist could help determine if a food allergy is an issue for you or your child and further to determine whether this food allergy is playing a role in you or your child's eczema. Typically, elimination diets are not recommended when helping patients with flares of their eczema since food allergy is less likely the reason for these flares of AD.
14. **Is there any case of eczema too mild for this treatment?**
    - Many patients with mild eczema can be treated with moisturizers and/or low-dose topical steroids and do not need the Aron compound. Some patients may also respond to nonsteroidal medications that are now approved for atopic dermatitis.
15. **Is it okay to mix at home all of these ingredients that form the aron regimen compound?**
    - We highly recommend that a professional compounding pharmacy be utilized to mix the ingredients used in the Aron compound. IF that is not available, we can/do provide mixing instructions for patients to be able to mix the ingredients themselves at home, if desired.
16. **My scalp has eczema. Is there an alternative to the base cream that can be used, so the cream doesn't get on my thick hair, like an oil?**
    - Yes, we have different medication types (oils, solutions, etc.,) that we can use alternatively to treat eczema on the scalp. We are now offering a foam version of the Aron compound for the scalp which should be much more aesthetically pleasing.
17. **As for children, what is the best treatment? My grandson suffers so bad and his skin around his feet is crusty and flaky.**
    - Every case is different and needs to be individually evaluated to determine what is the best treatment. Eczema on the feet and hands can be difficult to manage. We are experts in helping those with difficult to treat eczema in all areas, especially for the hands and feet.
18. **What is the long-term effect of topical steroids like those used in the Aron regimen?**
    - No formal long-term studies have been performed with the Aron Regimen, but Dr. Richard Aron's 50 year clinical experience of treating patients with atopic dermatitis has revealed an excellent safety record using this method of treatment. Topical steroids have been for almost 50 years with an excellent safety record if used properly under the guidance of a medical professional skilled in the treatment of atopic dermatitis.
19. **Why are the feet and hands the hardest to get under control?**
    - Hand and feet eczema can be difficult areas to control. A possible reason is that exposure to various chemicals and irritants is most likely to occur through the hands as one touches items. It is also simply very commonplace for eczema to present in these areas. Additionally, other related immune problems can show up on the hands and feet as well

(like psoriasis or other autoimmune conditions); thus these related conditions can complicate the diagnosis. These areas are also easy targets to scratch, which can further disrupt the already malfunctioning skin barrier that is disrupted in eczema.

20. **Will prolonged use of topical steroids cause thinning skin or other problems?**
    - Listed below are some of the potential problems that can occur with the improper use of topical steroids. These issues are much less likely to occur with proper management and close follow-up with your eczema medical provider.
    - Potential side effects can include some of the following:
        - Skin related: thinning of the skin, bruising, redness, acne, stretch marks, rosacea, infection, increased hair growth, appearance of blood vessels, skin discoloration, etc.
        - Body related: increases in blood sugar, bone abnormalities, growth issues, adrenal suppression, hypertension, diabetes, cataract, glaucoma, weight gain, etc.
21. **Do topical steroids get into the bloodstream? Do topical steroids compromise the immune system?**
    - It is very rare for low and/or medium dose topical steroids to get into the bloodstream and cause systemic related issues. Potent and superpotent topical steroids are more likely to be measured in the blood with their use.
    - Further and more importantly, It is rare for topical steroids to compromise the immune system, but it has been seen/reported. It would be important to rule out other causes of immune deficiency before attributing the issue to topical steroid use in general though.
22. **How do you identify thinning of the skin on a baby? Is visible thin blood vessels a sign?**
    - In some cases, It is difficult to assess whether thinning of the skin on a baby is due to topical steroid use, long-standing eczema, or just normal skin. Babies' skin is naturally not as thick as older children's, and it is much more likely to reveal thin blood vessels as a function of the intrinsic paucity/lack of fat and its translucent nature at this young age.
23. **What causes systemic side effects after coming off of topical steroids if most doctors claim it is unlikely to affect systemically?**
    - Experiencing systemic side effects after coming off topical steroids is a very rare complication. It would be much more likely to be experienced with the use/discontinuation of ORAL steroids. The amount of topical steroid that is systemically absorbed and bioavailable is clinically negligible to undetectable in most cases of their use- thus the reason that systemic issues from topical steroid discontinuation are less likely to occur. I would be more interested in understanding and/or ruling out other systemic issues causing adrenal insufficiency than attributing systemic symptoms to coming off of topical steroid use.
24. **If I use topical steroids, will it need to be long-term? How can we identify the root cause?**
    - There is no cure typically for atopic dermatitis, but many patients do outgrow it- especially children. Every case is different. In most cases, we are able to induce a clinically relevant control with the therapy we suggest. Once control is achieved, we are then committed to slowly reducing and/or eliminating the use of medications, if possible. This is typically

