

Handle with Care:

Keeping Baby's Formula & Breast Milk Germ-Free

Target Audience:

Pregnant Teenagers

Adults

Adults with Infants

Topic Areas:

Feeding My Baby (0-12 months)

- If using formula, make sure that the formula is properly prepared
- If using formula, made sure that a fresh bottle is used for each feeding

Handle with Care: Keeping Baby's Formula & Breast Milk Germ-Free

Lesson Creator:

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Purpose:

The purpose of this exercise is to get the class talking about safe ways to handle baby formula and expressed breast milk at each step of the process -buying, preparing, storing, feeding and even traveling with infant formula breast milk.

What the Nutrition Educator Needs to Know to Answer Questions:

Babies can get sick easily. This is because they do not carry many of the germ-fighting factors adults do. That is why it is very important to make sure all breast milk, expressed breast milk and baby formula. The symptoms of food borne illness (food poisoning) do not appear to be serious - nausea, vomiting and diarrhea. But they can be very serious - kidney failure, meningitis, even death.

People with weak immune systems have less protection against food borne illness. That means they are even more likely to get sick from "bad" food, formula and breast, milk. This is most true for babies and children under five years old. They are more at risk for food borne illness because their immune systems are not yet fully fanned. Their bodies can't easily fight the germs that can make them sick.

Bacteria are one cause of food borne illness. They cannot be seen, smelled, or tasted. The only way to be sure that food, formula and breast milk are safe is to handle food safely.

It is important that parents of babies and young children learn how to keep food, formula and breast milk safe. This lesson reviews the safe handling of baby formula and expressed breast milk. It is meant to help discussions on infant feeding with "parents-to-be" and parents of babies. Ideally, it should be taught with a lesson on overall safe food handling.

Before teaching this lesson, please review the safety tips listed in the Rutgers NJAES Cooperative Extension Publication FS950 *"Handle With Care: Keeping Baby's Formula Germ-Free"* and FS949 *"Handle With Care: Guidelines for Safe Storage and Use of Mother's Milk"*. These publications can be found at the end of the lesson.

References:

Ackerley, L: Home hygiene with a baby: the new approach to advising parents. *Professional Care of Mother & Child*: 1996; 6:4, 99-102.

Committee on Nutrition. Bamess LA, ed. *Pediatric Nutrition Handbook*. 3rd ed. Elk Grove Village, IL: American Academy of Pediatrics, 1993.

Duyff, RL. Hornick, B & Braun, J, ed. *The American Dietetic Association's Complete Food & Nutrition Guide*. 1 Ed. Minneapolis, MN: Chronimed Pub, 1996.

Imong, SM, Jackson, DA, Rungruengthanakit, K, Wongsawasdii, L, Amatayakul, K, Drewett, R and Baum, JD: Maternal behavior and socio-economic influences on the bacterial content of infant weaning foods in rural northern Thailand. *J Tropical Peds* 1995; 41:8,234-240.

National Restaurant Association Educational Foundation. *Applied Foodservice Sanitation*. 4th ed., Chicago, IL: Kendall/Hunt Pub., 1992.

Paulson; D. Get a handle on hand contamination. *Food Quality*: 1996, 4:42-45. Penn State University Cooperative Extension. *Take Good Care of My Baby*.

Sigman-Grant, M. Off to a Good Start - You and Your Baby. Penn State Univ Cooperative Extension

Spencer, JP. Practical Nutrition for the Healthy Term Infant. *Am Fam Phys* 1996; 7:138-144.

University of Florida, Home Economics Dept. A Model Program to Reduce Food borne Illnesses for Compromised Individuals, 1994.

For Additional Reading:

Baby Food and Infant Formula, Food Safety.gov. Available:

<http://www.foodsafety.gov/keep/types/babyfood>

"Formula Tips," Iowa State University Extension.

"Baby Feeding Tips that Really Work," Minnesota Extension Service, University of Minnesota, College of Human Ecology.

