

“Collagen Peptides in Clinical Practice: Mechanisms, Evidence, and Applications for Skin, Joint, and Bone Health”

Webinar Questions Answered by Dr. Shiloah Kviatkovsky, PhD, CISSN

- Are bone broth and other animal sources contaminated with heavy metals?
They can be, but it depends on the animal, sourcing, environment, and preparation. Heavy metals accumulate variably in tissues, but these supplements come from food grade animals, so the risks would be the same as consuming the meat from these animals. For supplements, the only way to ensure the product is free of contaminants is by third-party testing (COA) with results for lead/arsenic/cadmium/mercury.
- How significant is the type of collagen for benefit?
The current body of evidence suggests that it is very significant. Type 1 and 3 for skin, joints, tendon/ligament support, and bone markers. Type 2 primarily for cartilage in joints and OA.
- How much cartilage from food would be the equivalent of a typical supplement? For those of us who do consume poultry/meat bones & cartilage when we eat.
Practically, it's hard to equate because supplements deliver standardized peptide profiles and doses (often 2.5–15 g/day) and cartilage intake varies widely in collagen content and digestion. Eating cartilage/bones can contribute collagen amino acids, but it's not dose-precise like supplementation
- Dr. Kviatkovsky has mentioned that the Western diet lacks food sources of collagen. Can she share examples of other dietary patterns where collagen is a regular part of the diet?
Examples include traditional dietary patterns emphasizing:
 - bone broths/stocks, tendon/ligament-rich stews
 - skin-on fish or poultry, oxtail, shank, short ribs
 - “nose-to-tail” eating traditions across many cultures (East Asian, Mediterranean, Latin American, Eastern European)The modern Western diet tends to under consume these collagen-rich cuts.
- Any benefits for breast cancer survivors to use collagen peptides?
There's no strong clinical evidence that collagen peptides specifically improve cancer-related outcomes. However, collagen peptides may support skin/hair/nails or joint comfort in some people, and can be a useful protein adjunct if tolerated. For survivors, I recommend: clear it with oncology and if actively treated or immunocompromised and choose a reputable or third-party tested product to minimize contaminant risk.
- What about collagen stimulators such as products like BIOSIL that help the body stimulate it's own collagen manufacturing?
Since these products may support connective tissue biology, they may be helpful, however, data is limited on these products.
- Are there any drug interactions with collagen - what are the contraindications to collagen supplementation?
Collagen is generally low risk, but use caution in:
 - Severe renal disease (protein load considerations)
 - Significant food allergies (marine/fish or bovine sources)
 - Patients requiring strict protein restriction

Most common “contraindications” are actually tolerability-related (GI upset). Always document supplement use in med lists.

- What would you recommend for someone who doesn't need collagen for aging, but for reduced wound healing, who is in their mid-30s?
First: assess root causes (energy deficit, inadequate protein, iron deficiency, zinc, vitamin C, vitamin A, glycemic control, steroids, smoking, vascular disease). Collagen peptides can be adjunctive, but only after foundational nutrition is adequate. For wound support, collagen peptides are often used at ~10–15 g/day, and pairing with vitamin C is reasonable.
- How long does collagen benefit for skin last after the eight-week intake?
We don't have perfect “washout duration” data. In practice, benefits appear to fade gradually if discontinued—similar to many nutrition-based interventions—because collagen turnover is continuous. If a patient stops, I counsel that results may diminish over weeks to a few months depending on baseline aging factors and lifestyle.
- I have a lot of clients who take collagen in hopes that it will improve hair health. Is there any good evidence for this?
Hair evidence is weaker and less consistent than skin. Some studies suggest improvements in brittleness and subjective appearance, but objective hair growth data are limited. For hair loss concerns, prioritize addressing overall nutrition.
- I have heard many people complain of GI bloating and upset from both bovine and marine collagen. Can you explain why this happens and what is the best approach if these people want to supplement with collagen but can't tolerate it?
Common reasons:
 - high dose too quickly (start low, titrate)
 - sweeteners/sugar alcohols/flavor additives
 - histamine sensitivity (some marine products)
 - individual digestion variabilityBest approach: start at 2.5–5 g/day, switch brands, choose unflavored, split dosing, take with food, or try a different source (bovine ↔ marine).
- Does collagen help improve the bursa around joints?
No direct evidence that collagen specifically “repairs bursa.” Most evidence targets cartilage symptoms/function (OA) or connective tissue remodeling signaling. I would not claim bursa-specific benefits.
- Can you speak to the potential benefit of Collagen for dry eye syndrome?
Evidence is limited. Collagen is not a standard dry eye therapy.
- What type(s) of peptides are Fortigel?
FORTIGEL® is a branded collagen peptide ingredient optimized/ marketed for joint cartilage support, especially for cartilage and OA symptoms. It is from a bovine source, which most likely makes it a type I and III collagen product, however, they do not specify.
- Is there any benefit to taking a liquid collagen vs powder?
No inherent advantage to “liquid” if the dose and peptide content are equivalent. Liquids often cost more and may include additives. I prefer powder for dose flexibility and lower cost per gram.
- Is there a way to equate dosage between collagen peptides and gelatin?
Gelatin and collagen peptides are related, but gelatin is less hydrolyzed and may digest differently. A practical equivalence used in sports literature is ~10–15 g gelatin/collagen for connective tissue timing protocols, especially when paired with vitamin C (e.g., pre-loading protocols).