achieved in some cases, but please understand that some patients may need prolonged treatment to ensure control. We aim to use effective and safe methods for those that have chronic atopic dermatitis.

25. **What (or who) are the biggest sources of disinformation on topical steroids?**
    - There is a lot of false information and or generalized misinformation that creates fear and/or distrust about the use of topical steroids. The largest source of misinformation is from internet sources that are promoting nontraditional ways to manage eczema, support groups that are against traditional methods of treatment, some naturopaths, or those that favor eastern methods of treatment.
26. **My skin has been very good since I was young. After an episode of sickness, I developed facial rashes flawed by skin rashes. Advice needed.**
    - I would recommend that you be evaluated by a healthcare professional to determine what the correct diagnosis is for you. Not all skin rashes on the face are atopic dermatitis.
27. **Do topical steroids cause long-term toxicity and/or weight gain in children?**
    - No, most properly used topical steroids do not cause long-term toxicity and/or weight gain in children.
28. **Is using an infrared sauna during treatment good or bad?**
    - I am unfamiliar with any good research showing the benefit of this type of treatment for patients with atopic dermatitis (AD). Infrared light is different from UV light that has been shown to be beneficial for patients with AD.
    - The key difference between infrared and ultraviolet radiation is that the wavelength of infrared radiation is longer than that of visible light, whereas the wavelength of ultraviolet (UV) radiation is shorter than the wavelength of visible light. Infrared and ultraviolet radiation are two types of electromagnetic radiation.
    - An infrared sauna is a type of sauna that uses light to create heat. This type of sauna is sometimes called a far-infrared sauna — "far" describes where the infrared waves fall on the light spectrum. A traditional sauna uses heat to warm the air, which in turn warms your body. An infrared sauna heats your body directly without warming the air around you.
    - The appeal of saunas in general is that they cause reactions similar to those elicited by moderate exercise, such as vigorous sweating and increased heart rate. An infrared sauna produces these results at lower temperatures than does a regular sauna, which makes it accessible to people who can't tolerate the heat of a conventional sauna. But does that translate into tangible/clinically relevant health benefits? Perhaps.
    - Several studies have looked at using infrared saunas in the treatment of chronic health problems, such as high blood pressure, congestive heart failure, dementia and Alzheimer's disease, headaches, type 2 diabetes, and rheumatoid arthritis, and found some evidence of benefit. However, larger and more rigorous studies are needed to confirm these results, especially in atopic dermatitis. Some of these studies were also performed with patients using a traditional sauna.
    - Please understand that this type of treatment is separate and distinct from Phototherapy, also called light therapy, which means treatment with different wavelengths of ultraviolet

(UV) light. It can be prescribed to treat many forms of eczema in adults and children and helps to reduce itch and inflammation.

- Phototherapy is generally used for eczema that is all over the body (widespread) or for localized eczema (such as hands and feet) that has not improved with topical treatments. The most common type of phototherapy used to treat eczema is narrowband ultraviolet B (NB-UVB) light, although other options may be recommended by your healthcare provider, including those that use ultraviolet A (UVA) light. Treatment with phototherapy uses a special machine to emit either UVB or UVA light.

