



Caring For Your Skin



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Welcome to the latest issue of the **Caring For Your Skin** Newsletter. In this issue, I address:

- 1) *The facial benefits of tretinoin and topical vitamin C that can be augmented with MMN*
- 2) *Are self-tanning and spray-tan products safe?*
- 3) *Current promotions*
- 4) *Anti-aging research update on NAD*
- 5) *Upcoming competitors for Botox, Dysport and Xeomin*

The facial skin benefits of tretinoin & vitamin C



I am often asked to recommend skin products to help maintain and improve the appearance of facial skin. My answer includes daily sun protective measures, moisturizers, and the use of tretinoin cream and a vitamin C serum. For the latest information on how moisturizers improve the appearance of wrinkles see:

<https://www.sciencedaily.com/releases/2018/02/180228133958.htm>

Read more about restoring and maintaining healthy facial skin at:

http://www.rutlandskin.com/restoring_and_maintaining_a_healthy_face.pdf

Tretinoin is a modified form of vitamin A, also known as Retin-A and Renova. There is much research that supports the use of tretinoin to help improve the appearance of fine lines in the skin and it can also help improve the appearances of sun spots. Tretinoin requires a prescription, and can be found a lower cost through www.GoodRx.com.

For a review of the benefits of tretinoin see: <https://www.webmd.com/beauty/features/retinoids-for-aging-skin#1>

There also is significant research to support the use of topical vitamin C. Vitamin C is a free-radical fighter that helps prevent sun-damage. It has also been shown to promote collagen production, even skin tone and improve the appearance of fine lines. Our skin can not synthesize vitamin C so it is dependent on oral or topical supplemental sources. Only a small amount of orally ingested vitamin C becomes active in the skin, compared to topically applied vitamin C. Vitamin C preparations are available without needing a prescription.

Two of my favorite vitamin C preparations are available at

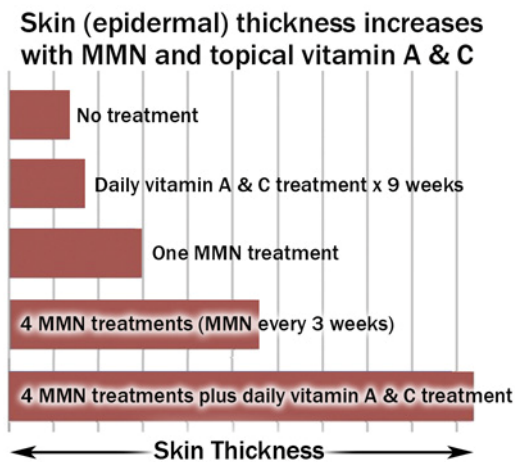
<https://www.cosmeticskinsolutions.com> One contains 15% vitamin C, 1% vitamin E, and 0.5% ferulic acid at an optimal pH (Essentially a knock-off of the very pricey SkinCeuticals vitamin C serum). Their other product contains 20% vitamin C with 0.5% ferulic acid at an optimal pH,

but without the vitamin E. Be aware that many of the vitamin C preparations being sold have less than optimal ingredients and (or) the wrong pH to be most effective. I have tested multiple vitamin C products and many have a pH that is too high to be most effective.

Also note that Vitamin C has a longer shelf life if stored in the refrigerator, and it is important to keep the cap screwed on tight to prevent the vitamin C from being oxidized (it turns an orange color when oxidized). I recommend buying the vitamin C directly from the Cosmetic Skin Solutions, as it is likely to be fresher. (We don't know how long the bottles have been sitting on the shelf in an Amazon.com warehouse.)