- I work in a facility that provides hydrolyzed collagen as a means to increase overall dietary protein intake. What are your thoughts on this? Do you think collagen supplements are limited to other benefits as presented or can they also promote positive nitrogen balance in people with low overall protein intake?

It can help raise total protein intake, but collagen is an incomplete protein (low in tryptophan; not “high-quality” for muscle protein synthesis compared with whey/animal proteins). It may support nitrogen intake, but shouldn’t be the primary protein strategy. Use it as a supplemental add-on, not a replacement for complete proteins.

- Please explain more about hydrolyzed collagen vs undenatured collagen?
 - Hydrolyzed collagen peptides: broken into small peptides → absorbed as peptides/amino acids; dosed in grams.
 - Undenatured type II collagen (UC-II): not hydrolyzed; retains epitopes → works via immune/oral tolerance pathways; dosed in mg.

They are not interchangeable.

- Does she have any product recommendations, or what to look for, and/or not look for?

I recommend focusing on quality criteria rather than brands:

- Third-party testing (NSF, USP, Informed Choice)
 - clear labeling of grams per serving (peptides) or mg dose (UC-II)
 - minimal additives if GI sensitive
 - transparent sourcing + COA on request
- How do you use collagen... do you take it in a drink, etc., timing, and do you add vitamin C?

For general skin/joint support: daily consistency matters most. For tendon/ligament/loading goals: take 30–60 minutes pre-rehab/loading, and pairing vitamin C is reasonable to support collagen synthesis pathway
 - Is there a specific preferred collagen type for bones?

Evidence for bone outcomes is primarily with collagen peptides (grams/day) over months; bone adaptation takes time. UC-II is not a “bone” product.
 - Can you talk about collagen during chemoradiation treatment? thank you!

This is a case-by-case oncology decision. Main concerns are:

- GI tolerance
- infection risk if immunocompromised (choose third-party tested products)
- ensuring adequate total protein/energy first

I would not position collagen as essential during active chemo/RT, but it may be acceptable with oncology approval.

- Are Collagen Peptides or UCII covered by insurance

Typically no (most are OTC supplements). Some patients may use HSA/FSA depending on plan rules, but it’s generally out-of-pocket.

- Collagen from animal parts (hides & bones) can accumulate heavy metals (lead, mercury, etc). How much of the research shows that marine-sourced collagen might be cleaner? For example, mercury is fat-soluble, not skin-soluble. Is this a better choice for pregnant women?

Marine collagen can still contain metals depending on sourcing. A study specifically examined toxic metals/metalloids in marine collagen supplements and performed risk assessment.

Cammilleri G, Tortorici M, Pantano L, Galluzzo FG, Pulvirenti A, Buscemi MD, Lo Dico GM, Macaluso A, Calabrese V, Jacob UM, Ferrantelli V. Toxic metals and metalloids in collagen supplements of fish and jellyfish origin: Risk assessment for daily intake. Open Med (Wars).