Handle with Care: Keeping Baby's Formula & Breast Milk Germ-Free

Main Themes:

Nutrition & Diet

Cooking & Food Storage

Shopping

Budgeting

Safety & Sanitation

Materials Needed:

Pencils/pens

Handouts:

"Baby Talk" pink worksheet - 1 for every 2 participants

"Baby Talk" blue worksheet - 1 for every 2 participants

Rutgers Cooperative Extension Fact Sheets found at the end of the lesson:

"Handle With Care: Keeping Baby's Formula Germ-Free" - 1 per participant
"Handle With Care: Keeping Breast Milk Germ-Free"- 1 per participant

Time the Activity is Expected to Take:

Class Recap: 5 minutes

Activity 1: 25 minutes

Activity 2: 20 minutes

Next Week's Goals: 5 minutes

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Lesson Plan:

Class Recap: (5 minutes)

1. Begin the class by asking participants to share their experiences related to their goals that they set the previous lesson. Keep this part of the class to about 5 minutes.

Activity 1: "Defining 'Germ-Free'" (25 minutes)

1. Welcome the group. Ask them if they've heard about how important food safety (i.e., keeping baby's food and drink germ-free) is for keeping a baby healthy.
2. Ask the participants to discuss what they do to promote food safety.
Note: Food safety means safely handling infant formula and breast milk to keep them free of germs. Add that food safety is something we all take for granted sometimes. But for parents of babies and young children, it is important to think about. Tell the participants that the class will focus on how they can safely handle infant formula and breast milk and keep them free from germs.
3. Explain to the participants that food borne illness (food poisoning) is caused by germs. Germs cannot be seen, smelled, or tasted. It is very important to keep formula and breast milk germ-free to keep babies and young children healthy. Babies and young children are very sensitive to food borne illness because their bodies don't easily fight germs.
4. Explain that the only way to be certain that formula and breast milk are safe is to follow good food handling practices.

Finish this activity by:

Reviewing each section of the "*Handle With Care: Keeping Baby's Formula Germ-Free*" and "*Handle With Care: Keeping Breast Milk Germ-Free*" fact sheets. Be sure to mention at least two key points under each section. Remember to keep your talk under 10 minutes.

Activity 2: "Baby Talk" (20 minutes)

The class will discuss:

- Buying, making, and storing, and feeding baby formula to the baby
 - Pumping, storing, and feeding breast milk to the baby
1. Divide the participants into 2 groups: "pink" and "blue." Give each group one "Baby Talk Worksheet" - pink or blue. Ask each group to discuss answers to the questions. Also, tell them to write down their tips for keeping formula/breast milk safe. Give the groups 10 minutes to talk about their answers.
 2. As the groups are talking, walk around the room. Answer any questions' and guide the answers.
 3. Beginning with the "Blue Group," ask the participants to share the tips that they came up with. If needed, use the "Handle With Care: Keeping Baby's Formula Germ-Free" and "Handle With Care: Keeping Breast Milk Germ-Free" fact sheets to answer questions and guide participants.
 4. Once the "Blue Group" runs out of ideas, ask the "Pink Group" for additional tips. After all answers have been given, clear up any wrong answers or ideas and review best practices mentioned.
 5. Then, ask the "Pink Group" to share what tips they listed from their worksheet. If needed, use the Handle With Care fact sheets to answer questions and guide participants.
 6. Once the "Pink Group" runs out of ideas, ask the "Blue Group" for additional tips. Again, after all answers have been given, clear up any misconceptions and review best practices mentioned.

Next Week's Goals: (5 minutes)

1. Ask the participants to name one thing that they learned in today's class that they will use. Make sure that each learning objective is mentioned, and if not, be sure to re-state that objective. Ask them to choose a related goal to work on

during the week. Let them know that they will be sharing their personal experiences during the next class;

2. Invite comments, suggestions, or questions.
3. Thank the participants for coming and tell them what the class will be about in the next-lesson.

For the Teacher: "What makes this lesson behaviorally focused?"

