

# Infant Formula Considerations During a Water Outage

**Christine Sasse, MS, RD, LD**  
Nutrition Specialist

## Introduction

A disruption in residential water supply poses challenges for infants who rely on infant formula. In some cases, it may be necessary to change to a different type of formula that does not require the addition of water. Preparation and storage instructions vary depending on the type of formula that is selected.

## Ready-to-Use Formula

Infant formula is sold in three types: powder, liquid concentrate, and liquid ready-to-use (RTU). During a water shortage, RTU formula is the best option because no water needs to be added to the product. RTU formula is often sold in 32-ounce plastic jugs, although jug size may vary between brands. This is typically enough to provide about a day's worth of individual bottles for an infant, although the amount an infant consumes can vary widely depending on an infant's age, size, medical conditions, and other factors. Once opened, RTU formula must be refrigerated and

used within 48 hours. The main drawbacks of using RTU formula is that it requires refrigeration, is more expensive than powdered formula, and is not always available in sufficient quantities at grocery stores.

If refrigeration is not available, consider single-serving RTU nursettes. Nursettes typically provide 2 to 4 ounces of RTU formula for one feeding. A very limited number of formulas are available in nursettes, but physicians may be able to provide nursette samples. When using RTU nursettes, throw away any formula that is left in the single-serve bottle within one hour of finishing the feeding.

## Powdered Formula

If RTU formula is not available or affordable, discuss other options with the infant's



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pediatrician. Regular bottled water can be used to make formula from powdered infant formula. Nursery water is not required. Bottled water from a safe source does need to be sterilized by boiling. However, there are other reasons that bottled water may need to be boiled. Infants under 2 months old, premature infants, and infants with weakened immune systems who must use powdered formula should be fed formula that has been heated with water hot enough (around 158°F) to kill bacteria. Pour the bottled water into a clean pot and bring to a rolling boil for 1 to 2 minutes. Allow the water to cool for only 5 minutes and mix the hot water with the powdered formula. After mixing, it is important to allow the formula to cool to body temperature to avoid burning the infant's mouth. One method to cool the bottle rapidly is to place it in an ice bath or run the capped bottle under cool water. Shake a few drops on the inside of your wrist to check the temperature.

## Liquid Concentrate Formula

Liquid concentrate formulas must be mixed with a safe water source according to manufacturer instructions before being fed to an infant. Most concentrate formulas are designed to be mixed at a 1-to-1 ratio of water and formula. An advantage of concentrate formula is that it does not need to be sterilized like powdered formula. However, because it requires a safe source of water, RTU is a better choice, if available, during a water outage. Because the opened package and the prepared formula must be refrigerated, liquid concentrate is only appropriate if refrigeration is available.

## Restoration of Water Service

Once water service is restored, water may not be safe to use, and a boil order may be issued. Caretakers of infants younger than 2 months old, premature infants, or infants with weakened immune systems should continue using bottled water if a boil order is issued. Most other infants can drink powdered formula mixed with water that has been boiled for approximately 1 minute to kill bacteria. Do not boil water longer than 5 minutes, as this increases the concentration of any contaminants in the water.

## References:

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