2025 Apr 15;20(1):20251141. doi: 10.1515/med-2025-1141. PMID: 40292256; PMCID: PMC12032979.

For pregnancy: prioritize third-party tested products with transparent COAs; avoid “beauty blends” with extra botanicals unless clearly tested.

- Is marine collagen consistently supporting the same positive outcomes as bovine?
Most outcomes appear similar when the dose and peptide profile are comparable, but direct head-to-head trials are limited. Product quality matters more than source in many cases.
- What should we teach patients to look for when purchasing a collagen supplement - are there certain criteria that make it a higher quality product?
 - dose transparency (grams)
 - type disclosed (peptides vs UC-II)
 - minimal fillers/sweeteners
 - third-party testing + COA
 - realistic claims (avoid “rebuilds cartilage” promises)
- Is there any patient population you would avoid use of collagen?
I’d avoid or use caution in:
 - severe allergy to source species
 - severe kidney disease needing protein restriction
 - patients with major GI intolerance despite titration
 - those with disordered eating patterns using collagen as meal replacement
- Do we know how collagen supplements affect blood sugar? When counseling patients on building a balanced plate, I am helping them get to 20-30g of protein per meal for good blood sugar regulation (slowing the absorption of glucose) - among other things like healthy fats and fiber, of course. If we are low on protein, does adding a collagen supplement have a similar affect on glucose absorption as dietary protein sources?
Collagen may help somewhat as a protein add-on, but it is not equivalent to high-quality complete proteins for metabolic signaling. For glucose control, prioritize full meals with complete protein + fiber + fat. Collagen can be a tool, but shouldn’t replace meal protein targets.
- Can you speak about VERISOL collagen. Also is there a recommendation for wound care?
VERISOL is best known for skin RCT data (e.g., Proksch 2014). For wound care, evidence is more mixed and typically not centered on VERISOL specifically—more often on collagen peptides broadly and adequate protein/energy + micronutrients.
- Is it beneficial to time supplementation separate from meals so there is no competition between amino acids taken in from a meal?
Not necessary for most goals. If using pre-loading for rehab, taking it 30–60 minutes pre-session is reasonable. For GI sensitivity, taking with food may help.
- What hydrolysis method are we looking for?
Patients won’t usually see method details. Instead look for:
 - “hydrolyzed collagen peptides”
 - low molecular weight (often 1–5 kDa reported)
 - reputable manufacturer with testing and clinical data
- Is there a problem or concern with taking collagen longer than the time frames you listed for skin/joint, etc?
Generally safe long-term if:
 - total protein intake is appropriate
 - product is quality-tested

- no GI intolerance

Reassess after an evidence-based trial window (skin ~8–12 wks; joints 8–24 wks; bone months).

- Is there any evidence to support collagen for hair growth, especially in relation to acute telogen effluvium and not necessarily age-related hair loss?

Evidence is limited. TE is often driven by stress/illness, iron deficiency, thyroid issues, low intake, postpartum shifts. Collagen may support overall protein intake but should not be positioned as a primary TE therapy.

- How can we tell if a supplement is type 1, 2 or 3?

The label should state:

- Type I/III commonly from bovine hide
- Type II often from chicken cartilage (UC-II)

If it doesn't specify, assume it's generic hydrolyzed collagen peptides (often mostly type I).

- Is there any evidence or research that recommends collagen for osteoporosis prevention, prior to osteoarthritis?

There is emerging evidence for bone markers/BMD over long durations, but collagen should be considered adjunctive, not primary prevention. Standard prevention remains: resistance training, vitamin D/calcium adequacy, fall prevention, and osteoporosis screening where appropriate.

- How does bone broth perform as a source of collagen compared to supplemental sources?

Bone broth protein/collagen content varies widely and is rarely dose-standardized. Supplements are easier to match to evidence-based dosing.

- How can one tell what gelatin products are effective?

Look for:

- grams per serving
- minimal additives
- reputable manufacturer

For connective tissue protocols, total grams matter more than marketing.

- What are the differences between marine and bovine collagen peptides?

Main differences are source allergen considerations, taste, and potential contaminant perception. Efficacy is likely similar when peptide profiles/doses match, but quality varies by brand.