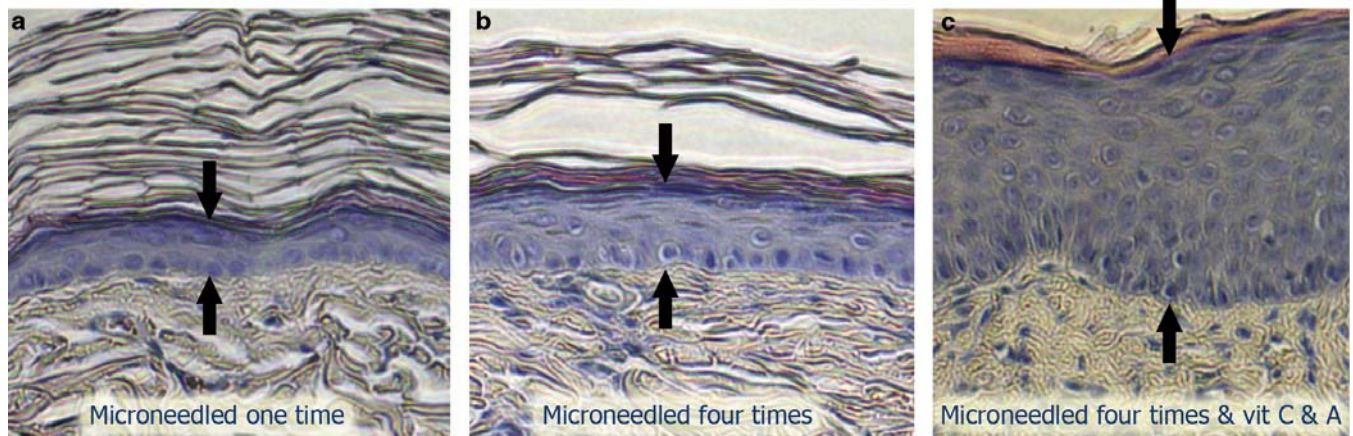
For more information behind the benefits of topical vitamin C see: <https://www.ncbi-nlm-nih-gov.libproxy.lib.unc.edu/pmc/articles/PMC5605218/>

The following graph, from a research study, shows an increase in thickness of the skin after nine weeks of vitamin A and C application on animal skin, compared to untreated skin.



Even greater skin thickness was achieved with topical vitamin A and C in combination with medical microneedling (MMN) – **over 6½ times thicker than untreated skin!**

In the following microscopic photos of skin biopsies from treated skin, the living skin layer is shown between the arrows. The collagen layer is just below the living layer. Note the increased thickness of the skin, particularly after four MMN treatments (3 weeks between each treatment) and daily vitamin A and C applications. The upper dead layer of skin became more compact, and lower collagen level became denser. This leads to thicker and smoother skin.



From: Burns 2014, 40:966-73

For more information on MMN treatments at the Rutland Skin Center see: <http://www.rutlandskin.com/MMN%20FAQ.pdf>

Are self-tanning and spray-tan products safe?



The reason that self tanners and spray-tans are popular is that people have become aware of the dangers of sun-bathing and tanning bed use. Sun and tanning bed exposure significantly increases the risk of developing skin cancers, including potentially deadly melanoma. In addition, these two practices damage the skin giving rise to age spots and wrinkles. The other reason that people seek out tanning alternatives is that many people still consider darker skin more attractive than fairer skin.

As a dermatologist I am uncertain if it is better to use one of these tanning products rather than sun-bathing or using a tanning bed as there are some concerns regarding the safety of the most common ingredient in most of these tanning products, dihydroxyacetone (DHA). DHA has been approved for use in topical creams but not for use in spray-on tans. There is some concern over possible toxicity from inhaling the aerosol from spray tanning products, including the possibility of causing cancer. One should wear goggles, nose plugs, keep the mouth shut and apply petroleum jelly to the lips when getting a spray tan to decrease the risk of inhaling the spray or getting it on the lips or mouth. "Reported side effects from DHA-containing spray tans include rashes, cough, dizziness, and fainting. Some physicians have expressed concern that chronic exposure to spray tans may increase the risk of pulmonary disease, including asthma, chronic obstructive pulmonary disease (COPD), and cancer."

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4345932/>

There has been evidence in laboratory studies that DHA may be cancer causing, and may block vitamin D production. Studies have shown that DHA self-tanning products generated more harmful free radicals during sun-exposure than untreated skin, and can negatively affect melanocytes, the cells that give rise to melanoma.