29. Can you talk about how steroids can increase the risk of osteoporosis?

- There are many causes of osteoporosis. Not all cases are related to steroid use. Most cases of osteoporosis that are caused by steroids are seen in patients using long-term ORAL and/or systemic prescribed steroids, and NOT topically applied steroids. The risk of osteoporosis in patients on topical steroids would be very unlikely to occur. If you already suffer from osteoporosis we would want to stay away from and or limit the use of potent and/or super potent topical steroids that do have a greater chance of systemic absorption.

30. How long is the topical antibiotic used in the aron compound?

- We are typically able to remove the topical antibiotic from the Aron regimen medication compound once control is achieved and maintained for some time. Once the skin is able to reestablish a healthy microbiome, it is safer to remove the topical antibiotic from the compound. Unfortunately, flares of atopic dermatitis could later arise once the topical antibiotic is removed and thus allow pathogenic strains of staph infection to flourish.

31. Is the long-term goal of AR to stop using steroid creams?

- Most cases of atopic dermatitis (AD) are chronic in nature and require chronic treatment. The goal is to achieve CONTROL of AD using safe and effective treatments. We do always aim to use less frequent applications of topical steroids and/or less potent forms of topical steroids once control is achieved. Once long-standing control and/or remission is achieved, it is much easier to remove the chronic treatment and/or reduce the frequency of application over time to maintain that control. This removal and/or reduction in the topical steroid is achieved by applying less frequent applications of the compound and/or by removing and/or lowering the gram amount of the topical steroid.

32. Discuss Red Skin Syndrome.

- This subject is controversial and there is not a well established definition and or classification currently available. Topical corticosteroids withdrawal (sometimes called “topical steroid addiction” or “Red Skin Syndrome”) appears to be a clinical adverse effect that could occur when topical corticosteroids (TCS) are inappropriately used or overused, then rapidly stopped. It can result from prolonged, frequent, and inappropriate use of moderate to high potency topical corticosteroids, especially on the face and genital area, but is not limited to these criteria. In reviewing the studies that were used for the systematic review, it is thought that adult women who blush easily are a population that is particularly at risk. Very few cases have been reported in children, but no large-scale studies have attempted to quantify the incidence. Thus, continued vigilance and adherence

to a safe, long-term treatment plan developed in conjunction with your eczema provider is advised.

33. What to look for in TSW and/or RSS?

- Burning, stinging, and bright red skin are the typical features of topical steroid overuse and withdrawal. The signs and symptoms may occur within days to weeks after TCS discontinuation. In general, TCS withdrawal can be divided into two distinct subtypes: erythematoedematous and papulopustular. Clinical features differ between the two types, but there is some overlap of some signs and symptoms.
- The majority of erythematoedematous type was found in patients with an underlying eczema-like skin condition, like atopic or seborrheic dermatitis. Patients with this type of withdrawal experience swelling, redness, burning, and skin sensitivity usually within 1-2 weeks of stopping the steroid.
- The papulopustular variant was more often associated with the use of topical corticosteroids for cosmetic purposes or for an acne or acne-like disorder. It can be differentiated from the erythematoedematous type by the presence of papules (pimple-like bumps), nodules (deeper bumps), pustules, redness, and –less frequently– swelling, burning, and stinging.
- Based on a systematic review of research to date, both types primarily affect the face of adult females and are mostly associated with inappropriately using mid- to high-potency topical corticosteroids daily for more than 12 months.

34. What to do for TSW and/or RSS?

- Consult your healthcare provider. Your doctor will most likely rule out other conditions such as allergic contact dermatitis, a skin infection, or, most importantly, a true eczema flare. Confusing the signs and symptoms of eczema for steroid withdrawal could lead to unnecessary under-treatment of the eczema.
- Once a diagnosis of steroid addiction or overuse is made, the goal should be to discontinue the inappropriate use of topical steroids and provide supportive care. Consideration might be given to some of the treatment options discussed in the literature: supportive care including ice and cool compresses, psychological support, systemic doxycycline, tetracycline, or erythromycin, antihistamines, and calcineurin inhibitors.

