

# BONE BROTH FINDS THE SPOTLIGHT

By Andrew Sterman

In the dietary branch of Chinese Medicine, cooking bones is a method to extract the essence of the animal in a way that can most easily be digested and assimilated. There is something shamanistic about it; we are trying to absorb the deepest digestible energy of the animal. Yes, high cuisine relies upon stocks for finesse and depth, but the focus in dietary therapy is on the deep resonance between the bone essence of a long-cooked stock and our own deepest level: bones, joints, blood building marrow, kidneys, reproductive system and the very special organ that resides surrounded by bone, the brain.

That's the theory, but does it do anything in practice? I'll leave the studies to others, but in my experience, bone stocks are extremely helpful for individuals who are depleted or run down from stressful lifestyle, over-exertion, travel, illness or old age. Bone stock is a bit like a dietary dose of ginseng—it's stimulating, grounding and fortifying at the same time.

According to the classical teachings of Chinese Medicine, stocks are not interchangeable. A beef bone broth strengthens our constitutional health and is very anchoring, while chicken stock stimulates our immune response and is more warming. Turkey and duck stock are somewhere in between. Fish bone stock is often forgotten but is fantastic as both cooking stock and health tonic, resonating with the skeletal and reproductive level. Fish bone stock cooks more quickly (fish bones are softer and quite skinny); 6-8 hours makes an excellent fish stock. Seafood offers a wide variety to work with: lobster and crab shell (more stimulating, for adrenal exhaustion) or oyster and clam shell (more calming, for emotional stress).

Although not bones, broths made from dried scallops, mussels, shrimp, abalone, and other shellfish are also common and important, particularly in Asian cuisine. Shellfish are constantly in the process of creating their shells and are therefore seen as particularly supportive to our own bone maintenance level. All the stocks provide calcium and other minerals and the land animal stocks also provide rich nutrition from marrow. To make a **vegetarian stock**, use seaweed (usually kombu/kelp) and dried mushrooms, both vegetarian foods that resonate at the constitutional level (we make vegetarian stocks often, only partly because they are ready in 20 minutes).

## HOW TO PREPARE

Buy 3-5 pounds stock bones from a good butcher shop. They'll know to give you bones high in connective tissue, such as knee joints. The best stocks congeal in the refrigerator due to collagen and such; using only femurs and polite bones will make a delicious but less miraculous stock. Always seek organic or pasture-raised meat products.

Roast the bones on a baking sheet in a 350°F oven for 20-30 minutes.

Meanwhile, roughly chop 1 leek, a few medium carrots and a few stalks of celery, toss them in the bottom of a stock pot with a tiny splash of olive oil and couple pinches of salt. Start them going, not too hot.

When the bones have browned a bit (they will also give off some fat that you don't need to use), toss them into the stock pot, cover with water and bring to a simmer. Stock must not be allowed to reach a rolling boil. A full boil will turn stock bitter and ruin its clarity, so prized in high cuisine. Stock should have a slow-rising bubble every few seconds, no more. Use the stovetop's lowest setting.

Add a good splash of cider vinegar or white wine vinegar (1/4 cup) and a half dozen dried mushrooms (optional, but a great option).

Cook on steady, low heat for 1-2 days without stop. I generally cook mine for two and a half days.

When it's done, pour the stock through a strainer into another pot to collect the bones and bits. From the collection pot, ladle or pour into refrigerator containers. Cool in the refrigerator overnight. Fat will separate to the top for removal and the stock will show its character by congealing through its natural gelatins.

Scoop some into a saucepan to melt before drinking. Some like it straight, some opened up with some warm water. Salt to taste if desired (salt is a mineral of the sea and joins the work of the stock unless a person has a specific renal

hypertension that is sensitive to salt intake). While you have it on hand, by all means explore cooking with stock in soups and sauces. For a good home cook, the addition of a great stock is what you need to match fine restaurant cooking.

## FURTHER NOTES FOR CLINICIAN/COOKS DON'T FORGET FISH BONE BROTH

A good fishmonger will save the skeletons and heads after filleting fresh fish and give them to you without charge or for a minimal fee of perhaps two dollars a pound. Where I shop in New York City, the guys are pleased when you carefully select beautiful fish for dinner but they get excited if you ask for bones to make stock. Ask for white fish skeletons; avoid the high oil fishes, such as salmon, until comfortable enough with fish stock to know how to use the stronger taste these fish will provide. Include the heads and fins if you can.

As with beef bone stock, begin by roasting the bones on a baking tray in a 350°F oven for 20-30 minutes. This isn't necessary but does contribute a beautiful taste to the finished stock.

While the bones are roasting, coarsely chop a few carrots and a couple celery stalks and toss them into the stock pot with a small splash of olive oil and a generous pinch of salt. Improvise with



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other root vegetables such as leek, daikon, burdock or parsnip, but avoid those that will overwhelm the color of the stock, such as beets.

Also toss in a half dozen dried mushrooms and a single piece of dried kombu.