<https://www.ncbi.nlm.nih.gov/pubmed/29193605> ,

<https://www.ncbi.nlm.nih.gov/pubmed/18024196> , <http://abcnews.go.com/Health/safety-popular-spray-tans-question-protected/story?id=16542918>

Despite all these concerns, some dermatologists feel that, based on our current knowledge, self-tanning products may be safer than sun-bathing and using tanning beds. But even they can not be sure. <http://time.com/3896827/self-tanner-tanning-lotion/>

Be aware that these self tanning products and spray tans do not offer significant sun-protection and you are still at risk of sun-burns, and sun damage that can lead to skin cancer and premature aging. So you still need to take sun protective measures as described here: http://rutlandskin.com/sun_protection.pdf

The bottom line: If you feel compelled to have darker colored skin, self-tanning products may or may not be safer than sun bathing and tanning bed use. A topical self tanning cream may be safer than spray-on tans. However, please realize that there is some concern that

these products may pose some potential health risk, including possible cancer. And remember that they do not offer significant sun protection, so you still need to protect you skin from the sun to lower your risk of getting skin cancer and premature aging.

Current promotions



For all patients - \$100 off 1 cc syringe of Restylane Defyne. Treatment must be received by June 29, 2018. *Limited to 15 patients, and one syringe per patient.* Restylane Defyne is one of two new second generation filler products have been used in Europe under the name Emervel. This filler product, like the other Restylane family products (Silk, Restylane classic, and Lyft) is made of hyaluronic acid. ***The advantages of Defyne over the older Restylane products is that it causes less post-treatment swelling and it has more elasticity, resulting in a more natural looking result with facial expressions.*** The longevity is comparable to the other fillers, lasting up to a year when used in the lower face. The regular cost is \$590 per 1 cc syringe. So if you had significant swelling with fillers in the past, or wish to achieve more natural looking results in filling areas in the lower half of your face, now is a good time to try Defyne. For more information on Restylane Defyne: <https://www.restylaneusa.com/restylane-defyne>



For new patients or established patients that have never received filler treatments at the Rutland Skin Center before - \$50 off a single syringe of Restylane, Restylane Silk or Restylane Lyft. Treatments must be received by June 29, 2018. *Limited to one syringe per participant.*

Improve the look of moderate to severe frown lines with...

Dysport



For new patients or established patients that have never received Dysport at the Rutland Skin Center before - \$25 off one Dysport treatment (\$280 or greater), until June 29, 2018. No limits to the number of people who can participate in this offer. *Limited to one offer per person.*

Get an additional \$20 off the above offers if you have not yet registered for the Aspire Rewards program. To sign up for Aspire Rewards and get the \$20 treatment certificate click

here <https://www.aspirerewards.com/app/home.do#how-it-works> We can also help you sign up by calling Laurie at 773-3553 a few days before your appointment.

kybella®



For non-surgical **permanent** fat reduction - Kybella may be the answer for you. Dr. McCauliffe has been using Kybella successfully for double chins, and "off label" for jowls, bra-rolls, knee bulges, and arm and belly fat. It is nice to have this permanent fix for areas of unwanted fat. **Save \$200 on Kybella treatments.** Limited to three patients.

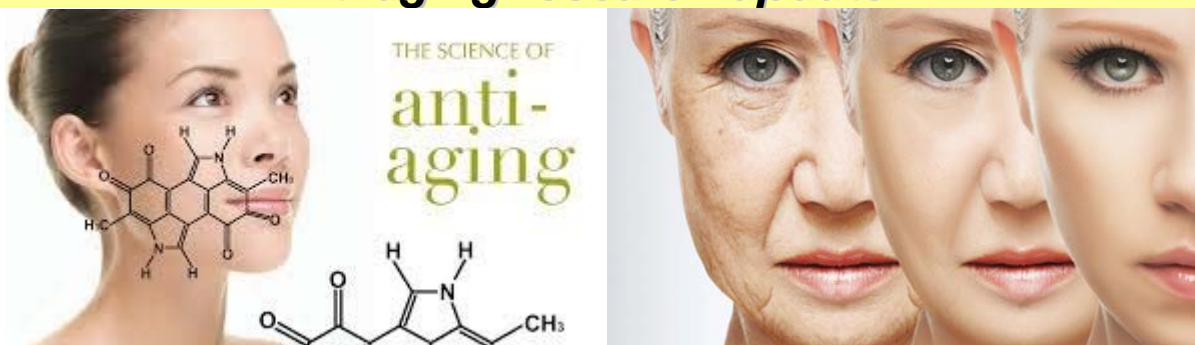
To participate in this promotion you must sign up with the Brilliant Distinctions reward program at https://www.brilliantdistinctionsprogram.com/?cid=tab_kyb_c If you need help signing up, call Laurie in our office at 802-773-3553.