35. What should I do if topical steroids are not helpful for me or my child with AD?

- For many patients, topical corticosteroids (TCS) are a safe, very effective therapy for eczema treatment. If TCS therapy is no longer effective for your condition, stopping topical corticosteroids should be done with the knowledge and supervision of a caring physician.
- There are many side effects that are reported with the inappropriate use of topical corticosteroids. When used with the proper dosage, frequency, and duration, along with close monitoring by a physician, topical corticosteroids have a very low risk of causing systemic problems or thinning the skin.
- Importantly, there are risks to NOT treating your child's eczema effectively. Along with the profound effect on family life, uncontrolled eczema can negatively impact your child's quality of life, causing mood and behavioral changes, poor school performance, bacterial infections, and poor sleep. Embarrassment from eczema can cause social isolation and

impacts the daily life activities of childhood such as clothing choices, holidays, interaction with friends, owning pets, swimming, and the ability to play sports or go to school. Typically the risks of NOT treating the atopic dermatitis is much greater than the risks of using a properly orchestrated treatment regimen using topical steroids.

36. **It can be tricky to do studies on children, so how do we know scientifically that there are no consequences from long-term topical corticosteroid use?**
    - Your statement is true- unfortunately, long-term studies on the safety of TCS use are not commonly done. Most of the data we have originates from studies that are less than one year of duration.
    - Data supporting long-term TCS use are limited to low-to-mid-potency products. Currently, there is a lack of information on the safety of commonly prescribed, long-term monotherapy with mid-to-high-potency TCS in pediatric AD.
37. **Are Nonsteroidal medications like Protopic or Elidel safe?**
    - Protopic and Elidel are brand names of medications for the drugs tacrolimus and pimecrolimus, respectively; both are considered topical calcineurin inhibitors (TCI) and can be used to treat atopic dermatitis (AD).
    - Long-term treatment with TCIs and intermittent use of low-to-mid potency topical steroids (TCS) was generally well-tolerated in 27 trials of >5800 and >1900 pediatric patients, respectively, with no evidence of cutaneous atrophy or cumulative systemic exposure and no reports of a cancer called lymphoma.
    - Many recent meta-analyses and reviews have also contributed to the body of evidence that has failed to detect increased lymphoma risk with TCIs [source;source]. One study compared the incidence of TCI-associated malignancies reported to multiple TCI AE databases and found a rate similar to or lower than the expected rate of malignancy in the general population [source], and another compared incidences of lymphoma in health insurance claims databases and did not find an increased risk among patients treated with TCIs versus TCS [source]. And no increased risk of malignancy was detected in 7457 children enrolled as of May 2014 in the ongoing prospective 10-year observational cohort study of children with a history of AD and pimecrolimus use (Pediatric Eczema Elective Registry, PEER) [source].
    - A decade's worth of clinical experience, epidemiological data, postmarketing surveillance, and adverse event database monitoring have failed to demonstrate a causal relationship between TCI use and malignancy, yet TCI labeling continues to include a Boxed Warning. The biggest impact of the warning is to limit patient access to the most well-studied medications for long-term maintenance AD treatment, especially in children.
38. **Do many people have success using Protopic? I cannot use it because my facial eczema won't tolerate it.**
    - Stinging and burning are common side effects seen with the use of these TCI (topical calcineurin inhibitors). This sensation is typically transient and improves with time. Sometimes, we have to use both a low potency topical steroid (TCS) first in order to calm down the inflammation and then revert to using the TCI as a maintenance medication.

