

# “Skin Health and Nutrition: Separating the Science from the Trends”

Webinar Questions Answered by Nancy Collins, PhD, RDN, LD, NWCC, FAND

*Please note that these are brief answers to complex questions and are not meant as medical advice. Please seek medical advice from your personal healthcare professional for more complete information.*

- Regarding Kennedy Pressure Injuries and skin failure, has there been any evidence for the projected timeline from presentation of skin failure/a diagnosed Kennedy pressure injury and death? For example, in the world of kidneys with relation to end stage renal disease when a patient chooses to stop dialysis, we can anticipate death within 2-6 weeks. Do we have an estimate like that for terminal ulcers yet?

The literature identifies two different presentations of Kennedy Terminal Ulcers (KTUs). The first presentation is bilateral and has the shape of a butterfly, pear, or horseshoe with irregular borders; it has a sudden onset on the sacrum or coccyx. The initial presentation is usually a blister or superficial skin loss, which progresses to a yellow or black necrotic wound. These KTUs may precede death by a few days to a few weeks. The second presentation, commonly called “3:30 syndrome,” manifests unilaterally with an intact dark spot or small macular area that rapidly develops (a matter of hours) into a larger, often necrotic wound. This presentation usually precedes death by a few hours, usually less than 24 hours.

For more information, read this: [bit.ly/3q2LvBP](http://bit.ly/3q2LvBP)

- What is the current thinking about chocolate or sugar and skin?

Research suggests there is no direct link between the components found in chocolate and skin conditions like acne. Eating an excessive amount of fat and refined sugars in the overall diet may trigger an inflammatory response from the body, leading to acne and other skin problems. And some people may be allergic, which is a different case. There is some research that shows chocolate with high cacao content may actually be beneficial to the body since it contains antioxidants and other minerals. As they say, everything in moderation.

- Is Botox a good solution for aging/ wrinkles. What are your thoughts?

Of course, I have many friends and colleagues who have had Botox and fillers and other procedures to ward off the aging process. Some came out looking refreshed while others came out looking odd and unlike themselves. We know these things work to reverse some lines and wrinkles, but it depends on the skill of the clinician administering it. One of my friends is bordering on being addicted to these types of procedures and has incurred quite a financial burden to maintain this every few months. It is a long-term commitment as Botox does not last very long. If it makes you feel better to try it and you can afford it and find a competent practitioner, great. But ultimately you must be comfortable in your own skin.

- Have you seen a collagen supplement that tests for toxins of lead and cadmium? I haven't found any. They all seem to test high when I look at the research. The marine animal-based ones seem to be the lowest, but do they have the same positive effects?

Data shows that many collagen supplements will test positive for measurable levels of heavy metals because of possible quality issues with sourcing and manufacturing. Stick with major reputable companies.

Both bovine and marine collagen provide the same benefits.

- Are you familiar with any plant-based sources of collagen?

Collagen supplements are made from the bones, muscles, skin, tendons, and ligaments of animals. It is not plant-based.

- What makes each type of collagen fiber type different from each other?

The simple answer is the chemical structure. Some 28 types of collagen types have been identified. They differ by how the molecules are assembled, the cell components that are added and where the collagen is used in your body. All collagen fibrils have at least one triple helix structure

- Is hyaluronic acid helpful for aging? How much would you suggest?

Here is a nice summary of hyaluronic acid from the Cleveland Clinic that will get you up to speed on this topic.

<https://my.clevelandclinic.org/health/articles/22915-hyaluronic-acid>

- Is there a concern with taking collagen supplement and/or how much with Dupuytren's disease?

In Dupuytren's contracture there is an increase in the ratio of type III to type I collagen. It would be best to speak with a physician for more on this topic.

- Is bone broth superior to collagen supplements since it comes from the bones rather than processed skin?

I am not sure "superior" is the word. Bone broth can be easily made at home so it might be more convenient and more cost effective for some people. There are pros and cons to both and it depends on the source of both. If you are making your own bone broth, obviously the ingredients will determine the quality.

