

TECHNICAL FOCUS Collagen Replete™ // Apr. 09, 2021

# Type I & III bovine collagen peptides **Collagen Replete**™

Cartilage & Bone

SUPPORT FOR HEALTHY:\*

Hair, Skin & Nails

\*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure or prevent any disease.

Tendons, Muscles & Ligaments

• Research shows that collagen production in the skin declines after age 20. Once women hit menopause, their collagen synthesis decreases even further.<sup>1</sup>

Photo Right: The skin structure layer *Microstructure (3D rendering)* 







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Note: If pregnant or nursing, consult your healthcare practitioner before using any nutritional supplement.

## Collagen Replete<sup>™</sup>

## Grass-fed bovine collagen peptides to support connective tissue & combat the effects of aging\*

Available in a great-tasting natural fruit-flavored liquid, Collagen Replete<sup>™</sup> helps counteract the loss of collagen that occurs with aging.\* It features 3,000 mg of collagen peptides per serving, from grass-fed bovine hide, providing support for connective tissue and helping combat the effects of aging on hair, skin, nails, joints, bones, tendons, muscles, and ligaments.\*

## Specifications:

Available in 16 fl oz (473 mL)

Serving Size

1 Tablespoon (15 mL)

Servings Per Container 31

## Directions:

Take one tablespoon (15 mL) once per day or as directed by your healthcare practitioner. Mix with water or juice. Shake well before use.



#### Features:

- Collagen peptides are easily absorbed and won't gel
- Convenient liquid form allows for higher dosing that mixes well with water or juice.
- Subtle mixed-fruit taste is a pleasure to take\*

Amount Per Serving	
Calories	20
Total Carbohydrate	2 g
Total Sugars	2 g
Includes 0 g Added Sugars	
Vitamin C (as calcium ascorbate)	40 mg
Collagen Peptides	3,000 mg

**Other Ingredients:** Purified water, organic agave nectar, ionic minerals, citric acid, mixed natural fruit flavor, sodium benzoate.

**Does Not Contain:** Milk, eggs, fish, shellfish, tree nuts, peanuts, wheat, soy.

**Caution:** Keep out of reach of children. If pregnant, nursing, taking any medication or have any medical condition, please consult your healthcare practitioner.

**Storage:** Keep tightly closed in a cool, dry place. Refrigerate after opening.





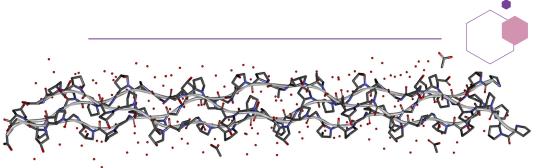


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## Key Ingredients in Collagen Replete<sup>™</sup>

**Collagen peptides** provide crucial structural support for the connective tissue of the body.\* It also contains the amino acids the body uses to build keratin, another structural protein that makes up hair and nails.\* In clinical research, collagen has been shown to increase skin elasticity, hydration, and wrinkling; reduce broken and brittle nails; and support joint comfort.\* It may also promote the healing of musculoskeletal injuries.\*

**Vitamin C** is necessary for the synthesis of collagen.\* In fact, the tissue breakdown seen in scurvy, the vitamin C deficiency disease, is due to loss of collagen.\*



Above: Hydration structure of a triple helix collagen peptide molecule



## Collagen Production Declines with Age

It may be surprising to learn that the peak age of collagen production in the skin is 20. After that, it declines by 1 percent annually.<sup>1</sup> Once women hit menopause, their collagen synthesis falls even further.<sup>2</sup> Other factors that can decrease collagen include smoking, sugar consumption, and sun exposure.

While it's impossible to prevent age-related reductions in collagen synthesis, high quality supplements can help replenish what's been lost. Research indicates that supplemental collagen peptides are absorbed intact and accumulate in the skin and cartilage.\*<sup>3</sup>

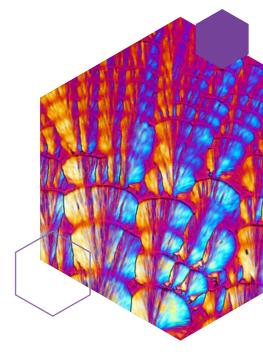


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## The Three Types of Collagen

The three most-researched types of collagen are Type I, Type II, and Type III. A full 90 percent of the body's collagen is in the form of Type I, which is found in the skin, organs, bones, tendons, and ligaments. This is the best collagen for beauty benefits and general connective tissue support.\* Type II is mainly found in cartilage. Type III provides structure to muscles, organs, and blood vessels. It often occurs with Type I collagen.<sup>4</sup> Collagen Replete™ features both Type I and Type III collagen.

