



# Well Disinfection Procedure

Disinfecting is done by adding unscented bleach (chlorine) directly into the well, circulating it through the plumbing, letting it sit overnight and finally flushing the system the next day.

## Procedure:

1. Add the required amount of unscented bleach directly into the well. At the house, turn on **one cold water tap** and let it run until you can smell chlorine. Shut the tap off.
2. Repeat step 1 at every cold water tap in the house, one by one, remembering to do outside taps, bathtub and shower, washing machine and toilets (one flush is enough).
3. Go back to the well and add the same amount of unscented bleach into the well again.
4. Return to the house and this time run all the **hot water taps**, one by one, including the washing machine, dishwasher, bathtub and shower.
5. Shut each tap **off** before going on to the next one.
6. Return to the well and add  $\frac{1}{2}$  of the required amount of unscented bleach.
7. Using a garden hose attached to an outside tap, wash down the inside of the well casing with the chlorinated water.
8. Let the system sit overnight to allow the unscented bleach to work.

In the morning, run an outside tap away from the house (not into the septic system) to clear most of the chlorinated water out of the well.

The hot water tank should also be emptied outside using a garden hose connected to the drain fitting. (Power can be turned back on after flushing).

What remains in the rest of the plumbing is small and can be drained normally by turning each tap on for a few moments to clear the lines.

Once the well and plumbing have been flushed, the system should be used for laundry or flushing toilets but not for consumption. When you no longer can smell chlorine in any tap, wait 2 more days before sampling. Three consecutive good sample results, taken a week or more apart, indicate that the water supply system has been successfully disinfected.

**To reach 50ppm an unscented bleach (chlorine) containing 5.25% is used in the following situations:**

### Drilled Well—casing up to 6" (15cm)

*Measure, or accurately estimate the depth of water in the well.*

*In Imperial measure—for every 50 ft. of water in the well add 10 oz of unscented bleach.*

*In metric measure—for every 15m of water in the well add 280ml of unscented bleach.*

### Dug Well —casing 36" (.9m)

*Measure, or accurately estimate the depth of water in the well.*

*In Imperial measure—for every 50 ft. of water in the well add 1 quart of unscented bleach.*

*In metric measure—for every 1.5m of water in the well add 1.1 litres of unscented bleach.*

If you have to estimate the depth of water in your well, estimate on the high side; it is better to use more unscented bleach than necessary than not to use enough.

# Cautions

For any well that has flooded, the normal disinfection procedure may not be adequate because parasites like cryptosporidium may have been introduced as well as bacteria.

Dug wells, because of their construction, are vulnerable to surface and shallow ground water contamination. They are not safe after a flood. Dug wells should be tested regularly and may need permanent treatment.

Drilled wells may be successfully flushed and disinfected by following these instructions, or by calling Your Health Connection to speak with an inspector to discuss procedure and testing.

All wells should be visually assessed for structural integrity.

Both the well and the plumbing in the house need to be disinfected at the same time. Any charcoal filter in the system must be disconnected first and power to the electric water heater shut off. Gas heaters should be shut off and turned on only by qualified people.

- ◆ If there is dissolved iron in the water, then unscented bleach will release this as rust and your water may turn orange. This will stop when the bleach is gone. Be careful of laundry during this process.
- ◆ If your well and plumbing system have a significant film of mineral and organic deposits (biofilm) inside the pipes, this may be supporting bacterial growth. The chlorine may not penetrate very far into this film, but may remove the surface layer exposing the next layer underneath. Sampling after the disinfecting process may show counts as high as or higher than before. You may need to repeat the disinfection process once or twice to get it all.
- ◆ If you have a water softener or iron removal unit in your water system, contact the supplier and ask if the unit can be left on-line while disinfecting with 50–100 ppm unscented bleach (chlorine). If the unit needs to be taken off-line, then it must separately be emptied, cleaned, disinfected and refilled before going back on-line.

Surface water is never safe without proper treatment.  
Call Your Health Connection to speak with a public health inspector for more information.