39. **Is there a correlation between eczema and the gut? If so, is there anything you can do to help?**
    - On the basis of a recent systematic review (see below for citation) certain nutrient supplements may prevent the development of atopic dermatitis (AD) or diminish its severity among infants and children younger than 3 years. Of the 21 selected studies, a majority found that certain nutrition supplementation was able to prevent the development (11 of 17 studies) or severity (5 of 6 studies) of AD. Specifically, supplementation with PROBIOTICS was the most commonly studied nutrient, where a majority of studies found that supplementation with certain probiotics reduced the incidence of AD. Certain probiotics have a positive impact in utero and in infants, when supplementation could lead to decreased AD development.
    - PREBIOTICS, ON THE OTHER HAND, are specific non-digestible oligosaccharides that stimulate the growth of certain types of bacteria in the colon.source Prebiotics differ from probiotics in that prebiotics assist the survival of the microflora of the colon, whereas probiotics contribute to the intestinal flora. Prebiotics stimulate the growth of the microflora of the colon. Researchers reported a reduced risk of developing AD with the use of prebiotic supplementation; however, a significant difference was not found in reducing the severity of AD.
    - According to this excellent review article: "Our systematic review revealed that nutritional supplementation may be an effective method in both preventing AD and decreasing its severity among infants. From the currently available literature, more studies are required before we draw conclusions about the effectiveness of BCSO, prebiotics, and formula."
    - More data is needed on the effectiveness of probiotics, prebiotics, and/or other supplements used to restore gut health in the management of AD in adults.
    - (Effect of Nutrient Supplementation on Atopic Dermatitis in Children A Systematic Review of Probiotics, Prebiotics, Formula, and Fatty Acids; JAMA Dermatol. 2013;149(3):350-355. doi:10.1001/jamadermatol.2013).
40. **Can the Aron Regimen compound cream still help when the eczema is mold-related?**
    - By definition, eczema is an inflammatory-related issue. Sometimes, a superficial fungal/mold infection can be present on the patient's skin with eczema. However, it is rare that an allergy to airborne fungus/mold is the reason for one's eczema. The use of topical steroids would be indicated in most cases of eczema; sometimes we use antifungal medications in cases where a fungal superficial skin infection is suspected.
41. **Of all your patients on the Aron Regimen: what is the rate of any side effects? Rate of adrenal insufficiency? Rate of stopping due to side effects?**
    - I would state that the general rate of experiencing side effects in my patients using the Aron Regimen is less than 5%. I have never had a patient experience adrenal insufficiency while using my treatments. I would state that the rate of patients stopping because of side effects would be less than 2% of all cases.
42. **Do I have a recommended probiotic brand? Florajen?**
    - At the present time, I am not recommending the use of any particular probiotic. Further research is needed before I can recommend this treatment.

43. **Does the Aron Regimen work for seborrheic dermatitis? I have long hair.**
    - Seborrheic dermatitis (SD) is a form of eczema and typically would respond to a steroid-containing treatment. Sometimes, an antifungal is needed to aid in the management of SD. A foam containing product we offer typically works best, which we can provide if you have long hair.
44. **How do we help patients with steroid immunity?**
    - Being "immune" to steroids is an extremely rare finding for patients with atopic dermatitis (AD), but all cases are different. Having the correct diagnosis is key. I do, however, have many patients who have severe AD that do not respond sufficiently to even high-dose potent topical steroids. In these cases, we look for alternative nonsteroidal options, treating concurrent infections on the skin if present, avoiding suspected food and/or aeroallergens, avoiding chemicals and/or irritants that could worsen one's eczema, use of biologic medications, bursts of oral steroids to help calm a significant flare, and/or referral to a dermatologist for biopsy to confirm the correct diagnosis. Many other conditions can look like AD and may not respond fully to topical steroid treatment.
45. **Our son has been on Dr. Aron's cream for 6 years, should we be concerned?**
    - Every case is different. Some cases of atopic dermatitis are chronic in nature and may require long-term treatment over many years. I would recommend periodic follow-ups to make sure side effects are not being experienced and the proper treatment is being prescribed and applied to maintain control.
46. **How different is eczema from dermatitis?**
    - Dermatitis simply refers to an inflammation of the skin. There are many causes of dermatitis. Eczema is only one form of dermatitis. Atopic dermatitis is the most common form of eczema.
47. **How can you treat nummular eczema?**
    - Nummular eczema, also known as discoid eczema and nummular dermatitis, features scattered circular, often itchy and sometimes oozing patches. The word "nummular" comes from the Latin word for "coin," as the spots can look coin-shaped on the skin.
48. **Who gets nummular eczema and why?**
    - Nummular eczema can occur at any age, and males tend to develop it more often than females.
    - Its causes aren't clear, but triggers can include very dry or sensitive skin and trauma to the skin from insect bites, scrapes or chemical burns.
    - Nummular eczema may also develop as a reaction to some other types of eczema and their triggers, such as a contact dermatitis with the chemical nickel. When it appears on the legs, it can be linked to poor blood flow in the lower body and the stasis dermatitis those circulation problems can cause.
49. **What are the symptoms of nummular eczema?**
    - coin-shaped lesions on arms, legs, torso, and/or hands
    - itching and burning
    - lesions that are oozing liquid or have crusted over
    - red, pinkish or brown, scaly and inflamed skin around the lesions

