



# THE BONE BROTH BIBLE

Everything You Need to  
Know About Bone Broth ...  
and Then Some

By Kettle & Fire



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# A Note From Nick and Justin, Founders of Kettle & Fire

We're two brothers who are passionate about health. Our mom would say it's due to the zucchini chocolate cakes (bleh) she used to make us when we were young.

It was this passion for health that drove us to start Kettle & Fire bone broth, America's first and only USDA grass-fed bone broth. Our company has one mission: to help people improve their health and their lives.

This company started when we first heard about bone broth and its amazing health benefits in late 2013. Justin was looking to incorporate bone broth into his Paleo diet more regularly with all his travel. Around the same time, Nick tore his ACL while playing soccer (ouch) and was looking for foods that could help with the healing and recovery process.

Being the incredible brother he is, Justin went online to buy Nick some bone broth but couldn't find anything that worked. After lots of searching, he could only find frozen bone broth made with bones from non-organic, non-grass-fed cattle and shipped in styrofoam containers (which are terrible for the environment).

These things combined were enough to stop us from buying bone broth. And we weren't the only ones.



If our goal was to deliver the amazing health benefits of bone broth to the world, we had to find another way. This passion for creating a superior bone broth led us on a yearlong journey to find the best recipe, the best bones, the best ingredients and the best packaging. We can now proudly say that we have succeeded.

And now, we're sharing everything we've learned about bone broth with you in this comprehensive guide. Seriously — you aren't going to find a more in-depth look into the history, benefits and many uses of bone broth anywhere else.

Even we were a little surprised at how much there is to learn about the ancient health elixir.

Our goal is to make you as passionate about bone broth as we are — and we'd love to hear from you. Drop us a line anytime at [justin@kettleandfire.com](mailto:justin@kettleandfire.com) or [nick@kettleandfire.com](mailto:nick@kettleandfire.com) and let us know your thoughts and any questions you have — we'd love to chat.

Yours in health,

Nick and Justin Mares



# Chapter 1:

## Bone Broth: A History Lesson

On the surface, bone broth seems like a simple product: bones, some vegetables, water and a whole lot of cooking time. But, like a ripped CrossFitter in baggy clothing, underneath a simple exterior lies something beautiful.

### Humble Beginnings

Our hunter-gatherer ancestors started making bone broth out of necessity.

Throwing away parts of an animal was unthinkable. Successful hunts were so rare that every part of the animal — not just the muscle meat most people buy at the grocery store today — was precious.

From the hooves and bones to the guts and skin, hunter-gatherers mastered the art of making every part of the animal count. They ate everything they could, and they used things they couldn't eat — like hides — to make shelters, clothing, weapons and tools.

Some animal parts (bones, hooves, knuckles, etc.) were too tough to chew and didn't work well for shelter or clothing.

So, what did our ancestors do to them? Burned 'em!

They quickly discovered that heat would break down tough animal bones and draw out nutrients. Things started out pretty basic — our ancestors likely dropped hot rocks into the carcasses of animals to heat up the bones and break them down. And without oven mitts, we expect there were hundreds of cases of burned caveman fingers.

Enter the pot!

It might not sound exciting, but the invention of the pot was a game-changer. Instead of dropping hot rocks into an animal carcass (ugh, our fingers feel like they're on fire just thinking about that), people could toss bones into a pot, hang it over a fire and leave it for a few hours (fire safety standards were far more lax back then).



Our ancestors could then add other, more readily available foods — vegetables, tubers, you name it — to this primitive broth to create a full meal. This is about the time when modern bone broth (a combination of bones, water, vegetables, something acidic, and herbs and spices) started to take shape.

### Bone Broth's Global Impact

Did you know that “bru,” the Germanic root of bone broth, means to “prepare by boiling”?

It's true.

While Europeans were cooking bone broth, a smart guy in Ancient Greece, Hippocrates (the father of medicine), was recommending it to people with digestion issues.

Bone broth managed to cross international borders and became a staple of traditional Asian cuisine. Traditional Chinese meals often feature a light soup made from bone broth and vegetables to cleanse the palate and help with digestion. And *seolleongtang* (a Korean dish made from ox bones and brisket) and *tonkotsu* (a Japanese noodle soup made from pork bones) both play big roles in those cuisines.



Bone broth was also popular in the Middle East. A philosopher and physician there, Maimonides, recommended chicken bone broth as both an excellent food and medication. This advice got passed down for generations, which helps explain why chicken soup is sometimes called “Jewish penicillin.”

In South America, bone broth was so popular and respected for its health benefits that a saying emerged about it: “Good broth can resurrect

the dead.” Unfortunately, the scientific method was not yet invented, so we have no way of knowing whether this actually worked.

Bone broth even spread to the Caribbean. People there ate “cow foot soup” — and continue to eat it to this day — as a healthy breakfast and to help cure all kinds of health ailments.

### New Challenges (and New Uses)

Over the past several hundred years, new technology helped expand bone broth's uses dramatically.

In the Victorian era, people started to take the gelatin from bone broth and use it to make all kinds of gelatin desserts. You could buy gelatin from merchants in the streets, but you

had to purify it yourself — an extremely time-consuming process. In 1845, Peter Cooper, an American industrialist, secured a patent for powdered gelatin.

Bone broth also continued to be a staple in cooking and fine dining. Restaurant chefs and amateurs alike used it to make soups, stews, sauces and gravies.

Homemade bone broth became a hit during the Industrial Revolution. As fuel costs rose, people who used to leave their broth bubbling over a fire at home could no longer afford the gas to heat their stoves for those hours.

As people worked longer hours and traveled more, inventors came up with creative ways to make bone broth more convenient. People began making — and using — broth powders and “bouillons” (cubes of broth that have been dehydrated) in an effort to get the benefits of bone broth without the long hours (or fuel costs) to make it themselves.

Things were good for a while — until MSG came around.

### **MSG: Bad News for Bone Broth**

After a Japanese biochemist invented monosodium glutamate (the infamous “MSG”) to emulate meat flavoring in 1908, more and more food companies began to use it in their products.

Big food manufacturers were impressed by MSG’s ability to trick customers into thinking they were eating meat even if a product didn’t have any meat in it. It also saved a lot of labor and money. Instead of boiling bones, they could just throw in a cheap chemical.

Now, most of the bone stock you’ll find at the store isn’t even made from animal bones at all.

### **Bone Broth Today**

We’re seeing a huge resurgence in the popularity of bone broth: It’s one of the trendiest health foods around.

People are starting to reject buying mass-produced, commercially processed “food products” made by large corporations. They’re more and more interested in going back to their roots: to organically grown food their grandparents and great grandparents grew up on.

Health-conscious people are no longer interested in simply picking up the cheapest option at the grocery store. Now, they’re wondering how they can use slow cookers to make their own broth. They’re browsing farmers’ markets to find local bone suppliers. They’re looking to buy from trusted companies that make broth with only the highest-quality ingredients.

### **Looking Forward**

Bone broth has a long, complicated and surprising history. Cultures around the globe have been making it for thousands of years. It was a fundamental part of their diets — both for the taste and the incredible health benefits. It’s still a huge part of traditional cuisines.

Food processing and new technologies almost swept that rich history away, but the future is bright.

As the years go on, expect to see more and more people incorporating bone broth's healing properties into their diet. And expect to see more new restaurants serving broth, like a few already do in Los Angeles, New York City, Portland and San Francisco.

With increasing demand to know exactly what we're putting into our bodies — and making sure our food is of the utmost quality — people are turning their attention back to the basics: basics like bone broth.

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## Chapter 2: Why Drink Bone Broth?

Bone broth has many names. The French call it *bouillon*. The Italians call it *brodo*. The Spanish and Portuguese call it *caldo*.

Why? Because part of the magic of bone broth lies in that it's a culinary tradition known all over the world to both indigenous cultures and classic cuisines alike. You see, although your granny and Julia Child may have differed vastly in their kitchen skills, they were both keenly aware of bone broth's benefits well before we had the scientific research to prove it.

There was even a time (before the 1930s) when *Chicken Soup for the Soul* was more than just the title of a best-selling book filled with heartfelt short stories. Before the 1930s, doctors used to recommend bone broth consumption for stomach ailments to both adult and infant patients alike. As you can see, bone broth is not a new phenomenon. But, alas, times have changed and the age-old knowledge of bone broth's benefits has gotten lost in our modern-day craving for instant gratification from a "magic pill" solution.

Nowadays, when it comes to our health, the front line of defense passes clear over diet and lifestyle changes, and instead, dives headfirst into pharmaceuticals. There's no denying the importance of drugs and medication. After all, if it weren't for them, where would be in emergency situations?

The problem is that their enormous presence often allows us to slack on the personal responsibility around applying preventative healing strategies toward lifestyle-related health issues (blood sugar imbalances, obesity, Type 2 diabetes, leaky gut syndrome, etc.), which have become accepted as completely "normal" in our culture. That "magic pill" mentality combined with easy and overly encouraged access to pharmaceuticals cancels out the emphasis we ought to be putting toward incorporating real foods, like bone broth, for their sustainable, powerful health-altering and healing properties. Which is why it's so important that holistically minded doctors and supporters of the ancestral health movement (like us!) are working so diligently to bring bone broth benefits back into everyday health and healing consciousness.



### **Let's Clear One Thing Up**

When we say bone broth, we're not talking about bouillon cubes, liquid meat extracts and artificial broth powders that line your average grocery store shelf. Yuck! That is not the stuff that contains the many bone broth benefits we'll be sharing all throughout this post. They might look like broth, but they contain zero nutritional value, are often filled with questionable ingredients (like MSG and artificial flavors) and, in fact, usually exacerbate the very issues (like leaky gut syndrome) a true, pure bone broth can repair.

When we say bone broth, we're talking about the marrow-filled, collagen-packed, gelatin-rich, mineral-dense magic liquid, the likes of which we make at Kettle & Fire. That is what we mean when we refer to bone broth benefits.

### **So What Can This Powerful Brew Actually Do?**

We're so glad you asked. Bone broth can strengthen and improve:

- Digestion
- Immunity
- Liver detoxification
- Joints and cartilage
- Bones and teeth
- Hair, skin and nails.

All of that in a bowl of soup? Yes.



## Chapter 3:

# Bone Broth's Many, Many Benefits

As with any food, be it vegetable or animal, its nutrient content will depend heavily on its provenance. Meaning, if you want the digestive and immune-boosting benefits bone broth can provide, you have to be drinking bone broth made from a healthy animal (i.e. grass-fed, pasture-raised or wild-caught animals). Hence, the reason we take so much care with our product to use marrow bones from pasture-raised, grass-fed cows and organic veggies. Happy, healthy animals produce nutritious meat, bones and connective tissue, which produce nutritious collagen that breaks down into nutritious gelatin, which contains an abundance of the many important healing nutrients we're about to discuss. Without these nutrients, you're not doing much more than getting hydrated.

Now that you've got that very important piece in place, we can transition into a conversation about bone broth, digestion and immunity. Let's start with "leaky gut syndrome." Ever heard of it?

Here's the quick 101: Leaky gut syndrome, sometimes referred to as "leaky gut," refers to a separation between the tight junctions of your gut (intestinal) lining, which basically creates holes that allow your body to reabsorb potentially harmful substances and waste that is supposed to be eliminated in your stool. This weakens your immune system, causes food intolerances and cravings, hormonal imbalances (acne, PMS, PCOS, etc.) and can even lead to autoimmune disease (like Hashimoto's).

