

Traditional Foods 101:

Bone Broth, Broth & Stocks

<http://nourishedkitchen.com/bone-broth/>

Bone broths are given special emphasis among traditional foods circles. Preindustrial societies across the globe have always placed particular and special emphasis on the preparation of the whole animal – and that includes emphasis on using bones for making broth. African tribes placed emphasis on bone broths for babies and small children. In Asia, emphasis is placed on stocks and broths made from fish and fish bones. In Europe, stocks and broths have become the foundation of cooking and are used in not only making soups and stews, but also for preparing reductions, sauces and for braising vegetables and meats.



*what's the difference between
broth, stock and bone broth?*

In traditional foods circles you'll hear a lot about broth, stock and bone broth – and they're typically used interchangeably. Bone broth, broth and stock are built on the same basic foundation: water, meat or bones (or both), vegetables and seasonings. As it cooks, the liquid is typically skimmed (although this is not necessary since the scum that rises to the top of the stock pot – off-putting as it is – is a rich source of amino acids) and eventually the solids are removed by straining the stock with a **fine-mesh sieve** or **reusable coffee filter**.

- **Broth** is typically made with meat and can contain a small amount of bones (think of the bones in a fresh whole chicken). Broth is typically simmered for a short period of time (45 minutes to 2 hours). It is very light in flavor, thin in texture and rich in protein.
- **Stock** is typically made with bones and can contain a small amount of meat (think of the meat that adheres to a beef neck bone). Often the bones are roasted before simmering them as this simple technique greatly improves the flavor. Beef stocks, for example, can present a faint acrid flavor if the bones aren't first roasted. Stock is typically simmered for a moderate amount of time (3 to 4 hours). Stock is rich in minerals and gelatin.
- **Bone Broth** is typically made with bones and can contain a small amount of meat adhering to the bones. As with stock, bones are typically roasted first to improve the flavor of the bone broth. Bone broths are typically simmered for a very long period of time (often in excess of 24 hours). This long cooking time helps to remove as many minerals and nutrients as possible from the bones. At the end of cooking, so many minerals have leached from the bones and into the broth that the bones crumble when pressed lightly between your thumb and forefinger.

why bone broths are good for you

Bone broths are extraordinarily rich in nutrients – particularly minerals and amino acids. Bone broths are a good source of amino acids – particularly arginine, glycine and proline. Glycine supports the bodies detoxification process and is used in the synthesis of hemoglobin, bile salts and other naturally-occurring chemicals within the body. Glycine also supports digestion and the secretion of gastric acids. Proline, especially when paired with vitamin C, supports good skin health. Bone broths are also rich in gelatin which improves collagen status, thus supporting skin health. Gelatin also support digestive health which is why it plays a critical role in the **GAPS diet**. And, lastly, if you've ever wondering why

chicken soup is good for a cold, there's science behind that, too. Chicken stock inhibits neutrophil migration; that is, it helps mitigate the side effects of colds, flus and upper respiratory infections. Pretty cool, huh?

- [The Benefits of Bone Broth](#)
- [The Chicken Soup Cure](#)
- [Bone Broths Support the Adrenals, Bones and Teeth](#)
- [Nourished Kitchen Reader Q & A on Bone Broth](#)
- [Can we be well-fed, but malnourished?](#)



Bone Broths are Also Inexpensive and Very Convenient

Bone broths are easy to prepare at home, very inexpensive (the cost of bones is usually under \$2/lb), and are very convenient and simple to make.

- [10 Nutritional Powerhouses that Won't Break the Bank](#)
- [11 Real Foods You can Stop Buying and Start Making](#)

ready? start making bone broth today

Ready to start making bone broth? Start with the recipes below, they all involve the long and slow cooking process that allows for the full release of nutrients – amino acids, gelatin and minerals – from the bones.

- [Roast Chicken Stock](#)
- [Perpetual Soup: The Easiest Way to Make Bone Broth](#)
- [Fresh Chicken Broth](#)
- [Asian-style Chicken Foot Stock](#)
- [Homemade Beef Stock](#)
- [Homemade Bouillon](#)

how to use bone broth

My husband and I aim to consume about one quart of bone broth per day, per person. While we start every morning with a mug of broth seasoned with salt, pepper and crushed garlic, we also use bone broth to braise meats and vegetables as well as in soups, sauces and stews.