50. How is nummular eczema treated?

- Nummular eczema can look like psoriasis, ringworm, fungal infection, and other types of eczema, including atopic dermatitis, stasis dermatitis, and contact dermatitis. It can also occur along with those types of eczema, though it often appears as an isolated condition. Dermatologists can usually spot the condition but may take a skin scraping to confirm a diagnosis.
- Once correctly diagnosed, nummular eczema tends to disappear completely with the right treatment. However, unlike some other forms of eczema, nummular eczema may need an aggressive type of treatment to induce a remission.
- Like atopic dermatitis, patches of nummular eczema are often infected with Staphylococcus aureus (staph), which needs to be treated along with the skin inflammation to clear the condition.
- Nummular eczema can be treated with a mid- or high-potency topical corticosteroid, along with a topical antibiotic. If eczema patches are substantially weepy and oozy, application of an astringent compress can help dry the area and drive out any staph infection.

51. How do you treat someone with TSW (2 yrs post usage) that has known staph and bacterial infections but is terrified of steroids?

- I would encourage you to be evaluated by an eczema specialist. Having close follow-up with an eczema specialist would be key for you to be able to safely utilize topical steroids (TCS) and avoid the possible complications of coming off the TCS too soon, and instead use an approach of using a gradual reduction in your treatment as you improve. Most of the presumed cases of topical steroid withdrawal (TSW) have occurred in females that used inappropriate ultra-potent strengths of topical steroids for an inappropriately long period of time or to their discontinuation and/or had an acceleration of their use in the preceding months upon their discontinuation.

52. Does the Aron Regimen treatment cause any type of steroid and or antibiotic resistance?

- Steroid and/or antibiotic resistance is a very rare complication and/or potential side effect of its use. Close monitoring of your condition because of frequent follow-ups and tailoring your treatment along the way can prevent these things from happening, in most cases.

53. Is the Aron Regimen safe for pregnant patients?

- While no formal studies have been done with the AR in pregnant patients, the use of low and/or medium doses of topical steroids appears to be very safe during pregnancy. AR is typically formulated by combining a low to medium dose topical steroid with a topical antibiotic and diluted with large amounts of topical moisturizers.
- According to a recent meta analysis (citation below). “We found no associations between mothers' use of topical steroids of any potency and type of delivery, birth defects, premature births, or low Apgar score.
- There is some evidence indicating a relation between low birth weight and maternal use of potent or very potent topical steroids, especially when high doses are used in pregnancy, and this may warrant more research. On the other hand, maternal use of mild or moderate topical corticosteroids is not related to low birth weight. We even found that mild or moderately potent topical steroids protect against death of the baby, but this was not seen

when the mothers used potent or very potent topical steroids. This finding needs further examination.

- Quality of evidence
    - The overall quality of evidence is low because all available studies were observational. The high quality study design of the randomized controlled trial that allocates participants to receive either topical corticosteroids or no treatment is not generally feasible in pregnant women due to ethical concerns about possible exposure of the fetus to an experimental treatment." *Chi C, Wang S, Wojnarowska F, Kirtschig G, Davies E, Bennett C. Safety of topical corticosteroids in pregnancy. Cochrane Database of Systematic Reviews 2015, Issue 10. Art. No.: CD007346. DOI: 10.1002/14651858.CD007346.pub3*

54. What are the alternative treatments for eczema? Can eczema possibly be cured completely?

- There are many available treatments for atopic dermatitis (AD). The most commonly used and most effective treatments for AD are topical steroids. Alternative treatments would include topical nonsteroidal medications, biological agents, antibiotic treatments if appropriate, avoidance of known triggers of eczema, and/or systemic anti-inflammatory medications. The Aron regimen is an attractive and effective treatment because we are able to offer a treatment method that uses diluted topical steroids combined with moisturizer and topical antibiotics, that when combined together can provide a safe and effective treatment while exposing the body to smaller amounts of topical steroids because of the synergistic effects obtained with this combination.
- Unfortunately, no cure is available for AD. Most cases of pediatric eczema are outgrown over time.