### **The Causes of Leaky Gut Syndrome and Why Bone Broth Helps**

A variety of things cause leaky gut syndrome, like:

- Stress
- GI infections
- Alcohol
- Smoking
- Inflammation
- Poor diet
- Consuming foods you're allergic or sensitive to.



We hate to be the bearer of bad news, but in today's 24/7, stress-induced world, leaky gut is pretty common. Even so, there is good news: You can close up those holes and rebuild your gut lining.

In the words of [Aglée Jacob](#), author of [Digestive Health with Real Food](#):

*“The first step to repair a leaky gut and reach optimal digestive health with REAL food is to eliminate the foods that are contributing to your symptoms. The second step is to nourish your intestines and body to allow your health to reach its full potential ... specific nutrients (glutamine, zinc, vitamin A) can all help your intestines regain their natural integrity.”*

That's right, she said glutamine. And bone broth has a ton of it.

Glutamine helps to repair those very same holes in the gut lining brought about by the seven causes listed above. Over time, your gut lining can once again become impermeable, which not only enhances digestion but also fortifies your immune system.

This is the very reason why so many specialized diets like the GAPS diet (the Gut and Psychology Syndrome diet) and the SCD (the Specific Carbohydrate Diet) make glutamine an essential part of their gut-healing dietary protocol. And it's definitely why Mary, The Paleo Chef, swears by bone broth as a tool to keep her immune system high and her hair, skin and nails gorgeous and glowing.

Glycine is another very special nutrient found in bone broth. It's known for helping to normalize stomach acid production. I know you've probably heard from doctors and friends that the “cause” of your digestive issues is from “too much acidity” and, usually, antacids are prescribed as a solution. Studies are finding that a lack of hydrochloric acid (i.e. stomach acid) production is, in fact, at the root cause of many digestive ailments. Here's a nice breakdown on that very subject from clinical nutritionist Christa Orecchio.

*“In addition to upping stomach acid production, glycine is also an important component of bile production. Bile is a digestive juice that helps to break down most types of fats (which is extremely important when consuming an ancestral style diet full of both plant and animal-based fats).”*

## **Liver Detoxification**

Most nutrients that enter the body fulfill more than one purpose. The same is true for glycine. As you've seen thus far, it's a star when it comes to improving digestion and immunity. But it also lends a serious hand to your body's main organ of detoxification, the liver.

Often the idea of “detoxing” goes hand-in-hand with consuming antioxidant-rich fruits (like the ones that you see in all sorts of juice detoxes). While those are certainly necessary to a certain degree, two of the antioxidants that are most critical for liver detoxification, glutathione and uric acid, are actually produced internally (i.e. you don't get them from food because your body makes them). The glycine found in bone broth helps to synthesize (i.e. make) these two all-important antioxidants in order to detoxify the liver.

Finally, the glycine found in bone broth can potentially decrease the need for vitamin B supplementation (which is commonly recommended these days) by helping the liver clear out excess methionine and homocysteine, two essential amino acids. If their concentrations in the body rise excessively, which can happen with excess meat and egg consumption, then the need for vitamin B supplementation will increase, as well. In other words, drink more bone broth, reduce the number of supplements you take (and dollars you spend on them). If that's not a stellar bone broth benefit, then we don't know what is.

### **Bone Broth and Joints, Cartilage, Bones, Teeth, Hair, Skin and Nails**

When it comes to joint and connective tissue health, both the proteins and carbohydrates found in bone broth are king. We'd like to highlight a few of them here in this section (bear in mind that there are many more than the ones mentioned here).

Glycine (yet again!) and proline, two non-essential amino acids released from the gelatin found in bone broth, are the raw materials your body needs to rebuild tendons, ligaments and other connective tissues (like skin). So whether you're a desk jockey or an athlete (especially a heavy lifter), bone broth is a crucial piece of your long-term, preventative musculoskeletal care routine.

Speaking of decreasing pain and inflammation, it's time to cover GAGs (glycosaminoglycans). GAGs are a tight-knit group of carbohydrates, the superstars of which (in this scenario) are hyaluronic acid, glucosamine and chondroitin sulfate. According

to Dr. Cate Shanahan, these GAGs stimulate the production of fibroblasts (connective tissue cells), which fortify your tendons, ligaments and connective tissues via collagen creation, making bone broth consumption a wonderful drug-free therapy for those with osteoporosis and joint inflammation.







## Chapter 4:

# How To Drink Bone Broth

If you're new to the concept of consuming bone broth, it can seem overwhelming. "You want me to just drink it ... plain?" people often ask.

Making bone broth a part of your healthy lifestyle is much more than just guzzling mugs of the liquid gold. You can easily weave it into your normal food routine and actively support gut health and wellness without even thinking twice.

One of our favorite ways to enjoy a warm mug of bone broth is simply seasoned with a dash of salt and pepper and a splash of lemon juice.

Aside from drinking it straight up out of a mug, bone broth can easily be mixed into other soups, stews or sauces. We especially like to use it to turn the delicious, caramelized pan drippings from a fresh roast into an *au jus* sauce (a light gravy made from cooked meat juices).

### Getting Into the Habit

As with any new habit, getting started is the hard part. Plus, people drink bone broth for different reasons, so how do you know if you're doing it right?

To get to the bottom of this, we reviewed common conditions and ailments where bone broth is frequently used. Not only did we look into how to drink bone broth for each condition, but we also examined frequency and amount. We've detailed our findings below, so keep reading to learn how to drink bone broth with confidence.

### Arthritis/Joint Pain (Severe and Mild)

Many people turn to bone broth after battling arthritis (rheumatoid and osteo), fibromyalgia and other chronic pain conditions.

### How Often Should You Drink Bone Broth for Arthritis?

As often as you can stomach it.

This is the perfect situation to consider swapping out your morning coffee for a hot cup of bone broth. While ditching caffeine doesn't seem appealing, coffee can certainly be associated with arthritic conditions. In this instance, bone broth is its natural antithesis.

### **How Much Should You Drink?**

A minimum of 8 ounces daily — but seriously, as much as you can tolerate.

16-32 ounces daily for a short period (one to two weeks, or up to 30 days) may be most effective at halting inflammatory progression, and then reducing to a maintenance amount of 8-12 ounces daily can be impactful.

### **How Should You Consume It?**

Any way that you can get it down.

Some people struggle with the acquired taste of bone broth. This isn't due to the taste, but because it has less flavor compared to coffee and sugary beverages.

Bone broth is more comparable to a cup of tea with a mild flavor. If you're struggling to adjust to drinking bone broth plain, start making soup daily. You'll be less aware that you're drinking it and you'll easily take in upwards of 20 ounces daily. You can make your bone broth soup extra anti-inflammatory by adding turmeric, garlic, onions and kale.

### **Metabolism, Detox and Weight Loss**

The glycine found in bone broth supports the liver in removing toxins from the body. As a result, many have turned to bone broth for detoxification and weight loss purposes. We even did our own bone broth detox and saw some pretty interesting results (more on that later).

### **How Often Should You Drink Bone Broth for Detox and Weight Loss?**

It depends.

Since a sluggish metabolism is often closely connected with toxicity and obesity, bone broth can have a dramatic impact on your health.

Depending on the rigor of your plan, you may end up drinking a lot of bone broth for a while. This is especially true if you're following a bone broth diet plan. You might be drinking it for every meal initially, either as a replacement or alongside your meal. Further down the road it still might be a twice-a-day thing.

### **How Much Should You Drink?**

You might end up consuming 40 or 50 ounces a day at times while only having about 12-24 ounces on other days. It depends on the specific plan you're following and how much weight you have to lose.



### **How Should You Consume It?**

In this case, heat it in a mug and drink it plain.

You can definitely add it to soups or stews, but bone broth diet plans often call for a few days where your only food intake is bone broth.

While that sounds extreme, a bone broth fast isn't a starvation diet. Not only is bone broth high in protein, it's also gentle on the digestive system while nourishing your body at a cellular level. It's like throwing your body into a repair cycle. By eliminating the excess work of digestion, you're allowing it to focus on the business of dealing with other things that need help.

Remember: Bone broth fasts or diets should not be done unless you've gotten an all clear from a qualified practitioner. Pregnant women or those in especially vulnerable conditions should not do bone broth fasts.

### **Skin Conditions**

One of the best ways to restore your skin is to consume collagen. It just so happens that bone broth is packed with this skin-healing nutrient.

### **How Often Should You Drink Bone Broth for Skin Health?**

Daily!

Bone broth is rich in collagen, which helps to add elasticity and strength to your skin, hair and nails. For skin conditions like eczema or psoriasis, a daily bone broth routine could be beneficial in nourishing your gut, which is often where skin conditions start.

### **How Much Should You Drink?**

Six to 12 ounces daily.

It's nice to add this as part of your morning or evening routine so that you remember to drink it every day and you're training your body to get its daily dose of skin-boosting nutrients at the same time. Drinking bone broth before bed along with taking a probiotic supplement can be a powerful skin-supportive program.

### **How Should You Consume It?**

Plain or in a soup or stew.

For time-crunched people, planning dinner recipes that utilize a slow cooker and bone broth can be the perfect way to get your bone broth in without having to think extra hard about it. Just drink some extra broth leftover from slow cooking your roast or have an extra cup of soup broth after dinner.

## **Autoimmunity and Increased Immunity**

We interviewed autoimmune experts at length about the benefits of bone broth. Here's a quote from Alaena Haber, one of the experts:

"Autoimmunity and gut health are mutually inclusive health concerns. Bone broth is a time-tested home remedy for both acute and chronic gut distress. Considering one of the main keys to a balanced immune system is gut health, bone broth is the perfect 'supplement' for anyone looking to manage the symptoms and inflammation caused by Hashimoto's and other autoimmune diseases."

### **How Often Should You Drink Bone Broth for Immune Balance?**

Daily or at least four times per week.

Whether you're dealing with an overactive immune system that is attacking your own body or an underactive one that isn't attacking the viruses and bacteria that it should, bone broth can help to nourish the gut, where a large portion of the immune system resides.

### **How Much Should You Drink?**

As much as you can, relative to how sick you are or how intense your symptoms are.

The old remedy of sipping chicken soup when you're sick is leveled up when you're drinking chicken or beef bone broth. While soup stock can be nourishing, you're adding in a whole new level of nutrients when you're drinking bone stock.

### **How Should You Consume It?**

If you're under the weather from a current cold or flu infection, sip it around the clock. If you're in the throes of an autoimmune flare, ditch coffee and tea, and savor at least three cups of bone broth a day (around breakfast, lunch and dinner). Additionally, enjoy soup or stew with bone broth in it at least three times a week. Add immune-balancing foods like turmeric, garlic, onion, squash, kale and chard to give your soup or stew some extra superpowers.

## **Digestion, Leaky Gut and IBS**

The glutamine found in bone broth helps repair the walls of your intestines and reverse leaky gut. It's why so many gut health experts recommend bone broth to their patients.

### **How Often Should You Drink Bone Broth for Digestive Health?**

Daily.

When you're suffering from problems with digestion, absorption or irritable bowel issues, your whole body is suffering. The digestive tract is considered the seat of health.