- **Drink it plain with a little salt, ground pepper and crushed garlic.**
- **Braised & Roast Meats:** [Easy Roast Chicken](#), [Salisbury Steak for Grownups](#), [Cider-braised Brisket with Tzimmes](#), [Roast Lamb with Oregano and Lemon](#), [Beef Pot Roast with Winter Vegetables](#)
- **Soups & Stews:** [French Onion Soup](#), [Potato Leek Soup with Dill](#), [Gluten-free Chicken & Dumplings](#), [Chipotle Chile](#), [Black Bean & Chicken Soup](#), [Spiced Lentil Soup with Roasted Tomatoes](#), [Curried Lentil Soup with Coconut](#), [Onion Bisque with Frizzled Leeks](#), [Egg Drop Soup with Duck](#), [Wild Mushroom Stew](#), [Caldo Verde](#), [Winter Minestrone Soup](#), [Beef Burgundy](#), [Kale and White Bean Soup](#), [Asparagus Soup](#), [Lovage Soup](#), [Chicken and Wild Rice Soup](#), [Lentil Stew](#).
- **Braising Vegetables:** [Braised Whole Baby Beets](#), [Braised Turnips with Parsley](#)

How to Store Bone Broth

Bone broth can be stored in the refrigerator for no more than a week. You can also freeze it in ice cube trays, and transfer the frozen cubes of broth to a resealable freezer bag where they will keep for 6 months. Alternatively, consider making [Homemade Bouillon](#).

get started on bone broth with these resources

Typically, all you need to prepare bone broth in your kitchen is a good stock pot or a 6-quart slow cooker and something for straining the broth. To prepare a very clear broth, I recommend straining with a very fine-mesh sieve or a reusable coffee filter (using both in conjunction yields the finest results).

- [Nourishing Traditions](#) (the cookbook that started it all)
- [Heavy-bottomed Stock Pot](#)
- [6-qt Slow cooker](#)
- [Fine-mesh Sieve](#) or [Reusable Coffee Filter](#) (for straining broth)

The Benefits of Bone Broth

FEBRUARY 3, 2009 BY JENNY [111 COMMENTS](#)

There is nothing like a homemade broth – rich, fragrant and glistening with droplets of golden fat. It's an essential aspect of good cooking. Homemade bone broth offers the depth of flavor that its storebought counterpart simply can't parallel. It's also an extraordinarily inexpensive food, especially for its nutritive value. Beyond its culinary uses and economic benefits, bone broth is remarkably healthful.

Culinary Uses

Broths made from bones have been used across the globe throughout human history. Nearly every traditional society boiled bones of meat-giving animals to make a nutritive broth. It is deeply flavorful, but versatile and can provide the base for soups, sauces, gravies as well as providing a cooking medium for grains and vegetables.

In our home, we inevitably have a crockpot of perpetually brewing poultry stock bubbling away on the counter. And we use it everyday. When I braise vegetables, I use bone broth. Or we use it to baste roasting meats. Or, of course, in the soups, sauces and gravies we eat throughout the week.

While bone broth is technically a stock, and not a broth the terms are often used interchangeably.

Frugal Benefits

Bone broths are remarkably inexpensive to make. Many times you can prepare a decent broth for the cost of energy used to heat your pot alone. By using the bones from leftover roast chickens matched with vegetable scraps you've saved, you can make a gallon of stock for pennies. In getting to know your butcher or local rancher, you can often acquire beef or lamb bones for free.

Preparing your own stock at home can possibly save you more money over time than any other kitchen endeavor. Consider that a one-quart package of *Pacific Organic Broth* will set you back at least \$4.75 at most grocers, but making your own bone broth from kitchen scraps will cost you only the pennies needed for energy use. And it tastes better.

