

The Ultimate Guide to Bone Broth: Nature's Collagen Supplement

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STORY AT-A-GLANCE

- › Homemade beef bone broth is a budget-friendly and nutritious dietary cornerstone, rich in collagen, healthy fats, calcium, magnesium, phosphorus, silicon, sulfur, trace minerals, chondroitin and glucosamine
- › Bone broth helps “heal and seal” the gut lining, which is important for optimal health and disease prevention
- › Abundant in collagen, bone broth supports tissue integrity, muscle repair and overall longevity, surpassing costly supplements
- › Harnessing the convenience of a pressure cooker like the Instant Pot streamlines bone broth preparation, ensuring safety and efficiency
- › From sipping it warm for comfort to enhancing soups, stews and sauces to reviving leftovers, bone broth elevates dishes with rich flavor and nutritional value

According to an old South American proverb, "Good broth will resurrect the dead."¹ While this assertion may verge on hyperbole, it underscores the longstanding reverence for this wholesome food throughout history.

Homemade bone broth made from beef bones is as “staple” as it gets if you want to eat healthier. It’s also a really cost-effective way to improve your diet, as you can make use of leftover carcass bones that would otherwise be thrown away.

Beef bone broth is one of the most important microbiome optimization strategies and helps “heal and seal” your gut, which is crucial for optimal health and disease prevention. Many of our modern diseases appear to be rooted in an unbalanced mix of microorganisms in your digestive system, courtesy of an inappropriate and unbalanced diet. Bone broth plays a vital role as it’s easily digestible, helps heal the lining of your gut and contains valuable nutrients.

The Science of Bone Broth and Collagen

One of the reasons why bone broth is so good for you is because it’s loaded with collagen. While there are plenty of collagen supplements on the market, bone broth is by far the least expensive option.

Collagen accounts for about 30% of the total protein in your body. One of its primary functions is to provide structural support and strength to your tissues, such as skin, bones, tendons, ligaments and cartilage,^{2,3,4} allowing them to stretch while still maintaining tissue integrity. As such, collagen is crucial for repairing soft tissue, muscle and connective tissue, all of which tend to get weaker and less elastic with age.

Glycine makes up nearly one-third of the amino acids in collagen. Collagen is also high in proline, hydroxyproline and alanine, which are the building blocks for the matrix of connective tissue. Your body uses these amino acids to rehab stressed areas and places in your body where it’s needed the most.

Many mistakenly believe that beef can fulfill most of your body's protein requirements. However, this assumption overlooks the substantial differences in amino acid composition between beef and collagen. Relying solely on muscle meat fails to provide sufficient amino acids necessary for strengthening connective tissue.

Additionally, collagen contains higher levels of specific amino acids with anti-inflammatory and longevity-promoting properties, as highlighted in the chart below (marked in green). In contrast, red meat contains amino acids associated with inflammation (red). Excessive intake of methionine and histidine, in particular, may have

adverse effects on longevity, a topic I discussed in [“Collagen and Gelatin Are Crucial for Optimal Health.”](#)

Amino Acid	% Gelatin Collagen	% Beef
Glycine	28	1.6
Proline	17	1.0
Hydroxyproline	14	0.3
Alanine	11	1.3
Methionine	0.8	3.2
Histidine	0.8	2.1
Tryptophan	0.4	1.3
Cysteine	Trace	0.2

Bone broth also contains plenty of healthy fat and important nutrients like calcium, magnesium, phosphorus, silicon, sulfur and trace minerals, along with the broken down material from cartilage and tendons, such as chondroitin sulphates and glucosamine. Like collagen, chondroitin and glucosamine are both sold as supplements, and bone broth can replace the need for all of them at a fraction of the price.

Health Benefits of Bone Broth

Aside from improving gut health,⁵ other health benefits of bone broth – many of which are linked to its collagen content – include:⁶

Strong, healthy skin, hair and nails^{7,8,9} – When your collagen level is high, your skin will tend to be soft, smooth and firm, because the collagen allows skin cells to repair

and renew themselves continuously

Healthy bones^{10,11,12}

Deeper sleep and serotonin release due to its glycine content¹³

Reduced joint pain and stiffness,¹⁴ including osteoarthritis pain¹⁵

Improved blood pressure and reduced cardiovascular damage¹⁶

Improved glucose tolerance¹⁷

Reduced inflammation and oxidative damage, as glycine inhibits the consumption of nicotinamide adenine dinucleotide phosphate (NADPH). NADPH is used as a reductive reservoir of electrons to recharge antioxidants once they become oxidized

Speeding recuperation from illness such as colds and flus – Chicken contains cysteine, which can thin the mucus in your lungs and make it less sticky so you can expel it more easily¹⁸

Reducing joint pain and inflammation, courtesy of chondroitin sulphates, glucosamine, and other compounds extracted from the boiled down cartilage

Making Bone Broth at Home: Overcoming Challenges

If you're like me, you probably avoid making bone broth yourself because it's so time-consuming and energy inefficient. You have to simmer the bones overnight, and leaving a boiling pot unattended while you sleep could be potentially dangerous as well.

There's an ideal solution for this though. Cooking your bones in a pressure cooker such as an Instant Pot will radically increase energy efficiency and safety, and reduce the hassle factor.