Bone broth is rich in nutrients that help improve digestion. It also helps seal the tight junctions in the small intestine leading to improved protection against toxins or partially digested food particles circulating through the bloodstream.

Bone broth can also help nourish the large intestine to better perform its task of eliminating waste. Fat is an essential nutrient for proper elimination, and protein is vital for cellular energy and repair. Our bone broth is also low in garlic and onion, making it friendly for those who are eating a low FODMAP diet for IBS.

### **How Much Should You Drink?**

Anywhere from 8 ounces to many cups a day.

This is dependent on your current state of wellness and digestive health. If you're experiencing a number of unpleasant symptoms associated with digestion, then several cups a day may be a good starting point.

### **How Should You Consume It?**

Begin the day by drinking 8-12 ounces of warm bone broth. Consume a lunch meal that contains bone broth (like beef vegetable soup) and then sip a post-dinner cup of bone broth to end your day.

### **One More Thing**

As you can see, bone broth is extremely versatile and the health applications are endless. When you're trying to target a specific ailment, it can be helpful to ensure that you're consuming bone broth in ways that will help you see positive effects as quickly as possible.

While everyone is genetically unique, this guide can definitely serve as a starting point for your bone broth journey. Pay attention to the signals your body sends and make sure that you're looking for those positive changes, which, for some, can happen in the space of a few days or a week and continue to grow as bone broth becomes a regular lifestyle habit.

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## Chapter 5: The Secret to Developing a Taste for Bone Broth

Bone broth has skyrocketed to popularity in many wellness circles. For those new to drinking the liquid gold, that first taste can come as quite a shock. Most tend to assume that bone broth tastes like soup stock, and when they find that it doesn't, they either give up on the idea or gag it down.

While bone broth is an acquired taste for some, we have good news: You can learn to like it, even if you don't like it right away. Our mouths and brains can be taught to like new flavors, textures and foods, but sometimes we give up on something before we've had the chance to reprogram our taste buds.

### **What Does Bone Broth Taste Like?**

Here's the nitty-gritty guide on what bone broth actually tastes like. If you've never had a sip, then remove the notion that it tastes like chicken noodle soup broth or beef soup broth; it does not. Soup stock is often very flavorful and, in many cases, salty. Bone broth is often more bland and does not taste salty. Soup stock is a thin liquid. Bone broth has an oily texture and feels thicker in the mouth.

These two differences are often what make bone broth jarring to the first-time drinker. We've heard people say the bland taste was what they couldn't get past; while others were unpleasantly surprised by how oily it felt in their mouth.

However, we've learned to like it, and it really wasn't that hard. We'll show you how.

### **How to Make Bone Broth Taste Good**

So maybe you're like us and your first taste of bone broth was not exactly pleasant. Do you give up on the fastest-growing wellness trend and ignore the gut-healing benefits and the anti-inflammatory superpowers that it brings? Of course not!

Here's the secret for working bone broth into your diet while teaching your taste buds that it's not a bad thing. Part of learning to like bone broth involves educating your brain that it is not, in fact, soup. The association of soup and broth brings with it the expectation that it will taste like soup when it hits your mouth. It will not, and the brain needs a little help in sidestepping this.

First, add flavors that you are familiar with. You can start by combining bone broth with soup stock. It sounds counterproductive, but trust us, this is a good place to start. You can combine broth with beef or chicken soup stock. Then add an extra dash of salt or pepper, or whatever flavors your mouth truly loves, and sip away.

Eventually, you can reduce the amount of soup broth and increase the amount of bone broth. After doing this for a while, you can leave out the soup broth altogether and keep adding that extra bit of salt and pepper. This should eventually lead to decreasing the amount of soup broth until you realize that you're good with just the plain bone broth.

The process is a bit like learning to like black coffee after getting used to coffee with cream and sugar. If adding flavors you're familiar with doesn't work, try mixing the broth into something else. This can mean adding bone broth to a soup or stew you've made, making sure to use bone broth for at least 50 percent of the liquid so that you're starting to work that taste in. Add it to mashed potatoes or other mashed vegetables instead of chicken stock (it actually makes them creamier because there is more oil in the bone broth).

If adding and mixing seems like too much work, then all you have to do is start small. Take one sip daily of bone broth for a week: That's it. After the first week, take two sips daily. By the third week, aim to drink half a cup. After those 21 days, your brain will have learned a new habit — that bone broth is its own unique food and that it's really quite good.

### **How to Make Bone Broth Taste Better When You Don't Love It**

OK, so maybe you've tried everything we suggested above and you still just do not like it. Fear not, there are still ways that you can enjoy this wellness superfood without having to actually taste it.

Keep doing the soup/broth routine. The first suggestion above is to combine half soup broth with half bone broth and to jazz it up with other favorite spices. Much like people sip on echinacea tea when they're under the weather, you can view this soup/broth concoction as your daily immune supplement. At the very least, plan to drink this mixture any time you are under the weather. With the cold or the flu, your taste buds will be altered, and you'll probably have no trouble getting it down because bland foods become much more appealing. (Please note: Bone broth's blandness is not a negative characteristic. While bone broth isn't as rich in flavor as soup broth, it is oily and more bland due to the high concentration of nutrients it contains, like collagen, bone-strengthening minerals and amino acids that can help to improve digestion.)

### Add It to Your Daily Smoothie. What? Bone Broth in a Smoothie?

Again, this is where the more bland flavor profile works in your favor. If you're pairing it with greens and fruits, you will not even know it's in there and you will easily be able to get 4-8 ounces down daily.

Have soup every week. Soup is, of course, a fabulous one-dish meal that can be utilized at all times of the year and with numerous different ingredients. If you just can't wrap your brain around drinking plain bone broth, then make bone broth soup every week and eat it for two or three meals. You can change up the kind of soup, but a basic beef bone broth is going to be camouflaged well in almost any kind of soup. The same goes for chicken or turkey bone broth.

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## Chapter 6:

# Why Bone Broth Is Your Skin's Best Friend

*"Upon the altar of sunshine, what we ingest determines how our skin responds to sunlight."*

We love this quote by Nadine Artemis of Living Libations, an exquisite line of ultra-pure botanical health and beauty products.

We believe it's 100 percent true. Consume an excess amount of PUFAs (polyunsaturated-fatty-acids) found in processed foods and you'll likely notice an early onset of wrinkles or even skin hyperpigmentation. Get rid of those, increase your intake of lycopene-rich tomatoes and foods like watermelon, peppers, berries and dark leafy greens (to name just a few) and you'll likely notice that you can stay out in the sun quite a bit longer than before. All of those foods help to build an internal SPF that reduces sun damage to the skin, creating instead a dewy, glowing complexion.

All that being said, if it were up to us, we'd probably amend Nadine Artemis's statement to make it more all encompassing by changing it to this:

*"Upon the altar of good skin health, what we ingest determines how our skin responds to our internal and external environments."*

Which brings us to the benefits of bone broth for your skin.

If you've been following us for a while, then you've read our posts on just how amazing bone broth is for a healthy body and mind.

But it all goes a little deeper than that, especially when it comes to skin health. Beautiful, acne-free, glowing skin comes about when what we eat is properly digested so that the vital nutrients and minerals within those foods can be fully absorbed. You simply cannot accomplish all of that without a healthy gut lining. Plain and simple.

So, to make a long story short: A healthy gut lining + good digestion + proper nutrient absorption = beautiful, glowing skin.

The two main reasons why bone broth is health for the skin? It provides:

- Collagen (a protein)
- Fat (in this case, saturated fat).

The most important thing you need to know about collagen is that it's the most abundant protein in the human body. Skin, bones, tendons, ligaments, you name the connective tissue and, trust us, collagen is there.

Collagen in and of itself is important for skin and bone health. In fact, it's so important that it's sold in countless forms as a supplement and even in creams. It's best known for improving skin elasticity and anti-aging properties, as well as reducing skin roughness. Thankfully, grass-fed bone broth is both the most collagen-rich and wallet-friendly solution for all of these, which is one of the many reasons we're so partial to it.

In addition, proline, one of the many potent amino acids involved in collagen formation, is best known for making skin supple and reducing the dreaded cellulite.

Moving on to fat. As we wrote above, a big player in the bone broth skin benefits connection is the fact that bones release a type of fat known as saturated fat into the broth. If you've ever made bone broth yourself, you'll notice the rings of oil that naturally form at the top of your brew. That's the saturated fat we're talking about. When solidified, it's called tallow (providing it's made from cow bones).

By the way, did you know that companies, like our friends over at FATCO Skincare, are bottling this stuff up and making body butter and face creams? Yeah, people are putting beef fat on their faces because it does wonders for your skin!

The most important thing with which saturated fat (from bone broth) helps is vitamin assimilation — specifically vitamin D assimilation.

Collagen, the amino acids upon which it's formed, as well as saturated fat and all of the other nutrients that come from bone broth help to reduce inflammation, strengthen the gut lining, and enrich our digestive and immune systems. Ultimately, beautiful, glowing skin is a merry byproduct working in harmony.



## Chapter 7: The Bone Broth Diet

So, you've heard of the vegan diet, possibly the Blood Type Diet, most likely the macrobiotic diet and, of course, the Paleo diet. But have you heard of the bone broth diet?

Well, according to The New York Times, it "ranks with green juice and coconut water as the next magic potion in the eternal quest for perfect health," and apparently stars like Gwyneth Paltrow, Salma Hayek and Kobe Bryant have jumped on board with it. Not that we put much stock (pun intended!) in health advice from movie stars and athletes, but still, if it's getting that much of the spotlight, it's certainly nothing to scoff at. Plus, you know we don't just make our boney brew for no reason; we know it's loaded with a ton of benefits and we're excited that the rest of the world is finally learning about its benefits, as well.

Now, back to the question at hand: What is the bone broth diet?

Dr. Kellyann Petrucci coined the term in her book *Dr. Kellyann's Bone Broth Diet: Lose Up to 15 Pounds, 4 Inches — and Your Wrinkles! — in Just 21 Days*.

### How Does the Bone Broth Diet Work?

The 21-day program revolves around bone broth — or liquid gold, as Dr. Kellyann likes to refer to it — and a specialized diet designed to promote gut health and a lean body.

What's great about this program is that it's about so much more than weight-loss; it's about true internal healing. If you have low energy, this is for you. If you have digestive issues, this is for you. If you have skin issues, this is for you.

Dr. Kellyann isn't just instructing participants to live off bone broth for 21 days; she's treating bone broth more as if it were a supplement by weaving it into an ultra-nutrient-dense plan with an emphasis on veggies.

Eliminating the foods that commonly cause inflammation (gluten, grains, sugar, dairy and legumes, to name a few) and a little intermittent fasting, and it's no wonder people participating reported having lost 15 pounds and 4-6 inches on average.



Our favorite suggested strategy from the book? Replace your daily morning coffee with bone broth. It's genius and totally doable!

### Why Does Dr. Kellyann Love Bone Broth?

In her own words:

*"Gelatin's gut-healing properties are important because in order to stay slim and healthy, you need to have a rock-solid gut. In fact, as a clinician who specializes in transforming sick and overweight patients into healthy, slender people, I can tell you that nothing is more important to your health than a strong gut. Here's the story. Your gut is home to the trillions of microbes that scientists call your microbiome. Think of this microbiome as an ecosystem — one that's either in balance or out of balance. If it's in balance, you have a wide diversity of good microbes and very few bad ones. If it's out of balance ... very dangerous things can happen..."*

And it's 100 percent true. If your gut is out of whack, you could end up with an overproduction of those bad microbes and the toxic waste they produce. Worse yet, you could end up with SIBO (small intestinal bacterial overgrowth), an absolutely miserable digestive disorder.