The first treatment must be received by June 29, 2018. The \$200 will be subtracted from your second treatment. On average, patients need about three treatments for optimal or near optimal improvement. The cost per treatment usually ranges from \$350 - \$600, dependent on how large the treatment area is. We have had some patients that have only required one or two treatments to get the desired effect. The nice thing about Kybella is that the results are permanent so additional treatments are not needed to maintain the effects!

For more information on Kybella see: http://rutlandskin.com/#services_kybella

Call 802-773-3553 to set up a Kybella consultaion to see if you are a good candidate. If you choose to be treated, the \$79 consultation fee will be applied toward your treatment fee.

Anti-aging research update



In an earlier newsletter I mentioned promising research on a molecule called nicotinamide adenine dinucleotide (NAD). (<http://www.rutlandskin.com/Newsletter-Summer%202017.pdf>). Increasing NAD levels in mice reversed the aging process. This molecule not only slows down the aging process, as it also helps prevent DNA damage associated with other diseases including cancer. Human trials are underway.

"Dr. David Sinclair has spent his entire career focused on aging and now believes he's discovered a way to stay younger for longer. "We're absolutely talking about increasing the quality of life - preventing cancer, heart disease, diabetes, Alzheimer's," Sinclair said.

It starts with a molecule called NAD which humans need to live. As we age, the level of NAD in our cells drops, leading to DNA damage and the diseases of aging. In a new study in the journal CELL, Sinclair and his team at Harvard Medical School's Center for the Biology of Aging boosted NAD levels in the blood vessels of old mice.

"Now those blood vessels are young again. We get more blood vessels, more blood flow and the old mice, even the young mice, can run up to 50 percent, sometimes two times as far on a treadmill without getting tired," Sinclair said. {Makes me wonder whether NAD will become a performance enhancer for athletes that will require monitoring.}

Sinclair says human trials of the NAD booster are underway in Boston and ultimately, he hopes for Food and Drug Administration approval of a pill everyone could take.

"Just a single pill that they take every morning and it rejuvenates their internal organs and their systems so that you don't just feel young, but you actually are young," Sinclair said."

From: <http://www.wcvb.com/article/boston-researchers-reverse-aging-in-mice-study-shows/19562478>

If NAD proves to be effective and safe in helping us live longer healthier lives, it will become a sought after daily supplement, for humans and pets. If the average human life span increases significantly with NAD, other issues will need to be addressed including population control, and shortfalls in social security, pension and Medicare benefits.

New competitors for Botox, Dysport and Xeomin



In the United States we currently have three botulinum toxin products: Botox, Dysport and Xeomin. I have found that Botox and Dysport work similarly and have similar durations of effects. However I have found that Xeomin doesn't seem to last as long in some of my patients. Now there are two new products in the works. One will likely get FDA approval in the later half of this year and will be offered by Evolus, Inc. A second product will be brought to market by Revance Therapeutics, Inc. that is a longer lasting alternative compared to what is currently available. We still do not know how much longer lasting this new product will be compared to the other products. It would be a welcome addition if it adds months to the duration of the effects. We should all hope that more choices will create market forces that will lead to lower prices for consumers.

In closing, I hope you found items of interest in this issue of the ***Caring For Your Skin*** Newsletter. If you are not on the e-mailing list and would like to receive future newsletters via e-mail, or would like to have a particular topic covered in a future newsletter, e-mail your request to C4YSkin@gmail.com



Have an enjoyable summer and, as always, remember to use sun protective measures daily.
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