Health Benefits

As I mentioned earlier, bone broth has been prepared in kitchens, hearths and firesides throughout history. And, in many ways, it's a lost art. Home cooks have simply forgotten how easily a broth is made and how worthwhile it is to make this low-cost, highly nutritive food a regular part of the family diet.

As the bones cook in water – especially if that water has been made slightly acidic by the inclusion of cider vinegar – minerals and other nutrients leach from the bones into the water. Homemade broth is rich in calcium, magnesium, phosphorus and other trace minerals. The minerals in broth are easily absorbed by the body. Bone broth even contains glucosamine and chondroitin – which are thought to help mitigate the deleterious effects of arthritis and joint pain. Rather than shelling out big bucks for glucosamine-chondroitin and mineral supplements, just make bone broth and other nutritive foods a part of your regular diet.

Further, homemade bone broths are often rich in gelatin. Gelatin is an inexpensive source of supplementary protein. Gelatin also shows promise in the fight against degenerative joint disease. It helps to support the connective tissue in your body and also helps the fingernails and hair to grow well and strong.

Why Not Boxed/Tinned Broth

Boxed and canned broths and stocks are commercially available, and you can even purchase organic and free-range meat broths; however, these watery stocks pale by comparison to both the nutrient density and flavor of homemade bone broths. These commercially prepared broths are often aseptically packaged and highly processed. And expensive!

Save yourself money and maximize the flavor and nutrient density of your foods by incorporating broth into your diet more regularly. Want to know more? Check back next week and I'll teach you how to make bone broth from leftover roast chicken.

The Chicken Soup Cure

FEBRUARY 16, 2009 BY JENNY 10 COMMENTS

This is part of 2009's series *The Traditional Foods Primer*. January focused on sweeteners, and February's focus is on the nutritive power of bone broths. Earlier this month we addressed the Benefits of Bone Broth.

Chicken soup is known for its curative properties. And anyone who has ever been tucked away in bed, miserable with a stuffy nose knows the comfort and power of the golden broth, dotted with tender vegetables and soft noodles. While it's a folk remedy for the ages, researchers are beginning to discover just why and how chicken soup heals.

Chicken soup's curative properties have been documented for several centuries. In the 10th century, the Persian physician Avicenna referenced the healing powers of chicken soup. Again, in the 12th century Egyptian Jewish physician Maimonides recommended chicken soup to aid in the recovery from respiratory illnesses drawing his sources from classical Greek text. However, Maimonides and Avicenna weren't the only healers to recommend chicken soup to convalescents; rather, chicken soup seems to pop up as a healing food across the globe.

Bottom line: stick to good, old-fashioned and traditional chicken soup. It's inexpensive to make, delicious and healthy with its anti-inflammatory properties.

North Americans serve the soup with vegetables and soft noodles. The French serve it flavored with garlic and fresh herbs. Germans enjoy chicken soup served with dumplings

or spätzle. Chinese chicken-based soups are often served with ginger, scallions and anise.

Recently, chicken soup's success in improving symptoms of respiratory illness has been tried in scientific circles. Researchers at the University of Nebraska Medical Center have studied chicken soup's ability to inhibit neutrophil migration and thus mitigate the symptoms of the common cold and other respiratory tract infections. Indeed, their research indicates that homemade, old-fashioned chicken soup due to its highly anti-inflammatory properties holds significant promise in managing the symptoms of upper respiratory tract infections like colds. Unsurprisingly, the study's results indicated that commercially produced chicken soups varied wildly in their effects. Bottom line: stick to good, old-fashioned and traditional chicken soup. It's inexpensive to make, delicious and healthy with its anti-inflammatory properties. [1. Chicken Soup Inhibits Neutrophil Chemotaxis In Vitro. Rennard et al.]

Yet, chicken soup's healing properties extends beyond mitigating the symptoms of the common cold. Other research indicates that chicken soup, particularly the collagen found therein, may help to lower blood pressure.[2. Biosci Biotechnol Biochem. 2009 Feb 7.]A good bone broth that gels is rich in collagen, but that gelatin is often lacking in commercially prepared soups.