The gut imbalances that Dr. Kellyann mentions in the quote above can arise for a lot of different reasons, such as:

- Emotional and physical stress
- Antibiotic overuse (it kills off both the bad and good bacteria in your gut)
- Unknown food sensitivities
- Chronic gut inflammation.

There are many more reasons, but those are four of the biggest.

### Gelatin and its Awesome Healing Properties

What makes gelatin so incredibly powerful are the four amino acids within its structure:

- Proline
- Glycine
- Arginine
- Glutamine

When your gut gets seriously beaten up by the four biggest gut-health offenders mentioned above (emotional and physical stress, antibiotics, food sensitivities, chronic gut inflammation), it actually has a domino effect on your overall health. It creates a chronically inflamed internal environment that makes losing weight and having great skin and boundless energy really difficult.

These four powerful nutrients (proline, glycine, arginine and glutamine) work synergistically to restore the integrity of your gut so that you can overcome those struggles. Now you can see why we all think bone broth is the crème de la crème.



## Chapter 8:

# 9 Unexpected Things That Happened During Our First Bone Broth Detox

Nick and Justin were chatting with the Kettle & Fire team about bone broth when one of us had a light bulb moment:

*"We're bone broth believers. So, why don't we give the bone broth diet a try and share the results with our customers?"*

We already know how much bone broth can do for a person's hair, skin, nails and gut health. But knowledge is nothing without action. Which is why we chose to put ourselves through Dr. Kellyann's 21-day bone broth diet challenge.

We bought the book, read it and jumped into this bone broth detox and biohacking experiment at full tilt.

### Let's Talk Bone Broth Detox and the "Carb Flu"

The carb flu doesn't feel much different than the regular flu, to be honest. As Dr. Kellyann warns in her book, this is something that's commonly experienced during the first two weeks of the bone broth diet. Common symptoms include:

- Headaches
- Exhaustion
- Foggy-headedness
- Sniffles
- Moodiness or feeling short-tempered
- Digestive distress
- Acne
- Anxiety.

Why does the carb flu tend to happen? Because your body is both rebelling against and adapting to a new primary source of energy — fat. Here's what Dr. Kellyann has to say about it in her book:

*"... if your cells are used to a high-sugar, high-carb diet, switching to real foods can throw them for a loop ... here's what's happening at this stage: If you've been eating a typical high-carb diet, you've been burning glucose from your diet for fuel. When you switch to a low-carbohydrate diet, your body will need to switch to fat for its primary fuel. It takes more work to create energy from fat, and your sluggish cells may complain at first."*

We certainly felt the effects of the carb flu during our journey. Here were some of the carb flu symptoms we actually experienced in the first four days (and occasionally toward the end of the week, but much less so than at the beginning):

- Headaches (we're always prone to these when making a dietary switch)
- Short temperedness (who doesn't get a little hangry?)
- Anxiety
- Exhaustion
- Brain fog
- Coldness at night (especially at bedtime)
- Morning grogginess (because no one wants to wake up and not eat)

*"Later in the night, I definitely had a shorter temper than normal... probably due to frustrations with not being able to eat," team member Jack said. "I felt what I thought were symptoms of the low-carb flu in the late afternoon. I was anxious for about an hour. Also, it felt harder at times to manage my stomach issues ... my body just wants to eat, eat, eat ... going to a group dinner at a Mexican restaurant was a pain in the butt. I kept having to resist alcohol and non-Paleo temptations."*

### **Did We Get Hungry Doing This Bone Broth Detox?**

You had better believe we experienced hunger. We felt it big time all throughout the week, especially on the fasting days (duh!). At the same time, we also simultaneously experienced clarity. Here's what we wrote in our journals about how our hunger levels shifted around throughout the week (it's actually all pretty hilarious):

#### **Day 1**

*"I started the detox after a weekend of drinking and eating bad foods (thanks, Cinco de Mayo)," one team member recalled in her diet diary. "The morning went fine, but my stomach started growling around 11:30 a.m. I slurped up 60 calories of K & F around 12 p.m. At 1:30 p.m., I had slight hunger, but I feel great. The hunger is coming back strong right as I'm trying to go to sleep."*



## Day 2

*"My first bone broth mini-fast. I did option two — five cups of bone broth and one smoothie at 7 p.m. I wasn't starving, but it was definitely a struggle to avoid foods that I could chew, and I was ecstatic to be drinking a smoothie by 7p.m.! Thank goodness all I did today was walk and stretch."*

## Day 3

*"The smell of food is killing me. I'm predicting today will be a bit harder due to caloric limitations from the past two days. I'm at a coffee shop this morning and the smell of breakfast tacos makes eating something hard to resist. My stomach was growling right around lunchtime. I drank bone broth and the hunger went away. There's more stomach growling today than the first fast. It's probably due to the fact that I essentially carb-loaded over the weekend. I'm really struggling with my stomach — I'm really freaking hungry. Funnily enough, I still have loads of energy. Later in the night, I definitely had a shorter temper than normal, probably due to frustrations around not being able to eat."*

## Day 4

*"Today was my second mini-fast of the week and this was so incredibly hard. I've never done two fasts in one week. I also ran for 15-20 minutes in the evening and that was a terrible idea — it made me very hungry. I had a smoothie at the end of the night like I was supposed to, but it wasn't satiating enough. I also had some spiced chicken fried up in coconut oil and two slices of bacon, which held me over. Next week I'm going to try not to do two mini-fasts with just one day in between. It was so hard and made me so hungry! I'll probably shoot for Monday and Thursday or Tuesday and Friday."*

## Day 5

*"I actually feel kind of great. I'm having an easier time succeeding at this challenge in certain types of environments."*

## Day 6

*"I slept great and it was a really productive today. I just feel cleaner. My mind is empty of all the fog."*

## Day 7

*"I tried to do a mini-fast today, but I was still ravenous from the 6-mile run the day before. I made it until 4:30 p.m., so about a 19-hour fast. I noticed I was craving foods filled with vitamin C, so I ate golden berries and sauerkraut. Also, I ate an entire bag of plantain chips. My skin is perking up."*

Here's a list of what not to do (hopefully you can learn from our mistakes) if you want to keep hunger at bay:

- Don't fast for two days in a row, and definitely leave two days between fasting days.
- Don't run 6 miles and expect to be able to do a fast the following day. You simply need more recovery fuel than you can get from a bone broth detox fasting day.
- Don't fast on days when you're supposed to be super social because it makes it really hard to resist partaking in the act of eating when everyone around you is doing it.

### **Weigh-ins and How Our Clothes Fit on the Bone Broth Detox**

Did we weigh in every day? Hell, no; that's just asking for trouble on a mental/emotional level. Plus, Dr. Kellyann recommends that you avoid doing this. However, we did weigh on Day 1, as well as on Day 7.

On Day 1, a team member wrote:

*"My weight is 140 pounds. I'm on my period and feel crampy and bloated."*

Conversely, on Day 7, she wrote:

*"The scale read back 135 pounds! That's 5 pounds down in seven days. I knew the scale had budged at least a few pounds. My clothes are fitting so much better! Especially at the waist! Yay!"*

Jack also experienced a lot of success in this domain.

On Day 1, he wrote the following:

*"It's the first BB fast day. Weigh-in: 162 pounds."*

Then, on Day 5, he wrote this:

*"I feel like my body is adapting to the new diet. My clothes feel very loose, especially my pants!"*

Finally, on Day 7, he wrote this:

*"My final weigh-in after seven days was 159 pounds (prior to my soccer game). So, I lost 3 pounds and I notice a leaner physique."*

### **Bone Broth Detox Unexpected Results and Celebrations**

Dr. Kellyann did a nice job in her book giving us a heads up on what we could expect. But we also happened to notice some unique things that we definitely weren't expecting. Some were not so great, but most of them were actually fantastic and totally worth celebrating.

The best ones popped up between days 4 and 7:

*"I ate Chipotle. Post-lunch was bad news. Chipotle sauce won't be used again. Strict diet limitations this week are allowing me to identify problematic foods."*



*"I noticed some constipation after fasting days."*



*"My energy levels are great and I'm not feeling tired at all. I feel a sense of clarity today. Productivity seems up."*



*"I'm still knocking out work stuff — weird! I figured I'd be asleep at this point. I'm wondering if Kettle & Fire is unlocking sources of energy I don't know about? I usually start falling apart work-wise around 6 p.m., but I'm still getting stuff done."*



*"My skin looks to be clearing up!"*



*"I played 90 minutes in a competitive soccer game. I was a bit worried about my performance since I usually rely on carbs and glucose to push through a long exercise bout like this. Surprisingly, there was no change in performance. I actually felt more focused and calmer during the game."*



*"So, I lost 3 pounds and I notice a leaner physique!"*



*"That's 5 pounds down in seven days. My clothes are fitting so much better!"*



*"I'm noticing changes in the cellulite on the back and side of my thighs. They look so much smoother!"*



We won't lie: The first seven days were been a bit of a roller coaster, but we all agree that the benefits definitely outweighed (pun intended) the negatives.

By the end of Day 7, we all:

- Lost between 3-5 pounds
- Fit more comfortably into our clothes
- Sharpened our mental focus
- Increased our energy and productivity
- Smoothed out and reduced our cellulite
- Cleared up our skin, especially facial acne
- Identified gut-disrupting foods
- Experienced more emotional control, reduced anxiety and a sense of inner calm
- Slept more soundly and deeply.

All of that was accomplished in just seven days on this bone broth detox. Imagine what we could do in 21 days.

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## Chapter 9:

# Bone Broth and the Ketogenic Diet: A Match Made in a Low-Carb Heaven

Bone broth is an established superfood and multiple diets have embraced its healing properties. The keto, short for ketogenic, diet is no exception. So how does bone broth fit into a keto food plan? Let's explore.

### What is the Keto Diet?

The ketogenic diet is a dietary plan that aims to get the body into ketosis, which is the process of burning fat, instead of glucose, as fuel. Keto eating requires extremely low carbs because dietary carbs get converted into glucose and are then burned as energy or stored as glycogen in the liver for energy later. When the body knows it can rely on carbohydrates as its source of energy, it won't readily turn to fat stores.

Proponents of the ketogenic diet say that it's a way to lose excess body fat without starvation, and it's also used therapeutically for conditions like diabetes, where glucose, insulin and carbohydrate balance need to be carefully monitored.

The principles of the ketogenic diet have been around for thousands of years, but it was first used as a medical treatment in the 1920s. Initially used to address pediatric epilepsy, the modern viewpoint on keto living has shifted substantially.

### What is Keto Beneficial For?

These days, while you will still find some adults following ketogenic diets to address seizures and epilepsy, but more people follow it for the same reasons others follow the Paleo diet – it's shown to be therapeutic for chronic conditions.

## **Weight Loss**

The ketogenic diet is effective for weight loss in a number of ways, although for some it does not promote weight loss at all. As with most dietary programs, bio-individuality does play a role in success levels. Keto reduces appetite due to the removal of sugars and starchy foods, leading to a reduction in calories consumed. Living in a state of ketosis also burns fat for fuel, resulting in a reduction of fat stores and greater fat loss. Some proponents and research indicate that ketosis can increase a person's metabolism, causing more calories to be expended in addition to those being burned for energy.