55. What is the longest period you can apply topical steroids to an almost 4-month-old baby?

- Every case is different. Most cases of infantile eczema improve by the age of one and/or earlier. Close follow-up and monitoring for side effects when using topical steroids while maintaining control is critical for a healthy baby. Finding a therapy that is effective while safe is the key. In general, I am not overly concerned about using low-dose topical steroids in an infant that has not responded to general skin care measures.

56. Why do my hands clear up after being in chlorine?

- Chlorine is the most widely used disinfectant for swimming pool water. It is a bleach and can kill bacteria. It is possible your hands are harboring bacteria that is causing your eczema. Killing the bacteria with the chlorine may help some patients, but I do not routinely recommend bleach baths with chlorine because for most patients it can dry out the skin too much. You may respond better to the Aron Regimen compound that contains a topical antibiotic.

57. Does the amount of steroid compound cream vary depending on the state we live in? I've noticed my son needs more cream in FL than TX.

- The amount of steroid provided in the Aron Regimen compound is determined by the severity of one's eczema. Different factors play a role in triggering eczema: heat, humidity, stress, pollution, aeroallergen exposure, dust mites, smoke, etc. It is possible the humidity

levels are affecting your son's eczema and he may require more intense treatment depending on the severity of his eczema.

58. **My grandson's pediatrician recommended Eucrisa. What do you think about it?**
    - Eucrisa is a steroid-free ointment for people with mild-to-moderate eczema and can be used on all skin tones from nose to toes, for adults and kids as young as 3 months old. Eucrisa is for topical use only. Do not use it in the eyes, mouth, or vagina.
    - The active ingredient, crisaborole 2%, acts deep within your skin cells to target an enzyme called PDE4 (phosphodiesterase 4). The specific way Eucrisa works is not well defined.
    - Crisaborole is combined with our proprietary Emollient-Rich Vehicle ointment. Ointments contain emollients, which can help lock in moisture and soften the skin.
    - PDE4 is an enzyme that helps to regulate inflammation in your body. When you have eczema, PDE4 enzymes may be overactive in your skin cells. This can lead to inflammation in your skin. Although the specific way EUCRISA works is not well defined, science shows us that it works differently by blocking overactive PDE4 enzymes within the skin cells. Blocking PDE4 is believed to reduce inflammation related to eczema.
59. **What are your thoughts about Dupixent for treating eczema?**
    - Dupixent (dupilumab) is a biologic that works by targeting an underlying source of inflammation that could be a root cause of your uncontrolled moderate to severe eczema. It helps heal the skin by reducing inflammation. It is not an immunosuppressant or steroid. It has been shown to be highly effective in helping patients with moderate to severe eczema when topical steroid (TCS) treatment has been ineffective.
    - In children 6-11, more children taking Dupixent plus a TCS saw clearer skin and less itch. Greater than 2x as many children taking Dupixent plus a TCS saw clear or almost clear skin compared to the just placebo/TCS group. Similarly, 4.5x saw less itch while on Dupixent and TCS compared to the just placebo/TCS.
    - In children 12-17, more children taking Dupixent plus a TCS saw clearer skin and less itch. Greater than 12x as many children taking Dupixent/TCS saw clear or almost clear skin compared to the just placebo/TCS group. Similarly, 7x saw less itch while on Dupixent/TCS compared to the just placebo/TCS.
    - In adults, more patients taking Dupixent plus a TCS saw clearer skin and less itch. Greater than 3x as many patients taking Dupixent/TCS saw clear or almost clear skin compared to the just placebo/TCS group. Similarly, 4x saw less itch while on Dupixent/TCS compared to the just placebo/TCS.
60. **How long can one spot treat with topical steroids after tapering off of the aron compound?**
    - Every case is different. With close follow-up, spot treating is considered safe.