

How to Disinfect A Well and Water System

Overview: Use ordinary liquid laundry bleach to **shock chlorinate** the water system. Determine how much bleach to use, then pour the bleach down the well and circulate it through the whole water distribution system. Wait 6 – 12 hours for the chlorine to work, then flush the chlorinated water from your well and pipes. Retest the water after 2-3 days.

Step-by-Step Instruction for Shock Chlorination

- 1. Create an opening at the top of the well to pour in the chlorine solution.** Well caps vary—this step may be easier for some wells than others.
 - If a flat or domed cap on top of a well with no pipes sticking up out of it, you can unbolt the cap and remove it.
 - **If pipes stick up from the well cap, do not remove the bolts!** The bolts hold the bottom plate of the seal and if you remove the bolts, the bottom plate will drop down your well. In addition, the weight of the pump may be resting on the cap, and if you remove the cap, you may lose your pump down the well. The best option is the vent pipe hole. If you can remove this short piece of pipe that sticks up out of the cap, you can use that hole to pour down the chlorine solution. If you have difficulties with this step, call a well or pump professional for assistance.
- 2. Determine the amount of bleach you will need.** An initial chlorine concentration of 50 to 100 parts per million (ppm) is recommended. To estimate how much bleach to use for this concentration, use the table below based on the well diameter and depth of water in the well. **Note: Do not use the total depth of the well. The depth of water is the distance from the water level to the bottom of the well.** This information is on your well log. Your local Watermaster can help you get a copy of your well log. Your well driller may also have this information.

Amount of Ordinary Chlorine Laundry Bleach to Shock a Well (very roughly 100 ppm)

| Well diameter (inches) | Depth of Water in Well | | | |
|------------------------|------------------------|---------------------|---------------------|---------------------|
| | Less than 50 feet | 50 – 100 feet | 100 – 150 feet | 150 or greater |
| 2 | 1 cup | 1 cup | 1 cup | 1 cup |
| 4 | 1 cup | 2 cups | 3 cups | 1 quart = 4 cups |
| 6 | 2 cups | 1 quart = 4 cups | 1½ quarts = 6 cups | ½ gallon = 8 cups |
| 8 | 1 quart = 4 cups | ½ gallon = 8 cups | ½ gallon = 8 cups | ¾ gallon = 3 quarts |
| 10 | ½ gallon = 8 cups | ¾ gallon = 3 quarts | ¾ gallon = 3 quarts | 1 gallon |
| 12 | ½ gallon = 2 quarts | ¾ gallon = 3 quarts | 1 gallon | 1 gallon |

- 3. Make sure you have the right type of chlorine bleach.** Use plain liquid laundry bleach (Clorox, Purex, or a generic brand). Do not use bleach with additives or special scents. The label should say sodium hypochlorite and the concentration should be about 5-6%.
- 4. Dilute the bleach.** Use 2 cups or less per 2 gallon bucket of water. Straight chlorine can corrode metal well parts.
- 5. Pour the diluted chlorine bleach solution down the well.** Be careful not to splash on clothes or skin.
- 6. Mix the chlorine and well water.** Attach a hose to a faucet near the well and run the water. After you smell chlorine, direct the water from the hose back down into the top of the well. (If you don't smell chlorine in a few minutes, add some more before circulating the water.)
- 7. Make sure the system is chlorinated** by opening each fixture (sink, shower, outdoor faucet) one at a time and let water run until you smell chlorine. Be sure to run hot water to draw chlorine into the water heater. If you don't smell chlorine, add more diluted bleach solution and circulate with the hose again.
- 8. Hold the chlorine in the pipes 6 – 12 hours.** Don't use the water! (A few toilet flushes are O.K.)
- 9. Remove chlorinated water from well and pipes.** Run a hose outdoors until you no longer smell chlorine. Don't use this water on plants. Next, run chlorine water out of plumbing. Less water down drain is better for septic tank.
- 10. About 3 days later, test for coliform bacteria.** Do not consume the water until you receive "clean" test results.