## **Heart Health**

While dietary cholesterol has gotten the brunt of the blame for the increase in LDL cholesterol and cardiovascular problems, recent research has proven that carbohydrates and sugar have a more deleterious impact on the heart and arteries. Ketosis removes this widespread risk factor that can be found in the form of starchy and refined carbs, and for those at high risk of cardiovascular disease, ketosis can be therapeutic and even preventive.

## **Diabetes**

In most who develop Type 2 diabetes, insulin resistance is a primary factor, and one that (in many cases) can be trained out of the body. By re-establishing a healthy insulin response and glucose balance, Type 2 diabetes can often be nutritionally reversed. With insulin resistance, cells become inefficient in their ability to take in glucose that is circulating in the bloodstream. As a result, the excess glucose is deferred to the liver and stored as fat. Insulin resistance can also be thought of as "carbohydrate sensitivity" and, much like other foods to which one becomes sensitized and then avoids, the body can reset and address the negative conditions developed as a direct result of repeated exposure to sensitizing foods. Keto can be a short-term diet aimed at helping someone reverse glucose or insulin imbalance problems, or it can be safely used as a long-term therapeutic dietary protocol.

## **Is Bone Broth Keto-Friendly?**

The ketogenic diet is ultra-low-carb. Because every person is different, there are no one-size-fits-all caloric or macronutrient rules for getting into ketosis. How many carbs you're allotted each day will depend on factors like:

- Your current weight
- Your height
- Your gender
- Your fitness and activity levels.

Athletes, for example, who are routinely training, will require more carbs than someone who is primarily sedentary. Even though ketogenic eating is low-carb, it does require some level of carbs, even if they're only 5 percent of your food intake.

When you look at the nutrient profile of bone broth, you will see the following (per cup):

- Fats: 0 grams
- Carbs: 2 grams
- Protein: 6 grams.

A sedentary woman would aim for 120 grams of fat per day and 70 grams of protein, but fewer than 30 grams of carbs. While some may delight in consuming that much protein, that's a hard macronutrient for some to regularly consume. Because bone broth contains protein, it can be a great alternative for keto dieters if they want something other than legs of lamb or protein shakes.

So, yes, bone broth is absolutely keto-friendly, and it can actually help ketogenic dieters to level up their nutrient game. One of the criticisms of ketosis is that because it so severely restricts carbohydrates, that means it also restricts nutrient-rich vegetables and fruits. Bone broth is a nutrient-rich food, albeit with different nutrients than those leafy greens provide, but bone broth is nourishing all the same.

Regardless of the primary reason someone is following a ketogenic diet, gut health can easily rise to the top of the list. Bone broth is a nutritionally sound food for gut health and, because it's very low in carbs and moderately high in protein, it is perfectly compatible with any ketogenic diet.

### **Who Should Not Eat a Ketogenic Diet?**

A word of caution: If you're starting a new dietary plan, especially if it's for a condition or disease, you need a professional to help you weigh your options. Pregnancy and breastfeeding are notable times of extreme physical vulnerability, and unless medically prescribed by a doctor, the ketogenic diet would not be healthy. Likewise, certain conditions respond better to higher carb and lower protein diets (like certain hormone imbalances or autoimmune diseases), so there is still the matter of considering your individual circumstances above all else.

Bone broth, however, seems to be showing up as a consistent factor among many different dietary viewpoints as a healing, therapeutic superfood. Whether you're following a keto diet, a Paleo diet, an ancestral diet or just a real food diet, [bone broth is beneficial](#) for chronic conditions and can also serve to prevent a number of diseases and conditions.





## Chapter 10:

# How To Increase Fertility Naturally With Bone Broth

According to the Centers for Disease Control and Prevention, over the course of just nine years (2000-2009), deliveries using ART (assistive reproductive technology) methods, such as IVF, have doubled. Overall, American birth rates have been regularly declining since 2007. Today, 6.7 million women of all ages are experiencing infertility issues and miscarriages.

But Why Has Infertility Become So Common?

As with most issues, there are a lot of contributing factors. Here are a few of the most common:

- Chronic stress and anxiety
- PCOS
- Gut and digestive issues (like leaky gut)
- The MTHFR genetic mutation
- Hormonal dysfunction from birth control and hormonal contraceptives
- Imbalanced blood sugar
- Irregular ovulation
- Inefficient hormonal detoxification
- A lack of healthy, monounsaturated fats (for example, from avocados)
- A lack of vitamin D from being outside in the sun
- A lack of lymphatic circulation-boosting, estrogen-metabolizing movement and exercise
- Age.

According to the American Society for Reproductive Medicine, approximately 20 percent of women wait until after age 35 to begin their families. This often leads people to conclude that since women are trying to conceive later, their age is the main factor that reduces the viability of pregnancies. Yes, egg count and sperm count have their important roles, but as you can see from the list above, there are no fewer than 11 additional contributing factors relating to infertility issues and miscarriages.

However, waiting longer isn't necessarily altogether bad. Sure, age can be a contributing factor, but it's certainly not this make-or-break issue. Thankfully, health practitioners and fertility experts like Christa Orecchio and Dr. Marc Sklar are beginning to speak out about this, sharing the message that whether you're in your 20s, 30s or 40s, you absolutely have the ability to conceive and conceive naturally with some health maintenance. A few more words on this from Christa Orecchio, author of *How to Conceive Naturally*:

*"It is crucial to understand that the health of your child is determined before you even conceive. It is also crucial to understand and be empowered by the fact that it is absolutely possible to conceive just as healthfully as you would have in your 20s if you do a little clean up work and boost your health."*

So, how do we increase fertility naturally and "clean up"? Well, the easiest place to start is using strategic food and supplementation.

### **How To Increase Fertility Naturally With Bone Broth**

In case we haven't hammered it into you enough already, how you eat, move, think and live each plays a huge role in your ability to conceive.

Just as there are foods that hinder fertility efforts, there are also foods that support your hormones and their fertile flow. We like to call these "fertility foods."

This brings us to bone broth and fertility. Did you know that bone broth is actually one of the most fertility-friendly foods out there? That's right. It balances hormones and bolsters your fertility, relieving you and your mate of infertility issues naturally.

According to Dr. Marc Sklar, also known as the fertility expert:

*"Bone broth, the way my grandmothers used to make it, is full of nutrients that every cell in our body thrives needs. The cells that make up our eggs and sperm are no different. Often, I see patients who are lacking in proper nutrition and bone broth can help reset their entire foundation. There is nothing more important than providing those cells (the very cells that make up baby-to-be) with the proper nutrients it needs in order to create the healthiest and happiest child possible."*

At his natural fertility clinic, Dr. Sklar has seen his patients succeed, not only with fertility, but also in tremendously improving their intestinal and digestive health, joint pain, hair, skin, nails and even autoimmune issues by drinking as little as one cup of bone broth a day.

Sound like a stretch? It's not. Here's why bone broth is such a powerful fertility food.

We can sum it up for you in just one word: synergy.

Bone broth heals your gut, and your gut is 100 percent linked to your hormonal health.

Healing your GI tract doesn't just make for an orgasmic pooping experience — it changes

your entire internal environment by calming whole body inflammation. It's that kind of environment that increases nutrient bioavailability from the vitamin and mineral-rich foods and supplements you're working so hard to get into your system.

You can be eating the world's healthiest, most fertility-friendly foods out there, but if those nutrients aren't bioavailable to your body, then instead of absorbing those nutrients, you'll just eliminate them.

To bring this topic of bone broth and body synergy home, we need to talk about adrenal function. Consuming bone broth directly supports kidney function. Kidney function directly supports the adrenals (small glands located on top of each kidney). Your adrenal glands produce essential hormones, like sex hormones and cortisol, which are vital to immune health and fertility.

There you have it. Bone broth is a fertility-friendly food because it creates whole body synergy. This has also led to bone broth becoming a more common recommendation during pregnancy from holistic and naturopathic doctors.

Awesome, right?

But just in case your friends are asking you for justification on how drinking bone broth is going to increase your fertile flow, here are a few bullet points you can use to defend yourself:

- The collagen (which turns into gelatin when cooked) in bone broth helps to heal serious digestive issues like leaky gut, reducing gut inflammation caused by massive spikes in cortisol (the stress hormone, which can throw hormonal function completely out of whack).
- The gut healing that takes place (due to collagen) allows for enhanced nutrient bioavailability to your body (from the food and supplements you eat). Vitamins and minerals from those nutrients are the things that feed (create and support) your hormones.
- The amino acids (protein building blocks) proline, glycine, arginine and glutamine, with which bone broth is packed, support our body's detoxification systems, getting rid of excess hormones — for example, estrogen — that cause all sorts of infertility issues.

Bone broth is, of course, not the only fertility-friendly food, but it's one of the most impactful ones.

- Bee pollen (high in folate)
- Yellow maca powder (for women) and black maca powder (for men), which are both high nutrients that help with chronic stress
- Royal jelly (high in essential amino acids and B-complex vitamins)
- Vitamin D
- Camu camu powder (high in vitamin C)
- Leafy greens and greens complex (high in chlorophyll and chlorella, which are breast milk-producing nutrients)

Now we've reopened the conversation about fertility and shown you that issues with infertility and miscarriage can absolutely be addressed using whole foods, like bone broth, as they work to synergistically heal gut and hormonal health.

Let's do our friends and family members suffering through these issues a huge favor and expose them to this knowledge.

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# Chapter 11: Experts Weigh In: How We Use Bone Broth

## Amy Myers, MD



As I always say, the gut is the gateway to health. In my new book *The Thyroid Connection*, I explain that the gelatin in bone broth protects and heals the mucosal lining of the digestive tract that aids in the absorption of nutrients.

Most patients with thyroid or autoimmune diseases are nutrient-deficient, so by drinking bone broth, they will gradually reverse nutrient deficiencies. Bone broth is also a rich source of amino acids, including tyrosine, which is one of the two building blocks of thyroid hormone. Because of the gelatin content for healing the gut lining, and the nutrient profile, I recommend bone broth to all of my patients.

## Sara Gottfried, MD



I prescribe bone broth to heal leaky gut, which is the underlying cause of every autoimmune disease. Leaky gut overstimulates the immune system, leading to systemic inflammation and, ultimately, autoimmune conditions. Bone broth can be used as part of a comprehensive protocol that includes removing trigger foods and environmental toxins, reversing inflammation, repairing, healing and sealing your leaky gut, and maintaining healthy gut flora to help correct autoimmune diseases.

As a doctor practicing functional medicine, I don't just treat symptoms. I think it's better to go upstream and manage the control system by addressing the root cause. Specifically, bone broth benefits autoimmunity because it contains gelatin, which heals the lining of the gastrointestinal tract. For my tribe, making bone broth is the most convenient way to get gelatin into the food plan.

Consuming bone broth is one of the best ways to replenish collagen and minerals in your body so that your hair regains luster; your nails, joints and teeth strengthen; and your gut seals over the leaky junctions between cells. Sip broth like tea. Enjoy a cup while you meditate in the morning, between meals or in the evening as an alternative to a glass of wine.