Add an inch of water to soften the vegetables, mushrooms and kombu.

Add the fish skeleton (a couple if small, perhaps a half a skeleton if a large fish such as cod or grouper, a whole large skeleton if cooking for broth clients), then cover with cool water. Bring up to nearly boiling but quickly reduce heat to sustain a simmer. As with decocting herbs, the intensity of the flame becomes a major contributor to the influence the dish will exert. Classical herbalist language contains the message also for food therapists and home cooks: wake foods quickly with a soldier's flame, then reduce for long cooking with a scholar's flame.

Add 1/4 cup white wine vinegar to extract calcium from the bones (the calcium of the bones will neutralize the acid in the vinegar, the extracted calcium will stay in the broth which will not taste vinegary).

Cook the fish stock at a low simmer with a scholar's flame for 6-8 hours. Strain in a colander over another pot or large bowl, allowing ample time for all the essential goodness to drip from the solids. Cooking overnight or up to 36 hours is fine.

While beef fat is no longer seen as a disease-causing factor, fish oils are positively revered in modern nutrition teachings. In our home and for my dietary clients, I serve fish stock without separating fat, but I do separate fat from the top of land animal or poultry bone stock. There is nothing particularly wrong with this fat; traditionally it was collected and saved for other cooking or for spreading on bread. There are two reasons to separate the fat from the broth (it will congeal on top for easy skimming once the broth is refrigerated overnight). The first reason simply is that many people deeply distrust fat, and it is essential that our patient/clients trust and accept their food. The second reason is merely a matter of cook's pride. A finely crafted stock will congeal with natural gelatin and collagen; fat isn't needed for richness of flavor or thickness of texture.

### DIGESTION

Digestion is more important than nutritional content; without good digestion even the best foods fail to nourish. This simple message explains why Chinese Medicine can be so much more successful with very weak patients than Western modalities, as modern thinking tends to emphasize material substance over functional capability (qi). Chinese Medicine has always been deeply interested in strengthening digestion. Here, dietary therapy is traditionally considered the highest medicine. Regarding broth, the essential idea is that the food is as close to pre-digested as possible, thanks to the very long cooking process.

Digestion can be seen as the continuation of the ripening process. For example, unripe bananas tax digestion, yellow bananas are less taxing, but brown spotted bananas are best; the stomach, spleen/pancreas and small intestine will finish the 'ripening' process as the banana is transformed, transported and assimilated. Fruits and

vegetables are said to ripen, animal foods to rot. Digestion is called ripening and rotting in classic texts because digestion of food eaten is not fundamentally different from spoiling of foods left uneaten. Digestion carefully directs and hastens a natural process. Stomach Fire is necessary for digestion (along with air from above—*da qi*—mixing with digesting food, but that is another discussion). If stomach fire (digestive strength) weakens, cooking fire becomes ever more important. Long-cooked foods tonify yang qi as they simultaneously provide nourishment that has been transformed (pre-digested) during two days of steady, gentle heat. To drink bone stock as a therapeutic tonic is to be given a gift of post-natal qi, already ripened, rotted, and (nearly) transformed. The added yang qi (from the prolonged cooking fire) helps with transportation, providing the most easily assimilated nourishment possible (and helping us shift our focus from material content to energetic function). The term 'rotting' is used in a very specific way, of course. If digestion is strong, our foods don't rot in our guts, bacteria being managed by stomach acids and other secretions (a sign of weak digestion is distention, belching or flatulence, signs that bacteria are playing too large a role in digesting what has been eaten). Broth transforms without rotting in the conventional sense because the barely boiling temperature is too high for pernicious bacteria during the two day cooking process. Again, cooking fire is replacing stomach fire in function.

Chinese Medicine sees the role of culinary spices primarily as aiding digestion and tuning internal harmonies. In this view, cuisine considerations evolved after therapeutic uses of spices and kitchen herbs. In stocks, these views often meet with the addition of aromatic spices. Strongly warming spices are often added (particular in the French tradition), such as whole black peppercorns, clove, onion and garlic. I recommend a plainer stock, but after long cooking, these herbs—classified as hot—are tempered and can be safely used to further support yang qi. For skillful use as Chinese Medicine, however, it is always important to be clear about intention. Are we aiming at *ying* (nutritive qi) in the middle burner? Grain congee seasoned with fresh ginger and scallion would be better, or stew/soup with star anise, cinnamon, nutmeg, cardamom, turmeric or clove (or simply five spice powder). When using a bone broth, we should be careful not to stimulate the *yuan* qi level through hot spices, particularly for those who need the stock the most, individuals with floating or leaking *yuan* qi.

Whether for dietary medicine or for making a beautiful (and deeply nourishing) dinner, homemade bone stocks are in a class by themselves. Although at first we may provide appropriately crafted bone broth for others, mastering the making of bone broths is something our patients can learn to empower their own healing. It is a key step in raising the home cook to her or his rightful place: Director of Family Health.

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