- Are "types" of collagen listed in the ingredient/nutrition label on supplements or somewhere else on the label? Want to be able to tell my patients where to look.

A reputable product lists the types right on the package. I typically see it on the front of the packaging, but every product is a little different. I think the point is to make sure you read the package and the labels.

- If collagen is from a bovine source, do you have to consider "mad cow" disease?

I have not heard of this being a problem and to be honest I never even thought of this before. I did a quick search and found this information: There is little evidence that mad cow disease can be transmitted through collagen, as collagen is most typically derived from cow dermis, not the central nervous system where BSE typically infects.

- In the meta-analysis, how much collagen did they need to take for 90 days?

A meta-analysis is a research process used to systematically synthesize or merge the findings of single, independent studies, using statistical methods to calculate an overall effect. In the de Miranda study they combined the findings of 19 different studies and each of those studies used a different methodology with different amounts of collagen. Please read the meta-analysis here <https://pubmed.ncbi.nlm.nih.gov/33742704/>

- Is Retin-A the end all-be all? For example, the Neutrogena retinol eye cream effective?

The following is solely my opinion. When I used Retin- A it irritated my skin so much that I was in serious pain. My skin was raw. I personally cannot tolerate it, but I am very fair skinned with sensitive skin. Perhaps others tolerate it better. But I do agree that some sort of retinol product should be a part of everyone's skin regimen. Retinol is much weaker than Retin-A but still effective. . Retin-A is much more powerful than retinol. Retinol first must be converted into retinoic acid in order to be used by the skin. Retin-A can be used directly by the skin as soon as it's applied. The retinol product I personally use is Dr. Zenovia Advanced Retinol Night Repair Treatment. I have used the Neutrogena eye cream but it irritated my eyes.

- Have you heard of or read The Collagen Diet by Pamela Shoenfeld? Or any other collagen diet/cookbooks you would recommend to learn more about this topic and cooking?

I have not read the Shoenfeld book. But I have read the Perricone book, which is more about inflammation, but you may find it helpful.

- Does caffeine interfere with the absorption of collagen? I believe the science may be conflicting but would love to hear your thoughts.

I agree there are a lot of opinions on this. Some say caffeine can cause your blood vessels to constrict, and as a result, the vessels at the surface of your skin won't deliver as many antioxidants and nutrients to promote collagen production. Other say drinking things high in caffeine have no effect. I think we need research, not just opinion. Here is an actual research study that begins to delve into these issues. [bit.ly/44O9Biv](http://bit.ly/44O9Biv)

- What collagen product would you recommend for use in long term care for wound healing?

I personally have had much success with Expedite from Medtrition. You can get free samples at [www.ExpediteHealing.com](http://www.ExpediteHealing.com) under the Healthcare Professional section.

- Are those PO/OG products available to consumers already?  
Yes, there are several companies making products including Medtrition which markets Expedite for wound healing. You can get free samples at [www.ExpediteHealing.com](http://www.ExpediteHealing.com) under the Healthcare Professional section.
- Were there any collagen studies that found no correlation?

You did not specify a correlation with *what* so it is hard to accurately reply to your question, but I will assume you mean wrinkles, firmness, etc. I am sure there is probably a study out there that found no correlation but most of the ones I read have found a positive effect.

- Is collagen effective for age 60 and above or is it ineffective?

It is effective no matter what the age. It is never too late to improve yourself. But keep in mind it is not only the collagen. It is overall diet quality, sun protection, topical skin care, genetics, pollution, and more.

- If the collagen is hydrolyzed, why is it necessarily put back together to collagen?

I am not certain I understand your question but let me say that collagen is hydrolyzed so that manufacturers can produce various products. It is a necessary step in the manufacturing process.

- Do you advise taking these collagen peptides on an empty stomach? Or any other ways to take it that you recommend?