### **David Borenstein, MD**



I love bone broth for many different reasons. Bone broth is an excellent treatment for leaky gut, along with a gluten-free diet. Bone broth also improves sleep and adrenal health, which directly influence thyroid health. More and more patients are asking me about bone broth, including those who have MS, Crohn's disease, and all forms of autoimmunity. It's a great tool for improving gut health.

### **Jolene Brighten, ND**



Bone broth can be a therapeutic food for gut healing because of the many minerals, vitamins and easily assimilated amino acids that are leached from the vegetables, herbs and the bones of healthy, pastured animals. Leaky gut and systemic inflammation are closely associated with autoimmune conditions across the board. And it's well known that protein deficiency suppresses the immune response and increases susceptibility to infection. So, there are a couple of reasons your natural or functional health practitioner might recommend a high-quality bone broth.

High levels of dietary glycine may help with modulating the immune system and reducing inflammation, which helps you to heal from infection and/or disease. Amino acids in bone broth are very easily assimilated by the body, making them perfect for those who may be on a journey of healing their gut. Drinking bone broth counts toward your daily liquid consumption and helps you stay hydrated, which is essential for kidney health and helps keep digestion regular.

### **Aimee McNew, MNT**



Bone broth nourishes the body at the cellular level. It's rich in nutrients like glycine and glucosamine, which fortify the lining of the stomach, improve production of digestive juices and repair the barrier function of the small intestine, helping to reverse and prevent leaky gut. Bone broth was the superfood of our grandparents' generation, which they learned from the generation before them, and so on. Our modern world has lost touch with old-fashioned nutritional wisdom because we are too focused on quick, convenient and sweet-tasting foods.

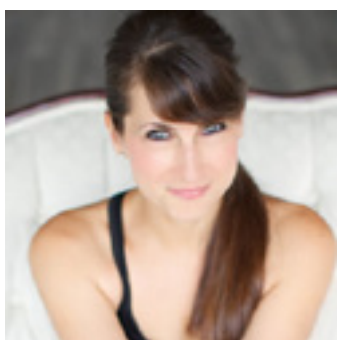
Bone broth may be an acquired taste, but it's the taste of pure nourishment. Unlike refined carbohydrates, which may satisfy sugar cravings temporarily but leave us craving more, bone broth answers the call of our cells to be energized, nourished and healed. I have personally used bone broth to reverse my leaky gut, to support my body during pregnancy and postpartum, and to boost my immune system when fighting viral infections. It's a food that is versatile and relevant for every stage of life and wellness.

### **Craig Fear, NTP**



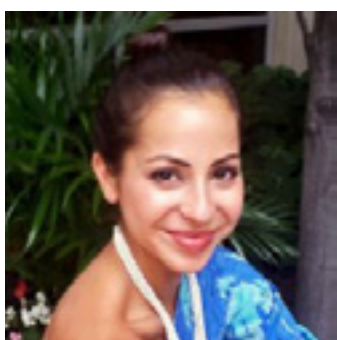
Because 70 percent of our immune system is located in our gut, many autoimmune issues are rooted in a compromised gut wall, whereby various pro-inflammatory foods (gluten, casein, etc.) can damage the gut lining, thereby setting up immune reactions. Bone broth is rich in amino acids, such as proline and glycine, as well as many minerals that help restore the gut lining and quell inflammation. Furthermore, bone broth can be used in countless soup and stew recipes, which are highly nourishing and easily digestible. It fits beautifully with many nutritional protocols that require strict avoidance of foods like simple sugars, grains and processed foods.

### **Jennifer Robins**



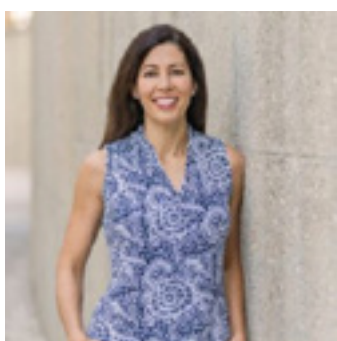
As many of us are familiar, bone broth (and collagen supplementation) can help facilitate the healing of a leaky gut. In a leaky gut, food particles and other substances can sneak outside the digestive tract, encouraging potential autoimmune activity to erupt. As a Hashimoto's patient, I take collagen peptides daily and put them straight into my morning coffee. I also try to make bone broth ahead of time and freeze it so when there is illness in the house I can have gut-healing goodness ready to go.

### **Alaena Haber, MS, OTR**



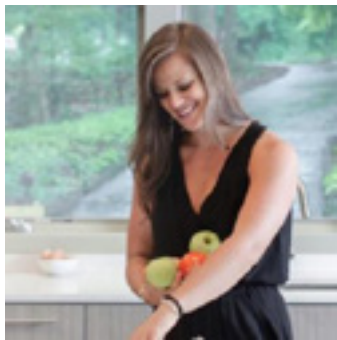
Autoimmunity and gut health are mutually inclusive health concerns. Bone broth is a time-tested home remedy for both acute and chronic gut distress. Considering one of the main keys to a balanced immune system is gut health, bone broth is the perfect supplement for anyone looking to manage the symptoms and inflammation caused by Hashimoto's and other autoimmune diseases. I recommend including it in your diet at least five times a week. My favorite way to do this is through homemade soups, especially a bowl of my anti-inflammatory, omega 3-rich triple seafood chowder!

### **Sally Johnson, RDN, LD**



Bone broth, an ancient elixir, has passed the test of time and proves true to tale that soup is medicine. We know today that slow simmered and cooked for up to a day or longer, broth made from bones from any animal is full of collagen and gelatin, supportive nutrients, minerals and amino acids, including glycine, that are central to digestive health, proper immune functioning and wound healing. For those with thyroid disease or any active autoimmunity, consuming bone broth can help heal leaky tight junctions of the small intestine and assist anti-inflammatory processes to relieve symptoms. As a part of your regular diet, sip bone broth from a cup or use it in soups, stews or any other recipe that calls for liquid.

### **Noelle Tarr, NTP**



Bone broth has a long and rich history of medicinal and culinary uses. In addition to being a staple in many professional kitchens, homemade bone broth (or stock) made from animal bones is used by many cultures around the world to support digestive health, immune function and, of course, to create traditional stews and soups. Traditional practices like eating organ meats and making bone broth allowed our ancestors to make use of all of the parts of the animals they hunted, which provided deeper nutrition and showed respect for the animal giving its life to sustain others.

Bones are made up of minerals and amino acids, including calcium, magnesium, collagen, chondroitin sulphates and glucosamine. Simmering bones in water for an extended period of time slowly breaks down the bone to release all of the glorious nutrients it contains. The end result? A liquid “gold” that’s incredibly nutrient-dense and packed full of culinary potential. Many of the nutrients found in homemade bone broth are super for reducing joint pain and inflammation, boosting the immune system, and supporting digestive and detoxification function.

### **Jessica Flanigan**



Bone broth can help heal the intestinal mucosa, which is usually implicated in autoimmune disease. It also tends to have trace minerals. I recommend half a cup per day during a gut-healing protocol/phase, and I personally use it when I am sick or if my gut is feeling tender from being ill or under the weather.

### **Jen Wittman**



Poor gut health is intricately connected to low thyroid function and, additionally, can trigger autoimmune conditions like Hashimoto’s disease and others. One of the most powerful ways to repair the gut is by having a daily dose of delicious bone broth.

What makes bone broth so therapeutic are substances like glutamine, collagen, glycine and proline, which restore the gut in a variety of ways. It’s really important to note that an inflamed and leaky gut contributes to just about every disease out there. Without healing the gut, you cannot truly heal the thyroid or reverse autoimmune conditions. This is why bone broth from grass-fed beef is a staple in my diet and that of my clients.



### **Sara Peternell, MNT**



Bone broth, home-prepared from the large bones of a pasture-raised animal, is one of the most nourishing foods I can think of. I encourage my clients to make this easy recipe and drink it regularly. For the majority of my clients who have autoimmune disease, especially Hashimoto's thyroiditis, bone broth is an essential food for healing the digestive system and hitting the reset button on the immune system. Bone broth is a rich source of minerals and amino acids like glutamine.

These nutrients are necessary as a foundation for one's health. Often our food plans lack the necessary minerals to keep our endocrine system, immune system and digestive system running beautifully. Glutamine is the essential amino acid for repairing the epithelial tissue of the small bowel. You don't have to just drink the broth, I encourage you to try mixing it into soups and stews, cooking rice with it, cooking your vegetables in it and using it in baking, as well.

### **Kinsey Jackson, MS, CNS**



As a clinical nutritionist, I've witnessed hundreds of folks reverse autoimmunity by healing their gut lining, and a major ingredient in this equation is (you guessed it!) gut-restorative bone broth. It's no wonder that a leaky gut precedes most (if not all) autoimmune disorders, considering the gut wall is only one cell layer thick and up to 80 percent of our immune system is located in and around it.

Autoimmune disease is characterized by an overactive immune system and it's not hard to imagine how the immune system goes haywire when foreign particles from our intestines sneak past the gut wall into our bloodstream. The body expends a lot of energy replacing the intestinal lining every few days, and the amino acids, fats and trace minerals found in bone broth are essential components of this process.

### **Laura Bruner, CNC**



Bone broth is an incredibly healing traditional food that, until recently, had seemingly been forgotten in the average diet. With its revival in fridges in stores and homes comes incredible healing for those suffering from autoimmune and/or thyroid diseases, as well as preventative and reparative benefits for those without. Bone broth provides the minerals, including calcium, magnesium, glucosamine and a host of others, for the body and digestive system to heal. The

glycine in bone broth reduces inflammation and regulates acid in the gut. The amino acids in bone broth are easily utilized by the body, making healing and nutrient absorption easier. The nourishing fats aid in repairing the cells of the body, providing essential vitamins that are just not found in a standard American diet.

I recommend that my clients and readers use bone broth in a myriad of recipes in order to get it into their diets on a daily basis (or as often as possible) — from chilis, soups and stews

to slow-cooked meats and even the liquid when cooking rice. And because I always like to practice what I preach, I do the same at home for my family. There are lots of gimmicky “superfoods” on the market, but there are few foods as super as bone broth.

### **Amy White, MS, NC**



The bulk of the human immune system lives in the gut. When the gut isn't healthy, the immune system isn't healthy. An unhealthy immune system increases the risk of developing illness, including chronic illness such as autoimmunity.

The amino acids found in collagen, a key component of bone broth, have been shown to repair and support the lining of the gut, facilitate digestive function and promote overall digestive health. I always encourage my clients to include bone broth in their diet daily and have had the pleasure of seeing health and vitality return as a result. Enjoying bone broth made with organic, toxin-free ingredients is an easy and delicious way to keep the gut healthy and the immune system strong.

### **Diana Walley, MNT**



Digestive health needs to be the first line of therapy in addressing autoimmune conditions. The gut is the seat of the immune system — therefore, a damaged gut can be a trigger for autoimmunity. Bone broth is an essential component of digestive repair. It contains valuable nutrients to heal the lining of the digestive tract and to boost immunity.

### **Sheila Gannon, MNT**



We know there is a link between autoimmune conditions and a leaky gut or increased intestinal permeability. Bone broth not only provides nutrients, such as minerals and amino acids, that are often depleted with a leaky gut, but it also helps to repair a leaky gut. As intestinal permeability is reduced, inflammation decreases and autoimmune conditions not only improve but can also go into remission. Additional benefits from repairing a leaky gut include improved mental clarity, increased energy, reduced joint aches or pains, and decreased inflammation. Bone broth can be used as a stock for soups or stews, when cooking grains, or consumed in a mug as a nourishing drink.

