

Is your well water, well?

WELL DISINFECTION

Q: WHAT IS DISINFECTION?

A. Contaminated drinking water may contain harmful bacteria, viruses or other microorganisms that can make you sick. Disinfection is one way to kill or inactivate microorganisms to make water safe for drinking. It can also get rid of the kinds of bacteria that can cause unpleasant tastes and odors.

Q. WHAT CAUSES WELL AND WATER SYSTEM CONTAMINATION?

A. A well or water system may become contaminated with harmful bacteria and other organisms when the well or plumbing is open to the environment during construction, repair or routine upkeep. A well may also become contaminated if the well casing is damaged, broken down over time, or if the well is flooded. Contamination problems can also be caused by improper plumbing connections between water treatment devices and wastewater piping, between the drinking water plumbing and heating/cooling system, or other cross connections.

Q. HOW OFTEN SHOULD A WELL BE TESTED?

A. Typically, a well should be tested once a year for coliform bacteria, or anytime there are changes in the water's taste, odor or appearance. The coliform bacteria test analyzes for a number of bacteria types. Most of these are not harmful, but a few are. The presence of coliform bacteria shows that surface contamination has found its way into the well, and disease organisms may also be present. The presence of *E. coli* or fecal coliform means a more serious health risk exists. In that case, the water should not be used for drinking, cooking, or bathing.

WWW.FLHEALTH.GOV/WELLSTEST



CONTACT WATER PROGRAMS FOR MORE INFORMATION

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Q: WHEN SHOULD A WELL BE DISINFECTED?

A:

- When a laboratory test of the water shows coliform bacteria are in the well.
- When the well has been flooded or near flood waters.
- After putting in or repairing plumbing pipes and fixtures (such as water softeners, faucets and filters).
- After well or pump repairs.
- When the well water tastes different than normal or has a musty odor.
- When restarting plumbing, wells or pumps cut off for a period of time or when a water system is drained or opened for some other reason.

Well disinfection will not solve the following problems:

- When contamination is coming from a certain source such as a septic system or an animal feedlot, if improperly located.
- When a well or plumbing system is improperly constructed, improperly located, or damaged and in need of repair (although disinfection should follow repair work).
- If the contaminant is arsenic, nitrates, fuel, pesticides, or other chemicals.

Procedure for disinfection of the well and water system

You should take the following steps to disinfect a well which has a submersible pump with a sanitary well seal with a threaded plug in it. You can only use this method if a removable threaded plug in the sanitary seal allows access into the well. (If your well does not have a submersible pump, but a pump located in a well pit, or you have a flowing well, or your well has a sanitary seal without a threaded plug, you should have your well disinfected by a licensed well contractor or licensed pump installer.)

Diameter of Well in Inches	Depth of Well in Feet		
	0-50	51-100	101-200
2 or less	1/8 cup	1/4 cup	1/2 cup
3-4	1/2 cup	1 cup	2 cups
5-6	1 cup	2 cups	1 quart

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STEP 1: POWER OFF

- Disconnect any water softeners or household water filters.
- Turn off the power and water supply, and drain the water heater.

STEP 2: MIXING A CHLORINE SOLUTION

- Sodium hypochlorite is the disinfectant found in laundry bleach. It is the recommended product for well disinfection. Since bleach loses its disinfecting capacity over time, it is important to use a fresh container. Do not use laundry bleach that contains any fragrance or other additive.
- Place a large clean bucket near the well. Add one gallon of water and the amount of bleach shown in the table and mix thoroughly. Be careful not to splash bleach on yourself.
- This table gives the amount of laundry bleach (6.0% sodium hypochlorite or 5.7% available chlorine) to use for well disinfection.
- NOTE: 1 cup is equal to 8 ounces.

STEP 3: ELECTRICAL SAFETY

- Turn off electrical power to the pump by turning off the circuit breaker or unscrewing the fuse.
- Do not turn power back on until STEP 5 or after placing the chlorine solution in the well.

STEP 4: ADDING CHLORINE TO THE WELL

- Pour the mixture into the well and avoid spilling on any wire connections. Use a funnel to pour the chlorine solution into the threaded opening. Be careful not to splash/spill the concentrated solution. Wear gloves and goggles. Do not use a siphon.
- Let the chlorine solution sit in the well for 30 minutes.

STEP 5: RECIRCULATING CHLORINATED WATER

- Run chlorinated water through the entire plumbing system by running water to each plumbing fixture, one at a time, until you smell bleach, and then close the fixture. Do this for each fixture, including:
 - ✓ Cold and hot water fixtures.
 - ✓ Toilets and shower/bath fixtures.
 - ✓ Any outside faucets or yard hydrants.
- Leave the chlorinated water in the plumbing for at least eight hours or overnight.

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STEP 6: REMOVING THE CHLORINATED WATER

- Run a garden hose from an outside faucet and discharge the water onto the ground until the chlorine smell is gone from the well.
- Once the chlorine is gone from the well, turn on each fixture inside the house one at a time until the chlorine smell is no longer present.

STEP 7: RECONNECTING WATER SOFTENERS AND OTHER WATER TREATMENT DEVICES

- Disinfect home water softener or household filters according to the manufacturer's instructions and then reconnect those devices.
- Refill the water heater if needed.
- Start the water heater.

STEP 8: TESTING YOUR WATER

- Make sure the chlorine has been removed from the water system.

Prior to using the water for drinking, cooking, making ice, or preparing food, be sure to have the water tested by a Department of Health certified laboratory. Search for labs here:
<http://appprod.dep.state.fl.us/labs/cgi-bin/aams/index.asp>

Please contact your local county health department or private laboratory to arrange for the sampling of your drinking water. Your county health department can provide more information about testing and disinfection: www.floridahealth.gov/programs-and-services/county-health-departments/find-a-county-health-department/index.html A list of DOH certified labs can be accessed at: <http://appprod.dep.state.fl.us/labs/cgi-bin/aams/index.asp>

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WARNING: Chlorine can damage eyes, and damage and inflame skin. In addition to not using the water for drinking, cooking or bathing, all likely water users need to be warned that a potentially unsafe level of chlorine is in the water system. Do not shower or bathe with water containing high levels of chlorine.

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