



Safe Food for Babies and Children: Warming Bottles Safely

For the first year of a baby's life, breast milk or infant formula should be used to provide the nutrition necessary to promote growth and general health. Pre-mixed infant formula and expressed breast milk do not need to be heated prior to feeding. However, many babies prefer warm bottles because of the similarity to warm milk fed from the breast.

Preparing infant bottles requires the parent or caregiver to be knowledgeable about safe heating and handling practices. Bottles can be heated safely and easily by stovetop heating or running the bottle under hot water. Microwave ovens also may be used, *but with great caution.*



Stovetop Heating

In this simple and convenient method, bottles are 1) placed in a pan of water warming on the stovetop or 2) placed in the pan after the water has been heated and removed from the stove. In either case, the water does **not** need to be heated to the boiling point, and the bottle needs to be in the water for only a few minutes. Stovetop heating is recommended for warming expressed breast milk. To prevent burns to the baby, test the temperature of the formula or breast milk by sprinkling a few drops on the inside of your wrist.

Hot Running Water

An easy way to safely heat bottles with disposable liners is to use hot, running water from your faucet. Holding the bottle under the faucet for approximately two minutes will allow the breast milk or formula to reach a desirable temperature. Remember to test the temperature by sprinkling a few drops of milk or formula on the inside of your wrist before serving.

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Microwave Heating

Microwaving certainly is convenient for moms-on-the-go and busy caretakers, but requires extreme caution when being used for infant bottles. Heating breast milk in the microwave is **not** advised.

Microwaving may cause uneven heating and change the composition of breast milk, destroying important immune factors. The uneven heating can result in hot spots. **Hot spots can cause serious burns to a baby's mouth and throat.** Follow these guidelines to safely warm infant bottles in your microwave oven:

Tips to Microwave Safely

- Always heat at least 4 ounces of formula at a time.
- Stand the bottle upright in the microwave and remove caps or nipples to allow heat to escape.
- Heat 4-ounce bottles for no more than 30 seconds and 8-ounce bottles for no longer than 45 seconds.
- Shake the bottle after heating to distribute the heat evenly.
- ALWAYS test the temperature by sprinkling a few drops on the inside of your wrist. Formula warm to the touch may be too hot to serve.
- Avoid heating glass baby bottles. These bottles absorb microwave energy rapidly, which may result in the bottle cracking or exploding.
- Avoid heating disposable bottles or bottles with disposable liners. These bottles are prone to developing hot spots and may burst, spilling hot milk or formula on the baby.

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For more information on nutrition and food safety, visit the NDSU Extension Service Web site:
www.ag.ndsu.nodak.edu/food.htm