### Kate at Healing Family Eats



Bone broth is the perfect natural supplement for thyroid disease and autoimmunity as a whole because it contains many easily absorbable nutrients that nourish and support the immune system rather than fighting it. It also contains collagen, which reduces inflammation of the intestine and, therefore, allows the gut lining to heal.

I always have a fresh batch on hand and make sure to drink at least a couple of warm cupfuls during the day, particularly with meals, to aid digestion. Occasionally I will stir in a tablespoon of MCT oil for a brain boost. I love to include it in soups and stews for extra goodness and I post several of these recipes on the blog so my readers can include this wonder drink in their own diet.

### Aglaée Jacob



I first started using bone broth in 2010 when I was at my sickest dealing with chronic and daily digestive issues on top of fatigue, regular headaches, skin issues and insomnia. I was a bit intimidated at first and definitely stepped out of my comfort zone to gather quality bones (being a former vegetarian), but the process was a lot easier than I thought.

Most importantly, I found myself really enjoying my daily 2-3 cups of homemade bone broth and I quickly started feeling so much better as a result. Today, I don't use bone broth as often, but I still try to include it as part of my weekly superfoods. I like drinking it first thing in the morning (as so does my 2-year-old).

### Amanda Goodwin



Genetics, intestinal permeability, exposure to trigger(s), autoimmunity (Hashimoto's, Crohn's, MS, lupus, etc.): All of these need to be in place for an autoimmune disease to occur. Therefore, if you have an autoimmune disease, you need to address your digestion and remove the trigger(s) to avoid other autoimmune diseases.

My coaching program includes a recommendation to use mineral-filled bone broth to mend the intestinal lining. Bone broth may also help your hair, skin, nails, cellulite and strengthen the immune system to prevent colds and the flu. Bone broth may not be suitable for everyone, as food sensitivities are an issue with some individuals.

### Joey Anderson, NTP, CGP



I recommend bone broth to most of my clients as foundational for any healing protocol. Besides the well-documented gut-healing benefits, I find it can be profoundly useful as an anti-anxiety aid and to help de-stress. Anyone dealing with autoimmune issues needs to find ways to keep stress and anxiety in check. I love that something as simple, traditional and delicious as bone broth should be part of everyone's healing tool kit.

### Jo Romero



One of the things I did once I started a Paleo-based diet was to add bone broth into my diet. If I make a rich, meaty beef broth, I add lots of aromatics and herbs like thyme, onions, garlic and ginger for a nourishing and tasty drink, and I cook it slowly in the slow cooker for a couple of days. I like to skim most of the fat off once it's cooled to make it easier to reheat and drink. Otherwise, I tend to use chicken broth blended up into vegetable soups. It feels nourishing and healthy, and it tastes great, too.

### Chef Frank Giglio



I have been cooking with stocks and broths since I was in my teens, but I really began using them for their medicinal properties around 2009. It was then that I began transitioning out of a raw vegan diet and looking to heal my gut and teeth from years of a depleting diet. Today I use broths and stocks for soups, stews and sauces. They are an integral part of my cuisine, which imparts both flavor and medicine. I like to add seaweeds and medicinal mushrooms to the liquids for added minerals and flavor.

### Abel James



Slow-simmered bone broth is a nutrient-dense powerhouse. And when *The Wild Diet* won weigh-in after weigh-in on ABC TV, bone broth was our secret weapon. Kurt lost 16 pounds the first week he tried broth. As he sipped it, he said, "I like it! This is just like the way my grandma used to make us soup!"

Exactly.

If you read *The Wild Diet*, you know that I enjoy intermittent fasting. Drinking bone broth during the fasting period is fantastic because it's low-calorie, easy on the stomach and packed with nose-to-tail nutrients. We have a batch of bones simmering on our counter almost 24/7.

Bone broth can even be a surprisingly satisfying savory substitute for coffee in the morning.

But if you want to take your broth to the next level of flavor, you can also use it as a base for soups.





## Chapter 12: Bone Marrow Soup. What It Is & Why It's Good For You.

Did you know that bone marrow and bone marrow soup (i.e. bone broth) are considered a delicacy in many different ethnic dishes? Today, we tend to view bone marrow as an animal protein by-product. However, the Paleo, primal and ancestral health movements have helped traditional foods, such as bone marrow soup, resurface in a big way.

Why? Because whether you're making bone marrow soup yourself or buying it, it provides an incredible amount of essential nutrients, such as gelatin and collagen, at an extremely affordable price.

### **Check Out These Three Stats on Bone Marrow and Bone Marrow Soup**

We're not entirely sure how we learned about this delicious, nourishing paste, but there's clearly something special about it, which is most certainly why, in the animal kingdom, a predator instinctively goes straight for it once its prey has been captured. So maybe we learned about it by observing other animals?

Either way, here's how we humans have been using it for ages:

In haute cuisine, marrow shows up as a garnish for beef tenderloin (which is served with a fancy reduction sauce) and is often used to add depth and flavor to stocks and soups.

Native Americans and Mongolians were known to eat raw marrow, which can be extracted in one long, thin barrel-shaped piece with a well-placed tap on a femur bone.

Scandinavian parents serve up bone marrow soup to their children in the winter, which is believed to build up serious strength.

Are your eyebrows arching in disbelief yet? That's OK. The first time we learned about all of this, we felt the same way. We had no interest in eating bones, much less their marrow.

But since we've learned and experienced just how much it can optimize hair, skin and nail growth, and how it keeps overall gut health in tip-top shape, we've become both avid believers and daily consumers.

Now, let's backpedal for a minute and cover some bone marrow basics.

### **What Is Bone Marrow?**

From a technical standpoint, bone marrow is a mostly fatty (the health-promoting kind we like!), slightly proteinaceous, mineral-rich and gelatinous substance.

Bone marrow has gotten a bad rap due to its high fat content, but if you're down with ancestral health, then you're probably OK with consuming copious amounts of healthy fats already. However, if you're new to the idea that fat is healthy and you're freaked out when you read that bone marrow is basically made entirely of fat, know that the fat that composes bone marrow serves a very serious function as is outlined in the quote below:

*"A University of Michigan-led study shows that the fat tissue in bone marrow is a significant source of the hormone adiponectin, which helps maintain insulin sensitivity, break down fat, and has been linked to decreased risk of cardiovascular disease, diabetes, and obesity-associated cancers. The findings appear in today's online-ahead-of-print issue of Cell Metabolism."*

Bone marrow soup is also chock-full of the following minerals:

- Calcium
- Magnesium
- Phosphorus
- Other trace minerals.

You see, this is why we don't want to throw away the bones or the marrow.

The parts of bone marrow that aren't made of fat cells (or adipocytes) are made of important cells that form and reabsorb both bone and connective tissues. These cells are called:

- Osteoblasts (bone cell formers)
- Fibroblasts (connective tissue formers)
- Osteoclasts (bone reabsorbers).

Their major duty? To manufacture both red and white blood cells.

### **Where Does Marrow Lurk?**

Well, it's found inside the bones of animals. Beef marrow is the standard, but it is found in the bones of other animals, as well (think mammals —birds, fish, etc.). Carefully crack open an animal's shank, humerus or femur and you'll find the marrow right inside. When you

extract it, which is usually either via the dedicated marrow spoon or a good old-fashioned tongue probing, suction and slurpage, it comes out in one long, off-white, somewhat-cylindrical piece.

### **Bone Marrow Benefits**

As you've already read, bone marrow is incredibly important and fulfills many roles. In fact, it's so important that we've even come up with a medical procedure — bone marrow transplants — to treat life-threatening diseases, like leukaemia and lymphoma, by replacing damaged bone marrow with healthy bone marrow. For some of these diseases, a bone marrow transplant is the only cure. In fact, a well-known Swedish oncologist by the name of Dr. Brohult actually used bone marrow as part of her treatment with leukaemia patients, believing that healthy animal bone marrow would help restore human bone marrow function. That philosophy comes from The Doctrine of Signatures, an ancient European philosophy.

Foods that resemble a certain part of the body can be used to treat diseases and ailments in that same part of the body — e.g. eating liver for liver health or eating bone marrow for bone marrow health. This quote by Nourished Kitchen sums up Dr. Brohult's line of thinking behind the intuitive actions she took in the name of healing her patients:

*"In the Chinese paradigm, bone marrow is considered the deepest tissue of the body and contains the essence of the being. It's an interesting correlation to consider that modern science has shown that within bone marrow are high concentrations of stem cells, the very organizing influences, and genetic material, for the being. It is these essential nutrients that help our bodies continue to build healthy, vital constitutions and repair cellular damage.*

*"Her hope — and desperation — paid off. Although the results were inconsistent, some of her patients quickly experienced remarkable improvements, including a normalization of white blood cell counts and a striking return of energy." Since that experiment, Dr. Brohult, her husband and her team continued to research alkylglycerols (AKGs), the active ingredient (which actually turned out to be a group of compounds) in calf's marrow that normalized white blood cell production. They eventually found the most abundant source came from the Greenland shark.*

In addition to being used in cancer treatments, bone marrow is also known to:

- Improve immune function
- Heal the gut lining
- Maintain bone health
- Speed up injury recovery
- Help regulate insulin.

It's probably due to the above reasons that Dr. Weston A. Price reported in *Nutrition and Physical Degeneration* that the indigenous peoples living in the Rocky Mountains of Northern Canada put such great stock in consuming animal organ meats, especially bone marrow:

*"I found the Indians putting great emphasis upon the eating of the organs of the animals, including the wall of parts of the digestive tract. Much of the muscle meat of the animals was fed to the dogs ... the skeletal remains ... have been cracked up to obtain as much as possible of the marrow and nutritive qualities of the bones. These Indians obtain their fat-soluble vitamins and also most of their minerals from the organs of the animals. An important part of the nutrition of the children consisted in various preparations of bone marrow, both as a substitute for milk and as a special dietary ration."*

### How To Find Bone Marrow

Bone marrow is positively delicious. It's got a gelatinous, mild, creamy and rich flavor, which as you read above, is the reason it's used in various sauces, soups and stew recipes.

If you want to take a stab at making your own bone marrow soup, you'll first need to gather the ingredient — bones. Animal quality is everything when it comes to making bone marrow soup, so you must make sure that the bones come from the following sources:

- 100 percent grass-fed, organic beef bones (which are our bones of choice)
- 100 percent grass-fed, organic buffalo bones
- 100 percent grass-fed, organic lamb or goat bones
- 100 percent pasture-raised, organic chicken or turkey bones
- Wild fish bones (from non-oily fish sole, turbot, rockfish or snapper, otherwise it may stink up your house).

The best place to find these bones is at the farmers' market. Occasionally, they can be found at Whole Foods. If you can't find them at your local farmers' market or health food store, check out Eat Wild to pinpoint the nearest place to source them.

Aside from that, you pour an acid medium + water over the top and simmer for a very long time. It's not hard to make, but it can be a serious pain. So, if you'd rather not risk burning down the house because you forgot to refill the crockpot, we've got you covered with our bone broth.

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## Chapter 13:

# Can You Give Your Dogs Bone Broth?

You give your dog a bone, but do you give your dog bone broth? It may sound like a strange brew made from leftover scraps, but bone broth has an impressive nutrient profile that can make a big difference in your furry friend's health.