- Class Recap is behaviorally focused because it allows participants to discuss the behaviors they have used from the previous lesson.
- Activity 1 is behaviorally focused because participants discuss how they would keep breast milk and infant formula, germ-free.
- Activity 2 is behaviorally focused because participants discuss how they would increase their use of germ- free formula or breast milk.
- In Next Week's Goals, the participants are invited to name one thing that they learned during the class that they will use. Through this activity and by reviewing the objectives again, the participants are reminded of the many topics discussed during the lesson. They will choose the behaviors that they will want to work on during the coming week.



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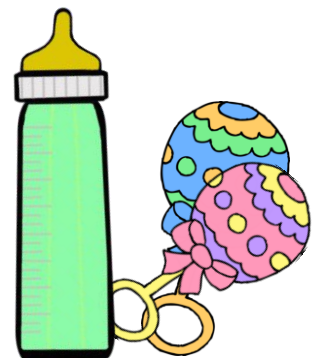
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Baby Talk

"Blue Worksheet"

1. When buying baby formula at the store, what can you look for to be certain it is safe (germ free)?
2. How long can you keep unopened baby formula before using it?
3. How do you prepare baby formula or pumped breast milk?
4. What do you do with leftover formula or breast milk when the baby doesn't finish his/her bottle?



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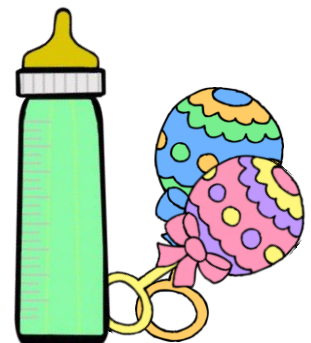
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Baby Talk

"Pink Worksheet"

1. Where do you store baby formula when you bring it home from the store?
2. What is the best way to store baby formula after you prepare it (or breast milk after it is pumped)?
3. What is the best way to clean a bottle?
4. What is the best way to warm a bottle?
5. What is the safest way to travel with baby formula or breast milk?



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THROW-AWAYS

Throw away refrigerated breast milk that your baby doesn't drink within 5 days.

Throw away frozen breast milk that your baby doesn't drink within 3 to 4 months.

Throw away thawed breast milk that your baby doesn't drink within 24 hours.

Don't refreeze thawed breast milk.

Baby didn't finish a bottle? Don't keep leftover breast milk that your baby doesn't drink. Why?



Germes from the baby's mouth contaminate the milk. This may make the breast milk unsafe to drink later.

**PREVENT THE SPREAD OF GERMS.
 WASH HANDS AFTER YOU...**

- ... use the toilet
- ... help a child use the toilet
- ... change diapers
- ... blow your nose or wipe a runny nose
- ... touch raw meat, poultry, fish or eggs
- ... clean up saliva, vomit or bathroom "accidents"

Keep dirty diapers away from bottles, toys and breast milk. Put only clean diapers in your diaper bag.

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HANDLE WITH CARE:



Keeping Breast Milk Germ-free

THE STATE UNIVERSITY OF NEW JERSEY
RUTGERS

Luanne Hughes, MS, RD
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 Gloucester County

Breast milk is the best food you can give your baby. It is nutritious, safe and easy for your baby to digest.

You may decide to pump your breast milk to feed your baby if you are away. Pumped breast milk must be handled carefully so germs do not contaminate it.



Babies are very sensitive to germs. Some germs can cause foodborne illness (“food poisoning”), which can make your baby sick.

The symptoms of foodborne illness may not sound serious—nausea, vomiting and diarrhea. But they can be

serious—kidney failure, meningitis, even death.

It’s easy to stop foodborne illness. Just follow these easy tips to keep your baby’s breast milk germ-free. You’ll have a happier and healthier baby!

GETTING STARTED

Always work with pumped breast milk in a clean, sanitized place. The kitchen is best.

You can kill germs and keep your baby from getting foodborne illness.

Clean the kitchen counter/table with a sanitizing cleaner.