- How much vitamin C is optimal to pair with collagen?

No universal "magic number," but modest doses consistent with normal supplementation (e.g., ~50–200 mg) are commonly used for collagen synthesis support. Avoid megadoses unless clinically indicated.

- What are some examples of brands, so I can compare collagen source and hydrolysis method? Essentially, where can I start researching options when a patient wants to try collagen for their health concern?

Look for products using clinically researched brands and ingredients that are specific to your clients' health concerns. Companies do not generally disclose their hydrolysis methods or formulation specifications.

- Can collagen be mixed into hot liquids? Is it broken down or denatured when heated? What is the best way to take it?

Collagen actually dissolves better in warm/hot liquids and has already been hydrolyzed into peptides and do not denature. Just avoid boiling collagen products for long periods of time. Hence, you can add collagen to coffee, soups, and foods like oatmeal.

- What foods are high in pro-collagen amino acids?

Collagen itself is high in glycine, proline, hydroxyproline. Other supportive amino acid sources: meat, dairy, legumes (but collagen-specific amino acids are highest in connective tissues/gelatin).

- Would consuming collagen impact one's PT/INR (raising it)?
There's no strong evidence that collagen peptides meaningfully affect INR. The bigger INR concern is vitamin K variability (greens, supplements) and drug interactions. Still, for anticoagulated patients: monitor and keep intake consistent.
- On the slide titled Collagen Peptides and Skin RCT, BCP is administered in the treatment. What does BCP stand for?
BCP typically refers to Bioactive Collagen Peptides (often used interchangeably with "specific collagen peptides" in the literature).
- Is there a difference or evidence on IV therapy way of getting these peptides?
There is not strong clinical evidence supporting IV collagen peptide therapy for these outcomes. Most evidence is for oral dosing and systemic peptide appearance.
- How do you feel about the Collagen Stewardship Alliance's validity as a source of information?
Treat any trade/industry group as a potentially biased source. Use them for general info, but anchor clinical recommendations in peer-reviewed RCTs/meta-analyses and independent testing standards.
- For skin benefits, how does oral collagen intake compare to topical products with collagen?
Topical collagen primarily moisturizes; it generally does not penetrate deeply to remodel dermal collagen significantly. Oral collagen peptides have better evidence for measurable biophysical changes in skin in some RCTs.
- I have been looking at Collagen Peptide Supplements available OTC from oral to powders and gummies - any difference or preference to forms?
Main issue is dose:
 - Gummies often under-dose collagen (and add sugar)
 - Powders are easiest to reach clinically relevant grams/dayChoose the form that improves adherence while meeting dose.
- Some cancer survivors ask about safety of collagen. Is there a reason for concern in this population?
Most concerns are quality control and tolerability, not collagen itself. Encourage third-party testing and oncology alignment if on active treatment.
- Will collagen supplementation be helpful, as in the dosing for OA management?
Evidence supports modest symptom improvement in OA with collagen derivatives, especially over 8–24 weeks, with good tolerability overall.
- In addition to therapeutic use, is collagen used as a preventative measure for sports-related injuries?
Evidence for prevention is still emerging. The strongest practical use case is as an adjunct to training/rehab, especially connective tissue loading contexts, rather than a guaranteed "injury prevention" supplement.

Disclaimer:

Financial support for this presentation was provided by Orgain. The views expressed herein are those of the presenter and do not necessarily represent Orgain's views. The material herein is accurate as of the date it was presented and is for educational purposes only and is not intended to be medical advice. The material presented in this webinar, is not intended to be a substitute for professional medical advice, diagnosis, or treatment. You should seek the recommendation of a medical professional regarding a medical condition or treatment or before starting a new nutrition and/or health regimen. Reproduction or distribution of these materials is prohibited.

©2026 Orgain, LLC. All rights reserved. Orgain, LLC is providing these webinars on an "as is" basis and makes no representations or warranties of any kind with respect to the webinars. Orgain, LLC nor any of its directors, employees or other representatives will be liable for damages arising out of or in connection with the use of this document. This is a comprehensive limitation of liability that applies to all damages of any kind, including (without limitation) compensatory, direct, indirect or consequential damages, loss of data, income or profit, loss of or damage to property and claims of third parties.