Japanese researchers went so far as to state[3. J Agric Food Chem. 2008 Oct 22;56(20):9586-91]: "By incorporating these foods into meals, normalization of blood pressure will be achieved without compromising the quality of life of those who need such foods."

Sadly, the excessive promotion of the low-fat diet may mean that consumers in search of a healthy, heart-friendly diet are actually missing the mark by choosing the much-acclaimed chicken breast which is virtually fat-less and also lacking in collagen. The parts of the chicken that are often considered waste seem to be the most rich sources of collagen. Using the carcass, legs and chicken feet in particular will lend the most collagen to your broth.

By preparing chicken stock and bone broth at home and making it a regular part of your diet, you and your family will reap greater benefits than by choosing commercially prepared soups and using them only infrequently at best. Chicken soup has been used throughout

the world for its curative properties, and it's interesting to learn that researchers are just beginning to understand the scientific mechanisms by which the food heals.

Interested in more information about the the curative properties of soup? Check out the last post in the Traditional Foods Series: The Benefits of Bone Broth.

Also, see these recipes from the [Nourished Kitchen's recipe archives](#):

- [Roast Chicken Stock](#)
- [Chicken & Wild Rice Soup](#)

Reader Questions: Bone Broth

JANUARY 6, 2012 BY JENNY [14 COMMENTS](#)

Next week, our question and answer session will focus on natural bodycare and you can send questions to questions@nourishedkitchen.com. If you have a random question that you need answered, please post it to our [facebook wall](#), it'll still get answered!

Video: Readers Questions on Bone Broth

Trouble viewing the video? [Click here](#).

relevant links:

Basic Information on Bone Broths:

You can get more information on bone broths through the links below, which also includes a print copy of this question and answer session.

- [Bone Broth Questions & Answers](#) (PDF)
- [Nourished Kitchen's: Bone Broth 101](#)

Basic Bone Broth Instructions:

If you want to get started making bone broth, here's a few tutorials that'll set you on the right path.

- [Roast Chicken Stock](#)
- [Perpetual Soup: The Easiest Way to Make Bone Broth](#)
- [Fresh Chicken Broth](#)
- [Asian-style Chicken Foot Stock](#)
- [Homemade Beef Stock](#)

Recipes for Using Bone Broths:

If you're wondering how to use up all that broth you'll be making, here's some recipes I use.

- **Drink it plain with a little salt, ground pepper and crushed garlic.**
- **Braised & Roast Meats:** [Easy Roast Chicken](#), [Salisbury Steak for Grownups](#), [Cider-braised Brisket with Tzimmes](#), [Roast Lamb with Oregano and Lemon](#), [Beef Pot Roast with Winter Vegetables](#)
- **Soups & Stews:** [Potato Leek Soup with Dill](#), [Gluten-free Chicken & Dumplings](#), [Chipotle Chile, Black Bean & Chicken Soup](#), [Spiced Lentil Soup with Roasted Tomatoes](#), [Curried Lentil Soup with Coconut](#), [Onion Bisque with Frizzled Leeks](#), [Egg Drop Soup with Duck](#), [Wild Mushroom Stew](#), [Caldo Verde](#), [Winter Minestrone Soup](#), [Beef Burgundy](#)
- **Braising Vegetables:** [Braised Whole Baby Beets](#).

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Can we be well fed, but malnourished? The teeth tell the tale.

JANUARY 4, 2012 BY SANDRINE HAHN [23 COMMENTS](#)

I am delighted that Jenny McGruther has invited me as a guest blogger for Nourished Kitchen! My name is Sandrine Hahn and I founded and lead Nourishing Our Children, an educational initiative of the San Francisco Chapter of the Weston A Price Foundation. On

the [home page of our website](#), we pose the question, “Can we be well fed but malnourished?” Let’s explore the answer!