SANITIZING CLEANER

Mix 1 tablespoon bleach in 1 quart water and wash counters with this solution. Keep counters wet for 10 minutes. Let them air dry before you work on them.

TIP: Use the sanitizing cleaner to clean high chair trays, changing tables/mats, toys and table tops. It helps stop the spread of germs!

Wash up before you pump your breast or work with breast milk. Know how? Use hot running water and soap. Wash for 20 seconds; rinse; then dry with a paper towel.

If you use a breast pump, read the directions. They’ll tell you how to use it and how to clean it. Always clean your breast pump after you use it. This will stop the spread of germs!

Wash bottles, caps and nipples in the dishwasher. Or, hand wash them with hot, soapy water.

Don’t use a towel to dry them. Air-drying is better and won’t spread germs.

STORAGE TIPS

Store breast milk in a sturdy container:



Plastic breast milk storage bags



Sterilized glass bottles



Regular plastic bags (“Double bag” these. Be sure to squeeze out extra air. Seal them tightly.)

Store pumped milk in 2 - to 4 - ounce portions to limit waste.



Write the date and time the milk was pumped on all bottles or bags. Sending pumped milk to day care? Write your baby’s name on the milk, so it won’t get mixed up.

Put pumped breast milk in the refrigerator or freezer at once.

Keep track of breast milk! Use the oldest first. Here’s how:



Store milk in one spot in the refrigerator or freezer.



Add newly expressed milk in back. Leave older milk near the front.



Always use milk from the front of your stock. Don’t forget—first in, first out!

USING STORED BREAST MILK

Leave refrigerated bottles/bags of pumped milk in the refrigerator until just before feeding.

Put frozen breast milk on a plate or in a bowl and thaw in the refrigerator. Or, place it under warm, running water to thaw quickly.

Never heat breast milk in a pan on the stove or in the microwave.

Breast milk separates into layers when frozen. This is normal. Gently shake thawed breast milk before feeding. This will mix the layers back together.

ON THE ROAD...

Keep formula safe when you're out with your baby. Use an insulated bag with an ice pack to keep formula cold.

TIP: Freeze a plastic bottle of water to make your own ice pack!

Always keep dirty diapers away from bottles, toys and formula. Put only clean diapers in your diaper bag.



**PREVENT THE SPREAD OF GERMS.
WASH HANDS AFTER YOU...**

- ... use the toilet
- ... help a child use the toilet
- ... change diapers
- ... blow your nose or wipe a runny nose
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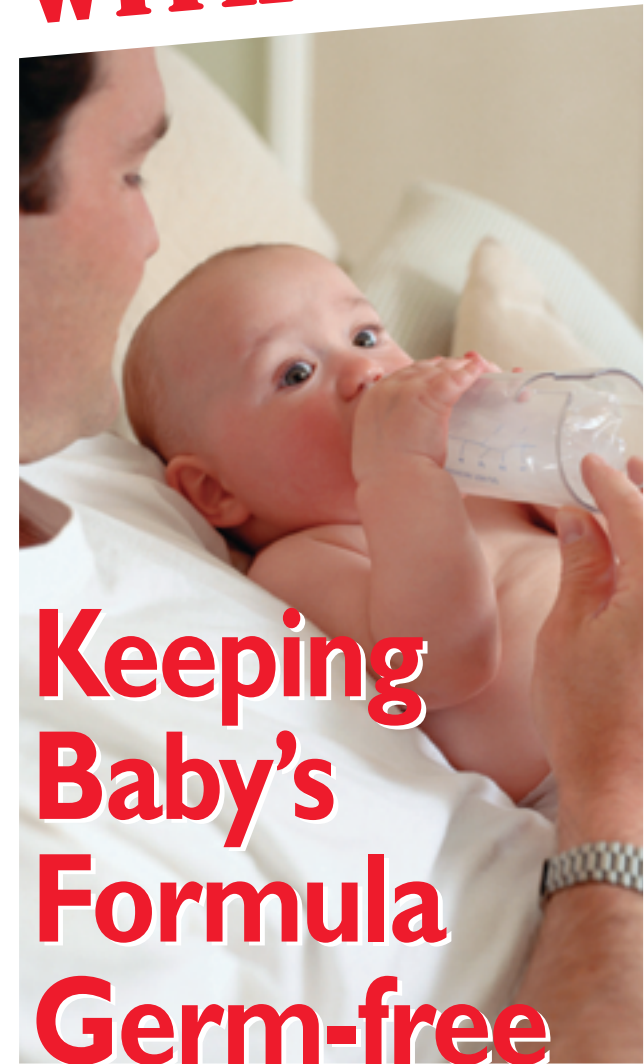
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HANDLE WITH CARE:



**Keeping
Baby's
Formula
Germ-free**

THE STATE UNIVERSITY OF NEW JERSEY
RUTGERS

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Gloucester County

Babies are very sensitive to germs. Some germs can cause foodborne illness (“food poisoning”), which can make your baby sick.

The symptoms of foodborne illness may not sound serious—nausea, vomiting and diarrhea. But they can be serious—kidney failure, meningitis, even death.

It's easy to stop foodborne illness. Just follow these easy tips to keep your baby's formula germ-free. You'll have a happier and healthier baby!

SMART SHOPPING

Check “Use-by” dates. Don't buy formula if the date has passed or if you won't use it before the “Use-by” date. It won't be fresh.

Check formula cans and bottles. Buy the ones in good shape—no dents, cracks or bulging lids.

SAFE STORAGE

Store unopened liquid formula and opened powder formula in a cool, dry place.

Best choices are a cabinet or pantry that is not near the oven, hot water pipes or heating ducts.

Refrigerate open containers of ready-to-feed and concentrated formula.

PREPARING FORMULA

Always prepare formula and bottles in a clean, sanitized place. The kitchen is best.

You can kill germs and keep your baby from getting foodborne illness. Clean the kitchen counter/table with a sanitizing cleaner.

SANITIZING CLEANER

Mix 1 tablespoon bleach in 1 quart water and wash counters with this solution. Keep counters wet for 10 minutes. Let them air dry before you work on them.

TIP: Clean changing tables/mats, toys, high chair trays and table tops with the sanitizing cleaner, too. It helps prevent the spread of germs!

Wash up before you mix formula or fill bottles. Know how? Use hot running water and soap. Wash for 20 seconds; rinse; then dry with a paper towel.

Next, hand wash bottles, caps and nipples with hot, soapy water. Or, wash them in the dishwasher.

Rinse and then boil bottles, caps and nipples for 5 minutes just before filling. Don't use a towel to dry them. Air-drying is better and won't spread germs.

Use sterile water for mixing powder or concentrated formula. And, always follow the mixing directions. Use the exact amount of water.

Keep filled bottles of prepared formula in the refrigerator until just before feeding.

THROW-AWAYS

Throw away prepared bottles that your baby doesn't drink after 48 hours.

Throw away open containers of ready-to-feed or concentrated formula after 48 hours.

Baby didn't finish a bottle? Don't keep leftover formula that your baby doesn't drink. Why? Germs from the baby's mouth contaminate the formula. This may make the formula unsafe to drink later.

WARM UPS

Warm bottles by placing them in hot (not boiling) water for 5 minutes.

You can warm plastic bottles in the microwave if you're careful. Here's how:



Put at least 4 ounces of formula in the bottle.



Leave the cap, ring and nipple off of the bottle so heat can escape.



Heat 4-ounce bottles for no more than 30 seconds at full power.



Heat 8-ounce bottles for no more than 45 seconds at full power.



Put the nipple, ring and cap back on the bottle. Turn the bottle upside down 5-6 times.



Check warmed formula before you feed it to your baby. Place a few drops on the top of your hand to make sure it's cool to the touch—not hot.

Feed warmed formula to your baby right away. Germs grow in formula that sits around.