You do not need to take collagen on an empty stomach to obtain the benefits. I recommend it with breakfast so that it becomes a routine. Consistency is key with this and more important than the time of day.

- In regard to collagen supplements, is a powder, gel or pill shown to be better absorbed than the other?

Each manufacturer says their form is the best. I don't think one is better than the other because it depends on the specific product. A high-quality powder may be better than some liquids, but the reverse can also be true. Read labels, question the claims (if it sounds too good to be true, it probably is), and stick with reputable manufacturers.

- Is Jell-O/gelatin a good source of collagen protein? Would this be a good and inexpensive source of collagen?

Jell-O brand gelatin is in fact gelatin, which does have benefits. That said one serving size of Jell-O is not concentrated enough to have much of an effect. There is a similar product used in health care called Gelatein if you are looking for a gelatin product particularly. Check out this link.

<https://www.medtrition.com/product/gelatein/>

One serving of Jell-O contains about 1 g protein while one serving of Gelatein contains 20 g protein.

- Is topical collagen more beneficial than po collagen?

Topical creams and lotions may contain collagen, but the external application is not as effective as ingested collagen supplements. But you need a good topical regimen as well for optimal skin health.

- Do you recommend a particular brand of collagen?

There are many good brands. I suggest you try a variety until you find you like.

- What is "verisol" collagen powder?

Verisol is a trade name from a specific company. It is their marketing of their own product.

- Is there an educational document that you have found to be beneficial to provide to our patients that would be written in terms that the "common" person would understand?

No but this is a good idea. I will try to write one at a later date 🍌

- Do you recommend any supplements for those with wounds resulting from peripheral artery disease?

PAD requires medical management. No nutritional product can compensate for the narrowing or blockage of the vessels that carry blood from the heart to the legs. PAD is primarily caused by the buildup of fatty plaque in the arteries (atherosclerosis). That said, wound healing requires energy (calories), protein, amino acids, vitamins and minerals, and collagen dipeptides. I would definitely try the traditional nutritional supplements, but PAD is little bit different than treating a pressure injury or surgical incision because at the root, you must restore the circulation.

- If collagen is helpful in the process of wound healing, is it still recommended for keloid formers?

Keloids are the result of excessive collagen production and can produce an 'overhealing' effect that results in excessive scar tissue. If someone is prone to this I would not supplement with collagen. Here is an interesting article on vitamin D and keloids. Mamdouh M, Omar GA, Hafiz HAS, Ali SM. Role of vitamin D in treatment of keloid. J Cosmet Dermatol. 2021 Mar 15.

- What are some topical products you would recommend in addition to collagen peptides?

I would need to know what problem you are seeking to solve with topical products to give a recommendation. In general, I would say every regimen need a retinol.

- Is there a commercial product available today that utilizes PO, OG and/or CHs, for wound healing practitioners to purchase/supply for patients (e.g., similar to when Juven came out w/ HMB)?

Yes. I use Expedite from Medtrition. You can get free samples at [www.ExpediteHealing.com](http://www.ExpediteHealing.com) under the Healthcare Professional section.

- Are additional collagen peptides in the diet harmful to someone with a poor GFR?

This is a very complex topic that requires clinical judgment and understanding the patient's goals. I have published an article that discusses this in detail in the journal *Wound Management and Prevention*. You can access it here <https://www.hmpgloballearningnetwork.com/site/wmp/nutrition-matters/wounds-versus-kidneys>

- Would you recommend collagen in post op bariatric patients to help with sagging skin that results from rapid weight loss? They do need to maintain 60-80g of protein daily and >64oz water daily and take vitamins!

It is not going to hurt but sagging skin is unavoidable with rapid weight loss after extreme obesity. People have reported improvement with massage, compression garments, etc. but ultimately body contouring surgery is often needed to remove the excess skin.

- In general, how do CH products compare to plain old gelatin? Do you know of any studies that compared CH supplementation to other types of protein supplementation?