Father and daughter. What do you notice about their faces from one generation to the next? Similar eyes, noses, smiles ... however, daughter’s face is significantly more narrow. Why? Do you think it is because mother may have a more narrow face and her daughter inherited that trait? Perhaps ... but, before we draw that conclusion, let’s consider the following:



Pictured above are a variety of different dental issues that we as a society have come to accept as normal or due to heredity. However, Dr. Weston A Price’s research indicates that these conditions are in fact not genetic but, rather, caused by a lack of vital nutrients during the formative period of the body. Dr. Price, a prominent Cleveland dentist practicing in the 1920’s, 30’s and 40’s, embarked on a series of travels to remote parts of the world in 1931 which culminated in his first publication of [Nutrition and Physical Degeneration](#) in 1939.

He discovered time and again that when the “displacing foods of modern commerce” were introduced into a healthy population group that there was a corresponding impact on their teeth. At the time, the list of such man-made items coming into the outposts during Dr. Price’s day was relatively short: refined sugar, white flour, vegetable oils (primarily cottonseed oil), canned fruits and vegetables and canned and condensed milk. When people started to consume foods made with these items, he documented an increase in dental carries or cavities in that generation. The next generation developed a more narrow face, with corresponding dental deformities or crooked teeth. Please learn more about Dr. Price’s research in a [preview of our presentation](#). *(Edit by Jenny: Nourishing Our Children has generously provided Nourished Kitchen readers with a special, discounted donation on their presentation materials of 50%. Check it out here – it’s worth it.)*



Cavities

While dentists today do correlate cavities to nutrition, their focus tends to be on sugar and other refined carbohydrates. The typical solution for decay is to fill the cavities, encourage the patients to increase their level of dental hygiene while decreasing their consumption of sweets. According to Price, when given enough specific nutrients, the body will re-

mineralize the tooth naturally so that no decay arises. The body can also repair damage that has already occurred. Otherwise we are faced with choosing amongst a short list of dental materials to put in our mouths and the mouths of our developing children, all of which are toxic to a certain degree.

Dental Deformities

Dentists by and large don't correlate deformities, such as crowding or overbites, to nutrition. As Dr. Suzan Hahn, a San Francisco dentist, explains:

When the jaw bone has enough nutrient density during development, it forms as a wide flat plane and all 32 teeth can come in unobstructed. When nutrients are lacking during the formative period, the bone bows and then the teeth come in crowded, crooked, with under bites, over bites or spaces.

As an aside, the same thing happens with the pelvis. When the diet is poor during the formative period, the pelvic opening will be oval rather than round, creating the possibility of birthing problems. The common solution to dental deformities is to cosmetically straighten teeth with braces. However, even with orthodontics, there is a limit to the structural corrections that can be made.



Braces

What's wrong with having crooked teeth? Can't we just straighten them with braces?

While we can create a beautiful-looking smile, braces do not address the underlying cause of crowded teeth, which is a lack of proper nutrition. One may have corrected straight teeth, but one could still be permanently left with:

- Narrow Nasal Passages
- Constricted Ear Canal
- Constricted Glands in the Head
- Reduced Surface Area in the Lungs
- Digestive Disorders
- Bone Problems
- and a Narrow or flattened Pelvis



The teeth tell the tale!

Pictured above are naturally straight teeth. As Sally Fallon Morell, President of [The Weston A. Price Foundation](#) and author of *Nourishing Traditions*, explains in her PowerPoint on Traditional Diets:

When the teeth are straight, it is a sign that the rest of the body was properly constructed, with good bone structure, good musculature, keen eyesight and hearing, optimal function of all the organs, optimistic attitude and a well functioning mind. And when the teeth are straight and the facial structure broad, the pelvic opening is round, allowing for easy childbirth. But when the teeth are crooked, it is a sign that there will be compromises in the rest of the body as well. When the face is narrow and the teeth crowded, there is less room for the important glands in the head, the pituitary, the pineal and the hypothalamus, the master gland. The hypothalamus is the seat of impulse control, and what is the defining characteristic of our young people today? Lack of impulse control!

When the teeth are crowded, the nasal passages are likely more narrow so there, more susceptibility to infection. The ear tubes are more narrow so problems in this area are more likely. Crooked teeth often goes with poor posture and underdeveloped muscles. The plumbing and the wiring of the body-house will be compromised as well. There will be less surface area in the lungs, fewer cells in the kidneys. The security system of your house, your immune system, will not be able to keep out all intruders. In addition to physical problems caused by poor diet, mental and emotional problems also appear. We actually have receptors for feel-good chemicals in our brains and these receptors can, work without the nutrients found in foods like seafood, animal fats and organ meats.

