

IS YOUR WELL WATER SAFE?

HOW TO DISINFECT YOUR WELL

If your well was flooded, you need to disinfect it and have the water tested BEFORE drinking the water. Instead, use bottled water or water that has been boiled at a rolling boil for 5 minutes until sampling shows no contamination. CAUTION: Boiling water concentrates any levels of nitrates that may be present in the water. YOUNG INFANTS AND PREGNANT WOMEN SHOULD USE *BOTTLED OR STORED WATER INSTEAD OF BOILED TAP WATER WHENEVER POSSIBLE* FOR DRINKING AND COOKING. If you do not have bottled water available for pregnant women and infants, it is better for them to drink boiled water than to drink water that is not boiled and may be contaminated. It is important not to become dehydrated.

Here are guidelines on how to disinfect your well. If you need help, call a plumber, well driller, or your county health department. The preferred method involves getting Calcium Hypochlorite tablets, often sold under the brand name “H.T.H”. The directions to disinfect your well using H.T.H. are listed below. If you are not able to get the H.T.H. tablets, you may disinfect your well using non-scented household bleach (5.25% chlorine) — directions for disinfecting your well with bleach are also listed below.

Well Disinfection- Calcium Hypochlorite (H.T.H.)

GENERAL

Complete all repairs before disinfecting system. Prevent surface water and near-surface ground water from entering the well in the future. Seal pipes and wires entering the well and seal well casing joints near the ground surface in bored wells.

High concentrations of chlorine in water are toxic. They can burn the skin on contact and cause illness if consumed. Warn all potential users of the water about these dangers and store the chemicals in a safe place.

PLUMBING

Small water systems should disinfect the plumbing system before disinfecting the well. The following steps are suggested:

- A. Pour 3 to 4 gallons of non-scented household bleach into the well and recirculate the water to the well. Use a clean garden hose to discharge water from any convenient spigot into the well. Continue the process until you smell bleach in the recirculated water.
- B. Stop recirculation. For all remaining spigots (hot, cold and fountains), open the spigot until you smell bleach and then close it.
- C. Turn off water heaters to prevent damage from accidental system drainage.
- D. Disinfect the well as described below.

WELL DISINFECTION

Calcium hypochlorite tablets are recommended for the super-chlorination (disinfection) of your well. Chlorine must be distributed from the top to the bottom of the well. Liquid chlorine bleach or granular chlorine powder will usually not distribute chlorine over the entire water column.

Use tablets with "Calcium Hypochlorite" as the active ingredient- they are usually sold under the brand name "H.T.H". Other forms of chlorine tablets are NOT suitable for use in wells. Unbroken tablets are oval in shape, about 1 ¼ inch long and ¾ inch across, have rounded ends. You can find these tablets at building supply centers, hardware stores and water treatment vendors. They are sold in 5- or 6- pound containers.

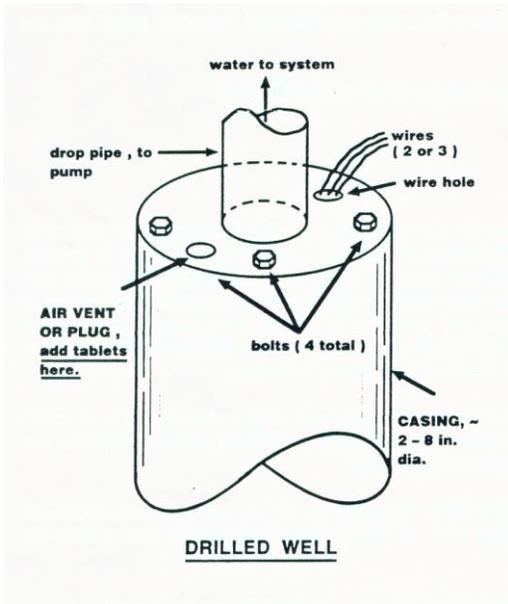
Follow these steps to disinfect your well:

- A. Break the tablets into different-sized pieces by placing them on a solid surface (brick or concrete) and tapping with a hammer. Read and observe container safety precautions- use eye protection and wear rubber gloves. DO NOT wrap the tablets for breaking!
- B. Pour the broken tablets directly into a bored well. Remove the well air vent and insert the broken tablets through the vent opening in a drilled well. A rod or a screwdriver may be used to force the particles through the opening.
- C. Recirculate the water to wash down the well walls if this was not done during the plumbing system disinfection. Replace the vent if removed for chlorine addition or recirculation. Turn the pump off and allow the chlorine to stand in the well and system for at least 24 hours.

CLEAN UP

Cautions

- Highly chlorinated well water can damage grass and plants.
 - Do not discharge significant amounts of highly chlorinated water into a septic tank.
 - Any trace of chlorine in a water sample invalidates laboratory test results. Repeat tests are costly and inconvenient.
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- A. Pump the chlorinated water to waste starting with an outside spigot. Pump until the water no longer smells of bleach and then flush through the remaining outside spigots.
 - B. Flush through all other spigots, fountains and connections until you do not smell bleach.
 - C. Before resampling for bacteria, test to confirm that all chlorine has been removed. You can use a swimming pool chlorine test for this purpose).



TABLETS NEEDED
(to obtain 200 mg/l chlorine)

Drilled Well	
Diameter of Well	Tablets per 100 ft.
2 in.	4 tablets (1 oz.)
4 in.	12 tablets (3 oz.)
6 in.	24 tablets (6 oz.)
8 in.	43 tablets (11 oz.)

Bored Well	
Diameter of Well	Weight per 50 ft.
22 in.	2½ lb.
24 in.	3 lb.
28 in.	4 lb.
32 in.	5½ lb.
36 in.	7 lb.

Well Disinfection- Liquid chlorine bleach (non-scented, 5.25% chlorine)

If you cannot obtain calcium hypochlorite tablets, use the following instructions. To disinfect your home water system, you must completely spread chlorine throughout the well and plumbing system.

First, pump your well for about 30 minutes at the wellhead or an outside faucet to remove the most contaminated water. Then pour the following amount of non-scented household bleach (5.25 % available chlorine) into the well according to the chart below. This amount contains enough chlorine to cover a well system as well as a water softener or heater and holding tank.

Depth of Well	DIAMETER OR SIZE OF WELL CASING					
	2 in.	4 in.	6 in.	20 in.	24 in.	36 in.
10 Ft. Deep	1 quart	1 quart	3 pints	1 gallon	1 gallon + 1 quart	2 ½ gallons
50 Ft. Deep	1 quart	2 quarts	2 quarts	3 gallons + 3 quarts	5 gallons + 1 quart	11 ½ gallons
100 Ft. Deep	2 quarts	2 quarts	7 pints	7 gallons + 1 quart	10 gallons + 1 quart	22 ½ gallons
200 Ft. Deep	2 quarts	3 quarts	1 gallon + 1 quart	–	–	–

Recirculate the water back into the well until you smell bleach in the water. Rinse the well casing and any other equipment inside the well with the chlorine. Turn on all the water faucets (hot and cold) in the home until you smell a strong chlorine odor. Turn the faucets off and let the chlorine stand in the well and plumbing system for at least 24 hours. Connect a garden hose to an outside faucet and run water away from the house foundation and septic tank system until the chlorine smell is gone. Do not pump large quantities of highly chlorinated water into a septic system.

After the disinfecting process has been completed, contact your local health department to have the water sampled. Continue using bottled water or water that has been boiled at a rolling boil for 5 minutes until sampling shows no contamination.

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Questions? Call your county health department.