Plain old gelatin has its role and has similar properties but one serving is not concentrated the way some products are such as Gelatein from Medtrition. One serving of plain old gelatin typically has 1 g protein while one serving of Gelatein, a medical food, has 20 g protein.

- Is there a product like Arginaid or Juven that has the low molecular weight collagen peptides to use in clinical wound healing?

Yes, Expedite from Medtrition. You can get free samples at [www.ExpediteHealing.com](http://www.ExpediteHealing.com) under the Healthcare Professional section.

- What is your take on Arginaid? Would you only take Arginaid in an inpatient setting for wound healing? Or can you take the powder at home for collagen synthesis?

You can certainly use Arginaid in both the inpatient and outpatient setting. I do not see it being used as much as it was about ten years ago because the research has shown that much more than arginine is required for wound healing. The science has advanced and we now have more products to choose from that reflect the latest science.

- Would a patient with whole leg lymphedema benefit from incorporating collagen into their diet assuming their protein intake is adequate? Also, would a lymphedema patient require a relatively higher intake of protein?

Lymphedema is a complex disease that requires compression as the number one intervention for management and well as obesity management. Here is a good summary <https://www.pagepressjournals.org/index.php/vl/article/view/8220/8246>

- Does it matter what collagen supplements are mixed in? Does heat or a hot beverage denature the protein and make it less effective.

I have heard people say yes and say no. My personal opinion is that it does not matter but I would use hot water and avoid boiling water.

- What is the benefit of collagen over taking protein from food that has the amino acid that make collagen?

If you have an optimal diet every day, then it probably does not have much benefit. The problem is most people do not have an optimal diet. Plus, they may have excessive alcohol use, exposure to environmental pollution, insufficient sleep, lack of exercise, other nutrient deficiencies, and effects from smoking and sun exposure. You must look at the whole picture and see where you are as a whole. Supplements can fill in gaps and some say the supplements are better absorbed so there may be that too.

- Does collagen help crepey skin or is that past help? Does micro-needling help collagen or just temporary results?

It might help crepey skin with regular consistent use, but my feeling is that genetics also plays a role here. Micro-needling does help if done correctly. Micro-needling creates “micro-injuries” in the skin. These tiny holes stimulate the body's natural wound-healing process by producing collagen and new skin cells. Use caution though – I have seen some micro-needling done too deep. You need the correct tool and the correct technique. Start with one small area until you get the hang of it or see a professional.

- How can you tell what products are reputable?

When I go to a web site and the promises seem over the top, I know I need to question it. If the price is outrageous for their “secret” blend or something similar I know that something is amiss. I don’t think there is any way to know for sure because the FDA does not regulate these items but use your clinical judgment, read reviews, and stick with companies that you know.

- I saw the placenta was mentioned. Is collagen recommended as a supplement for pregnancy?

Collagen supplements are generally considered safe during pregnancy but dosage and quality matter.

- In the metanalysis, is there any information on the effects of stopping supplementation and reversal of the benefits? Would one need to continue supplementation to maintain the benefits for skin health? (aging, wrinkles, hydration, elasticity)

Yes, you would need to continue the supplement to continue the benefits. Consistency is key.

- With bone broth there is a caution for people with gout, is there a similar concern for collagen supplements and any concerns for people with cancer in particular skin cancer?

Gout is a form of arthritis caused by an excess of uric acid in the bloodstream. Uric acid is a waste product produced when the body breaks down purines, which are substances found naturally in the body as well as in most foods. Gout is mainly controlled by medications these days rather than diet. I don’t think bone broth would cause gout to worsen but it would depend on the individual and the rest of their diet. As for skin cancer, I am not familiar with a link to collagen supplements.

- Is it safe to say when sourcing a reputable supplement, that a bioactive collagen peptide supplement contains collagen hydrolysates?

Yes, collagen hydrolysate is just another way to phrase it.