Finally, when the face is narrow, the pelvic opening is oval and childbirth becomes much more difficult, even life threatening. We should not blame the doctors for all the C-Section births they are doing today, these operations are necessary because otherwise the babies cannot get through the narrow opening of the pelvis.”

Once a child's body has been formed, we can't correct the narrow bone structure, although with good nutrition, it is still possible to be healthy. However, we can correct the bone structure in the next generation with good nutrition before conception and during pregnancy and growth. See our recommended [diet for pregnant and nursing mothers](#) and overall [dietary recommendations](#).



Facial Structure

This photograph illustrates perfectly the difference between normal and compromised facial structure. These two men belong to the same tribe and have the same genetics, but the young man on the right has excellent facial structure, a very broad face, while the young man on the left shows the elongation of the face and the narrowing of the palate that comes with the introduction of modern foods. His body has done the best it could with the materials available, but did not have the nutrients needed to build the strong bones that are required for wide dental arches. While the boy on the right has a bone structure that supports the entire face, it looks as though the face of the boy on the left is actually hanging from the skull.



The photo above is reproduced by permission with the [Price-Pottenger Nutrition Foundation](#) who holds the copyright. Please do not use the photo without their express written consent.

Pottenger's Cats

Like Price, Dr. Frances Pottenger was a researcher. His studies revealed that predictable changes in health can occur when you change the diet. In his study, cats that were fed a diet of raw meat, raw milk and cod liver oil lived generation after generation in good health. When the raw food was replaced by pasteurized milk and partially cooked meat, allergies and skeletal deformities occurred in the first generation. The offspring of these poorly fed cats developed glandular problems – thyroid, adrenal and pancreatic. The next generation experienced a whole host of degenerative diseases, and the fourth generation exhibited mental disorders and was infertile, meaning they did not reproduce. The implication for humans? Not that humans should eat only raw foods – humans are not cats. But, rather

when the human diet produces “facial deformities,” as we are seeing these days, extinction will occur if that diet is followed for several generations.



So back to our question – Can we be well fed but malnourished?

In a word – Yes. Yes, we can. It is possible to be malnourished even when we have plenty to eat. The very narrow arch behind the palatal expander captured above is indicative of what Dr. Price referred to as physical degeneration.

As has been previously mentioned ... it is not just the teeth and the shape of the face that are impacted by poor nutrition! Knowing that there are key nutrients needed for brain development, we can infer that without them, full development may be delayed, interrupted or never realized. Key nutrients include Vitamins A and D, Choline, DHA, Zinc, Tryptophan and Cholesterol. Most of them are found in the following foods: cod liver oil, and the liver, butter and egg yolks from grass-fed animals, while some are found in seafood and the meat of grass-fed animals.

How many of us routinely consume these foods or feed them to our children? My hope is that more and more do – which is why I established this educational initiative! Read more: <http://www.nourishingourchildren.org/Malnourished.html> and view the related section in our presentation here: <https://www.facebook.com/video/video.php?v=1558212590057> If you'd like to learn more about how to nourish, rather than merely feed your children, please take advantage of this opportunity to receive our [educational materials](#), many of which are on sale for up to 60% off in celebration of Nourishing Our Children's 8th Anniversary.

What if you eat right and your children's teeth are still crooked?

As an end note – in response to this information, some have expressed to me that they have fed their children a nutrient dense diet, yet their teeth are still crooked. **Possible reasons:** parents didn't start eating a nutrient dense diet well before the child was conceived in order to build their own nutritional reserves, their diet wasn't as nutrient dense as they thought, they didn't allow for enough spacing between children to recuperate their nutritional reserves (3 years is recommended), there is a malabsorption issue caused by a compromised gut (see [GAPS diet](#) for help), and/or it may take more than one generation to reverse the trend of physical degeneration that results in crooked teeth.