# Collagen Bone Broth Beef Stew

Bone broth is an old-school superfood that is wonderful for gut health, and just about everyone in the Western hemisphere has some degree of gut damage including “leaky gut syndrome” on account of the typical Western diet. The collagen proteins released from the soup bones actively repair the gut barrier. This recipe is more art than science, and I do not use exact measurements. Just trust your gut (pun intended) and listen for any whisperings from your ancestors :)

This recipe is a bit of a challenge, and took me 3-4 attempts to be successful, but once you get it down it’ll become a favorite.

Ingredients include: Soup bones, stew meat, garlic cloves (optional), onion (optional), white vinegar, worcestershire sauce, and any herbs or flavoring agents that you’d like to use. I usually use thyme and rosemary. Depending on the thickness desired you may want to have white flour or cornstarch on hand.

- Obtain 3-4 large soup bones and a good sized hunk of beef stew meat from your local butcher or grocery store. Some places you have to ask at the meat counter.

- Place the bones in a crockpot, ensuring that they do not stick above the rim.

- Fill the crockpot with hot water such that the bones are completely submerged, with at least an inch over the tops. You’ll want the water to be hot to start out with, as the slow cooker will otherwise heat it too slowly to maintain proper food handling safety. Typical tap water hotness is fine. Or if you prefer filtered water just heat it to a boil, and let it cool for about five minutes. Add a dash (about a tablespoon or two) of white vinegar to acidify the solution. This will help dissolve the bones and release the minerals and collagen. The acid taste can be neutralized later if needed.

- For a richer flavor, you can add aromatics of your choice. I like to dice some cloves of garlic and let them cook in the broth. You’ll filter out the garlic solids when you filter out the bones. Sometimes I chop an onion, and also add some sprigs of fresh thyme and rosemary. Again, all the solids get filtered out in the next step. The more you add here, the more amazing your kitchen will smell.

- Run the crockpot on high for 24-48 hours. The broth should become pale yellow and aromatic. Strain the broth using a fine-pore strainer or cheesecloth. The bones will most likely crumble at this point, especially if you went the full 48 hours, so ensure that all bone fragments are removed.

- Reduce the temperature of your crockpot to low. Give it a few hours to come down. Broth that is too hot will toughen your meat, the goal from this point forward is “low and slow” which is the secret to tender fall-apart beef. This is because you are hitting the “sweet spot” to break down only one of the two main protein types in meat. Science!

- Cut your stew meat into approximately 1x1 inch cubes.

- Braise your meat. To do this, get a big frying pan. I recommend using ceramic, because it has a natural non-toxic non-stick coating. If using a metal pan, spray with Pam cooking spray. I do NOT recommend using chemical non-stick coatings, such as teflon, as the high temperatures in braising can cause toxins to migrate into your food. Heat the pan, empty, on high heat for a minute or two. This builds up energy in the pan. Then toss your meat in. It should sizzle. Let it cook for several minutes, stirring occasionally. A common mistake is to think you're burning your meat - you're not! Let your meat really get the heat! You're actually performing a chemical reaction known as the Maillard reaction, which enhances the flavor of your food.

- Once you get a nice brown "glaze" in your pan, and the meat is semi-browned and just a bit seared on the outside, you want to get everything back into the crockpot. This includes the cubes of meat, any browned bits, and most importantly the glaze, which contains the tastiest molecules. You can use some of your bone broth to dissolve the glaze and get it into your crockpot. Don't worry if the meat isn't cooked all the way through, it will finish in the crockpot.

- Let this cook in the crockpot "low and slow" for another 6-12 hours.

- An hour or two before serving, chop up some potatoes and veggies of your choice (I like to use yukon gold potatoes, carrots, celery, and an onion). Depending on how tough or soft you like them, adjust how long they'll sit in the crockpot. I usually give them an hour or so. The longer you leave potatoes or other starches in, the thicker the broth will be as starch leaches out into the broth.

- Add worcestershire sauce to taste, if desired. Add salt, pepper, any other flavorings that you want.

- If your stew tastes "vinegary" or acidic, don't worry! Just slowly add baking soda (not baking powder) and if you see bubbles, that's the acid being neutralized. Stir, let it sit for a minute, taste again and repeat as needed. Unless you put a ton of vinegar in at the beginning it won't take much, if any, baking soda to get rid of the excess acid.

- Adjust the thickness of your stew to your liking. Some people like it thin, some like it thick. You can thicken using wheat flour or (if you are avoiding gluten) corn starch. You just have to make sure not to clump it. This is done by taking a cup or two of broth, placing it into a separate bowl, and whisking in your thickener until the mixture has an even consistency. Then whisk this into your crockpot.

- Enjoy a healthier gut.