Simply place the bones in the Instant Pot, fill the pot with pure, filtered water – just enough to cover the bones – add salt and other spices to taste, then set it to cook on high for two hours if the bones are CAFO, and four hours if organic and grass fed.

“When cooking CAFO bones, limit the cooking time to two hours to avoid introducing heavy metals into your broth.”

Using bones from CAFO (concentrated animal feeding operation) beef can be problematic due to potential heavy metal contamination. When cooking these bones in the Instant Pot, it's best to limit the time to two hours to avoid introducing heavy metals into your broth.

Once the cooking time is over and the pot has cooled down you can take out the bones and put the broth into quart glass Mason jars and put a lid on them. When you put them in the refrigerator it will cause them to become vacuum sealed. Additionally the fat that comes to the surface will also seal the broth and keep it good for 10-12 weeks in the fridge. Before you use the broth be sure to skim the fat off and discard it or feed it to your chickens.

If you're using beef bones from grass fed organic sources, you can safely cook them for four hours. Using bones from an organic source is even more important if you're using chicken, as CAFO chickens tend to produce stock that doesn't gel,¹⁹ which raises questions about the quality of the collagen you're getting.

On a side note, if you have a dog, you can carve off the loose cartilage around the joints after two hours and feed the cartilage to your pet. If you cook the bones for four hours or longer, most of the collagen will be dissolved in the broth, so there won't be anything left to pick off. More importantly, you never want to give your dog cooked bones as they can splinter during chewing and cause great damage to the esophagus.

Ways to Enjoy Homemade Beef Bone Broth

There are many ways to savor the wholesome goodness of homemade beef bone broth, ranging from sipping it as a comforting beverage to infusing it into various culinary creations. Here are some suggestions on how to incorporate bone broth into your diet:

Sip it warm – Embrace the soothing warmth of bone broth by sipping it directly from a mug. This strategy works especially well if you're feeling under the weather or are recuperating from a respiratory illness.

Use as a base for soups and stews – Elevate the flavor profile of your favorite soups and stews by using homemade bone broth as a base. Its hearty essence adds depth and complexity to traditional recipes, enhancing both taste and nutritional value.

Cook grains – Infuse grains like rice, quinoa or barley with bone broth for a delectable twist on otherwise bland staples. The broth not only imbues the grains with extra flavor but also boosts their nutritional content.

Enhance sauces and gravies – Add depth and richness to sauces and gravies by incorporating bone broth into the recipe. Whether drizzled over roasted meats or ladled onto mashed potatoes, the addition of broth lends a delectable dimension to your homemade meals.

Steam vegetables – Instead of using plain water, steam vegetables in bone broth to impart a savory taste and an extra nutritional punch.

Make flavorful marinades – Create flavorful marinades for meats by combining bone broth with herbs, spices and aromatics. The broth helps tenderize the meat while infusing it with layers of savory goodness.

Revitalize leftovers – Use bone broth to revitalize leftovers such as cooked grains, pasta or meats. Simply reheat the leftovers in a pot with a splash of broth to add moisture and rejuvenate the flavors.

Bone Broth for Everyone: Tailoring Your Broth

Customizing homemade bone broth allows you to cater to individual tastes and health objectives, ensuring that everyone can enjoy its nourishing benefits. Whether you prefer a robust flavor profile or specific health enhancements, here are some tips for personalizing your broth:

- **Try herbs and spices** — Experiment with an array of herbs and spices to impart unique flavors and additional health benefits to your bone broth. For a classic savory blend, consider adding bay leaves, thyme and black peppercorns. To enhance immune support, incorporate garlic, ginger and turmeric. Adjust the quantities according to your taste preferences and desired flavor profile.
- **Add a little salt** — Tailor the salt content of your bone broth to suit individual preferences and dietary considerations. While some may prefer a saltier broth for added flavor, others may opt for a lower sodium option. Himalayan pink salt or sea salt are popular choices for seasoning, offering trace minerals and a nuanced flavor profile. Remember to add salt gradually and taste as you go to achieve the perfect balance.
- **Support your health goals** — Customize your bone broth to align with specific health goals and nutritional needs. For instance, if you're looking to support joint health, consider adding other ingredients that are rich in collagen such as chicken feet. To promote gut health, include ingredients like kombu seaweed²⁰ — a sea vegetable with a savory umami flavor — which may aid digestion.
- **Improve your pet's nutrition** — Bone broth can also benefit our furry friends, providing them with a nutritious boost and enticing flavor. When preparing broth for pets, make sure it's free from ingredients like onions, garlic and excessive salt, which can be harmful to animals. Instead, give them plain bone broth made from animal bones and cartilage, without added seasonings or flavorings.

Offer small portions to your pets as a tasty treat or mix it with their regular food for added moisture and nutrients.

Whether you prefer a hearty beef broth or a lighter chicken broth, the possibilities for customization are endless. Feel free to experiment with different ingredients and flavor combinations until you find the perfect recipe to suit your taste buds and health goals.

Embrace the Nutritional Power of Homemade Bone Broth

As an accessible and natural source of collagen, healthy fats, vitamins and minerals, bone broth holds a revered place in traditional cooking and holistic wellness practices. By simmering beef bones with water and a medley of vegetables, herbs and spices, you can harness the nutritional richness of bone broth right in your own kitchen – and save a bundle in the process.

So, seize the ladle and start simmering! Your journey to better health begins with a humble pot of homemade bone broth.

Sources and References

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