The reason why bone broth has become an amazing superfood is partially due to its high content of bioavailable minerals, as well as nutrients such as collagen, gelatin and glucosamine.

Collagen, gelatin and glucosamine are proteins that have been shown to improve joint health, boost the immune system and repair the intestinal lining. This is why drinking bone broth is often recommended as a natural way to help alleviate symptoms of autoimmune disorders and digestive disorders, such as leaky gut syndrome.

### **What is Leaky Gut and How Can It Affect Your Dog's Health?**

A leaky gut is characterized by small gaps in the tight junctions of the intestinal lining, which allow particles such as bacteria and undigested food to pass through the intestinal lining and into your bloodstream. Leaky gut syndrome was once considered a "mystery" by health professionals, but it's now being recognized as an underlying cause of several illnesses, including autoimmune disease, chronic digestive disorders and allergies.

When it comes to your dog's health, leaky gut can turn into a huge problem. Chronic inflammation of the gut has been shown to play a role in the onset of several illnesses and diseases, such as rheumatoid arthritis and heart disease.

Frequent antibiotic use and processed foods are two reasons why digestive issues have become more common in today's society. While antibiotics are commonly given to dogs to heal infections, commercial brands of dog food are made from ingredients that worsen digestive health. Many commercial brands of dog food are made from inflammatory foods such as corn and grains that contain gluten — a protein that's been linked to intestinal inflammation and the development of leaky gut syndrome.

Even if your dog doesn't have digestive issues, it never hurts to increase the nutrients in its diet to improve intestinal health. The gut is where nutrient absorption takes place, which is why having a healthy gut improves your dog's health on all levels.

Since bone broth is easily absorbed, it's an excellent source of essential nutrients for older dogs and those with compromised digestive systems. The gut-healing properties of bone broth may also reduce digestive problems in dogs such as constipation or diarrhea.

### **Is Bone Broth Good for Dogs?**

There's no question that the nutrients in bone broth make it great healing food for us humans. What we are overlooking is how bone broth can be a powerful healing supplement for dogs, too. Let's take a look at the ways bone broth can improve your dog's health.

### **Improved Digestion With Gelatin**

There's a quote that says, "The road to health is paved with good intestines." This is especially true for your pup.

We've talked about how bone broth heals leaky gut, but let's take a look at the other ways the liquid gold helps with digestion. As mentioned earlier, bone broth contains gelatin, a protein that breaks down from the collagen in bones during the boiling process — it's the primary nutrient that gives bone broth its gut-healing properties. Gelatin helps maintain the strength of the mucosal lining in the GI tract, which provides a healthy environment for beneficial bacteria to grow. This is crucial to your dog's overall health and wellness, as an adequate supply of probiotics in the gut is one of the best defenses against illness and disease. Gelatin has also been shown to repair intestinal cells, which can help heal digestive conditions, such as leaky gut.

### **Strong Immunity**

As suggested above, a healthy gut results in a healthier immune system. With close to 80 percent of immune system cells being found in the gut, improving intestinal health with nutrients such as collagen and gelatin may help prevent the inflammatory responses triggered by leaky gut syndrome. Bone broth also contains proline, an amino acid found in collagen that's been shown to boost the immune system and promote faster wound healing.

### **Healthy Bones**

Not surprisingly, drinking bone broth does a dog's bones good. Bone broth contains a nutrient called glucosamine, which has been shown to support the healthy function of joints. Glucosamine is often taken as a nutritional supplement to support healthy joints and ligaments, and to reduce the pain and inflammation associated with arthritis.

Bone broth also contains hyaluronic acid, which is a fluid that's found in the eyes and joints. Getting hyaluronic acid from dietary sources can help reduce joint pain and stiffness, and may help prevent conditions such as osteoarthritis. Since arthritis is a condition that commonly affects older dogs, prevention through proper nutrition is key when it comes to your pooch's bone health.

## Reduced Inflammation

Inflammation affects our dogs' health the same way it affects us. The development of several conditions that affect dogs — such as allergies, rheumatoid arthritis, Type 2 diabetes, pancreatitis, liver disease and inflammatory bowel disease (IBD) — have all been linked to chronic inflammation. Since bone broth contains several anti-inflammatory nutrients, such as glycine, proline and arginine, it can provide the nutrition needed to prevent the development of inflammatory illnesses and diseases.

Aside from antibiotics and pro-inflammatory foods, such as corn and gluten, other causes of chronic inflammation in dogs include exposure to environmental pollutants, parasites, bacteria and harmful pathogens.

Chronic inflammation often has no early warning signs, which can make it difficult to detect. This is why adding anti-inflammatory nutrients to your dog's diet is necessary for disease prevention and overall health and wellbeing.

## How To Make Bone Broth for Dogs

Making homemade bone broth for your dog is easy, but it just takes a while. Once the bone broth has simmered, strain out all of the bones and allow the broth to cool in the refrigerator. After the bones are cooled, your broth may have a layer of fat on top — this is a good thing. It means the bones you've used are from healthy animals. Once you've removed this layer of fat, your broth should have a jelly-like texture. This is the gelatin, where many of the healing nutrients of bone broth are concentrated. You can serve the bone broth to your dog straight out of the refrigerator.

One thing to keep in mind when making bone broth for your dog is to leave out ingredients such as onions and garlic, which are toxic to dogs. If your dog has favourite vegetables, such as carrots or broccoli, adding those to your bone broth recipe will ensure your pup gobbles it down.

It's best to start off with feeding your dog small portions of bone broth and increase the portion sizes gradually based on your dog's dietary needs.

Now, dogs aren't the only animals that can benefit from bone broth — cats love bone broth, too!

As a food that promotes healthy joints, a strong immune system and improved intestinal health, your entire family, including your fur babies, can benefit from drinking bone broth regularly.





# BONUS:

## Bone Broth Recipes

Recipe credit to Casey Thaler and photo credit Erin.

### Cinnamon Chili Soup

**COOK TIME:** 30 minutes | **SERVINGS:** Serves 5

#### Ingredients:

- 4 tablespoons coconut oil
- 1 pound grass fed beef
- 1 pound ground lamb
- 2 to 3 cloves garlic, chopped
- 1 (28-ounce) can chopped tomatoes with juice 1 cup bone broth
- 3 tablespoons chili powder
- 1 teaspoon dried oregano
- 2 teaspoons ground cinnamon

#### Directions:

1. Melt the coconut oil in a large saucepan over medium heat. Add the beef and lamb and cook, stirring, until browned with no pink spots, about 10 minutes. Drain off excess fat.
2. Add the remaining ingredients, bring to a simmer, then reduce the heat and simmer for 30 minutes.

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### Pork Broth Stew

**COOK TIME:** 30 minutes | **SERVINGS:** Serves 5

#### Ingredients:

- 6 pounds pork backbones, cut up
- 2 teaspoons ground cayenne



- 3 cloves peeled and smashed garlic, or to taste 2 cups almond flour
- 4 cups coconut oil
- 2 quarts bone broth

### Directions:

1. Combine the cayenne and garlic in a small bowl and put the almond flour in a shallow bowl. Rub the backbone pieces with the spice mixture, then dredge in the flour, shaking off the excess. Save 1/2 cup of the almond flour.
2. Heat the coconut oil in a large cast-iron skillet over medium-high heat until hot but not smoking. Cook the backbones in batches, until darkened and crusty on both sides, about 5 minutes per side. Drain on paper towels.
3. Pour the broth into a large saucepan and bring to a rolling boil. Add the backbones, reduce the heat, and simmer for 60 minutes.
4. Meanwhile, pour off all but about 1/2 cup of coconut oil from the skillet, leaving the pork cracklings. Turn heat to medium-high and heat to just before fat begins to smoke, being careful not to let it burn. Slowly stir in the reserved 1/2 cup almond flour with a long-handled metal whisk (so you can avoid splattering hot oil) and cook, whisking constantly, until a dark red-brown layer is formed, about 5 minutes. Remove from the heat.
5. Bring the stew to a boil over medium-high heat. Add the almond flour mixture by the spoonful to the stew, gently stirring after each addition until well blended. Lower the heat and simmer uncovered for 30 minutes. Cook until the meat is falling off the bone, about another 30 minutes. If the stew gets too thick, add more broth or water.

## Chicken Fried Steak

**COOK TIME:** 15 minutes | **SERVINGS:** Serves 4

### Ingredients:

- 1/2 cup white rice flour (coconut flour or cassava flour okay) 1 tsp salt
- 1/2 tsp paprika
- 1/2 tsp garlic powder
- 2 tsp black pepper, divided 4 eggs, beaten
- 1/2 cup potato starch
- 1/2 cup tapioca starch
- 2 lbs cube steak
- 1/4 cup lard or coconut oil 3 tbsp butter (ghee okay) 2 cups beef broth
- 1/2 tsp dried thyme
- 2 tbsp heavy cream (coconut milk okay)

### Directions:

1. In a large pan or shallow bowl, combine the rice flour, salt, paprika, garlic powder, and half of the pepper. In a like-sized pan or bowl, place the beaten eggs. In a third like-sized pan or bowl, combine the other half of the pepper with the starches. Gently pound the cube steak to an even thickness, about 1/4"; slice into pieces the size of large steaks.

2. Dredge the steaks in the rice flour mixture, then the eggs, then the starch mixture, shaking off the excess as you go. Reserve 3 tbsp of the rice flour mixture (for making gravy later).
3. Preheat the oven to 170°F. Heat the lard or coconut oil in a cast-iron skillet on medium heat for 5 minutes. Add the steaks and fry in batches until golden brown, about 5 minutes per side. Place the cooked steaks on a wire rack supported by a baking sheet, then place in the oven to keep warm while you cook the others. Add more lard or coconut oil as needed while frying.
4. Remove everything but the browned bits at the bottom of the skillet. Reduce the heat to medium-low and melt the butter in the skillet. Stir in the reserved rice flour mixture and toast until aromatic, about 2 minutes. Stir in the beef broth and thyme and continue to stir as it thickens, about 2 minutes (add more broth if it gets too thick). Gently scrape up any browned pieces into the gravy. Once it has thickened, stir in the cream and remove from the heat. Season with salt and pepper to taste and serve the gravy over the steaks.

\*\* This dish goes well with Mashed Potatoes (or Mashed White Sweet Potatoes).

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### Sip and Serve: Thai Coconut!

**COOK TIME:** 2 minutes | **SERVINGS:** Serves 1

#### Ingredients:

- 7 ounces of Bone Broths Co. Grass-fed Beef Bone Broth
- Bone Broths. Co. Thai Coconut Spice blend:
- ½ tbsp dried cumin
- 1 tbsp sea salt
- 1 tbsp freshly ground white pepper
- 1 tbsp freshly ground black pepper
- 1 tbsp ground dried hot Thai chilies, or to taste 2 tbsp dried lemongrass
- 2 tbsp garlic powder
- 2 tbsp dried ginger
- 2 tbsp dried mint
- 2 tbsp toasted unsweetened coconut, ground

#### Directions:

1. In a microwaveable mug (or stovetop, if you like), heat bone broth until it's steaming. For microwave, this is usually 45 seconds. For stovetop, 5-8 minutes.
2. Mix in 1-2 tbsp of spice blend, to taste. 3. Stir and enjoy while still hot!





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