Collagen supplementation may support healing of musculoskeletal injuries, such as sprains, strains, ruptures, or breaks of musculoskeletal tissues\*



Above: Abstract polarizing micrograph of ascorbic acid crystals, with radiating fans of color. Taken at 100x in a polarizing microscope

## Why Collagen Peptides?

Collagen peptides are tiny proteins. The collagen has been hydrolyzed, which means it has been broken down into smaller particles. Hydrolyzation has two benefits. First, the peptides' small particle size makes them easier absorb. And second, hydrolyzation prevents the collagen from forming a gel when added to water.

## The Role of Vitamin C

In addition to collagen peptides, Collage Replete™ also includes 60 mg of vitamin C per serving. While collagen peptides help counteract the reduced collagen synthesis that occurs with age, vitamin C supports the body's own natural production of collagen.\*

To understand exactly how essential vitamin C is to collagen manufacture, consider scurvy. In this vitamin C deficiency disease, the connective tissue that binds the body together breaks apart, resulting in tooth loss, bulging eyes, muscle pain, skin lesions, and dry, breaking hair. For optimal collagen production, it is crucial to maintain adequate levels of vitamin C.\*





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## Researched Benefits of Collagen Peptides

## Cartilage, Bones, Tendons, Muscles, and Ligaments

Collagen is the primary component of the extracellular matrix found in connective tissue. This kind of tissue binds other tissues of the body together. Cartilage, bones, tendons, muscles, and ligaments are all examples of connective tissue.

While Type II collagen is usually recommended for supporting joint health, collagen peptides can help too.\* A double-blind, randomized, multi-center study of 200 patients tested the effects of 1,200 mg of hydrolyzed collagen versus placebo. After six months, a greater number of participants in the collagen group experienced a clinically significant improvement in joint health than in the placebo group.<sup>\*12</sup>





Collagen supplementation may also benefit the bones, tendons, muscles, and ligaments.\* It has been known for some time that type I collagen is associated with bone strength.\* The genetic disease Osteogenesis Imperfecta results from mutations to the Type I collagen genes, resulting in decreased production of Type I collagen.<sup>13</sup> It has also been found that age-related changes to collagen crosslinking in bone may negatively affect bone strength.\*<sup>14</sup>

Though research is still in the early stage, collagen supplementation may support healing of musculoskeletal injuries, such as sprains, strains, ruptures, or breaks of musculoskeletal tissues (i.e. the bones, muscles, cartilage, tendons, ligaments, and joints).\* A pilot study that added a supplement of 5,000 mg of gelatin enhanced with vitamin C to an intermittent exercise program found it improved collagen synthesis.\* The researchers concluded this supplement "could play a beneficial role in injury prevention and repair."\*<sup>15</sup> Since hydrolyzed collagen is absorbed more efficiently than gelatin (unhydrolyzed collagen), it is reasonable to assume that collagen peptides would yield similar results at a lower dosage.

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#### Skin

Many clinical studies have demonstrated the beneficial effects of hydrolyzed collagen on skin health at a dosage of 3,000 mg or less. Collagen peptides have been shown to increase skin elasticity and hydration,<sup>5,6</sup> decrease wrinkles and redness,<sup>7,8,9</sup> and even improve skin appearance in women suffering from moderate cellulite.\*<sup>10</sup>

#### Nails

Collagen may also improve the health and appearance of nails.\* An open-label 2017 study found that 64% of participants taking 2.5 grams of collagen peptides daily experienced stronger, less brittle nails.\*<sup>11</sup> They also enjoyed a 42% decrease in the frequency of broken nails and a 12% increase in nail growth rate.\*

## Conclusion

You can help replenish what age takes away, with supplemental collagen. Collagen Replete™ helps keep your skin, nails, joints, bones, tendons, muscles, and ligaments youthful longer.\* And because it comes in a liquid, there are no pills to take, just a great-tasting natural fruit-flavored drink!





## **Scientific References**

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