



Changing Soiled Underwear for Toddlers



Disposable pull-up underpants and underwear for children who still have “accidents” may help many children move from diapers toward independent toileting. However, changing soiled pull-ups or underwear introduces an increased risk of spread of infection. During the change, many surfaces may be contaminated with urine and feces. Teachers/caregivers need to follow some procedures to limit the spread of germs.

The Risks

Urine of toddlers and preschool age children should be expected to have Cytomegalovirus (CMV) – a germ which can cause a flu-like illness in adults, and severe harm to a fetus of a pregnant mother. Many studies have shown that a large proportion of young children are infected with CMV (cytomegalovirus) without having symptoms themselves.

Feces are common carriers of bacteria and many viruses. In child care settings where sanitation is not a priority, germs that cause diarrhea are commonly found in large amounts on floors, tables, toys and the hands of caregivers and children. Astrovirus, calicivirus, rotavirus, norovirus, adenovirus, hepatitis A, pin worms, *Cryptosporidium parvum*, *Giardia*, *Shigella*, *Salmonella*, *Campylobacter*, *Clostridium difficile* and disease-causing *Escherichia coli* are among the germs that can spread through contamination of surfaces from improper changing routines in child care.

Prevention

Managing Infectious Diseases in Child Care and Schools: A Quick Reference Guide, 2nd edition provides “best practice recommendations” from the national American Academy of Pediatrics (AAP). The book includes guidelines and Quick Reference Sheets. The Quick Reference Sheets explain the risks and control measures for individual types of infections. For example, see CMV on page 63, and hepatitis A page 83. To order a copy of the book, call the AAP at 888/227-1770 or order online from www.aap.org/bookstore. Chapter 3 is about infection control. An easy to read Cleaning and Sanitizing Chart on page 21 describes when surfaces should be cleaned and sanitized, including a routine maintenance schedule. Page 20 explains the differences between cleaning, sanitizing and disinfecting. The specifics of hand hygiene are in a box that starts on page 25. A similar boxed summary for the procedures to use for diaper changing are on pages 27-29. The standards for cleaning and sanitizing are in *Caring for Our Children, National Health and Safety Performance Standards: Guidelines for Out-of-Home Child Care*, 2002, 2nd edition. (The third edition is scheduled for publication in 2011.) These standards are a joint activity of the American Academy of Pediatrics (AAP) and the American Public Health Association (APHA) with the Maternal and Child Health Bureau. The document can be purchased from AAP, APHA and the National Association for the Education of Young Children (NAEYC) or accessed at no cost on the website of the National Resource Center for Health and Safety in Child Care (<http://nrc.uchsc.edu>)

The Cleaning and Sanitizing Chart is also in *Healthy Young Children*, 2002, p. 128. (See p. 70 for kitchen cleaning guidelines) – NAEYC. To order this manual, call 800/424-2460 or order online from <http://www.naeyc.org/store>.

The following recommendation for how to change toddlers was prepared by Susan S. Aronson MD, FAAP April 29, 2006 and updated February 10, 2010. The original version was prepared with input and comments gratefully acknowledged from:

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Procedure for Changing Soiled Disposable Pull-up Underpants or Cloth Underwear

1. Get organized.

Assemble all supplies for the change, removing supplies from their containers to avoid contamination of the containers during the change. Have a hands-free, plastic-lined, covered, waste can available to receive the contaminated disposable items from the change. These items might include clean disposable pull-up underpants or cloth underwear, a disposable material to cover the area where the change will occur, the expected amount of wipes, gloves (recommended, although not required) and 1 plastic bag for any soiled clothing.

Changing tables with steps that the child can climb with the teacher/caregiver's help and supervision are a good idea. This equipment reduces the risk of back injury for adults who help toddlers change. On a changing table the child is in a good position for the change and using steps means the child does not need to be lifted by the adult. Changing a child from the floor level or on a chair puts the adult in awkward positions and increases the risk of contamination of the environment. Using a toddler changing table helps establish a well-organized changing area.

Cover the surface on which the change occurs with sufficient disposable material to protect whatever is underneath – and big enough so the teacher/caregiver can fold over the contaminated surface of the disposable material. Only a clean surface should come in contact with the child's clothing once the soiled articles have been removed – i.e. when the child is being dressed. For example, use a large sheet of nonabsorbent paper from a diaper changing table or a disposable bed pad (these come in bulk packs). Whatever is used must cover the entire area where any soiled materials will be in contact, and must be of a substance or thickness that will not allow fluids that contain germs to get through to the undersurface. No matter what disposable covering is used, the teacher/caregiver must be prepared to wash the surface underneath if it is visibly soiled and then sanitize it after the change is completed. Some germs get through any covering. Be sure to use a surface under the disposable material that is easy to clean and sanitize such as a vinyl covered mat, plastic sheet or a piece of seamless linoleum.

2. Avoid contact with soiled items.

Consider whether to change the child lying down or standing up. Changing toddlers standing up may promote a consistent message about being "big" and not needing to be changed on a diaper changing table. However, having the child lie down for the change makes it easier to clean the child's bottom, is less awkward for the caregiver to manage, and better defines the surfaces that are likely to be contaminated during the procedure. The child may help assemble the supplies, and help put on clean clothing to be a "big helper."

If the child is changed standing up, it is likely that clothing, shoes and socks will be soiled. The teacher/caregiver must remove these items before the change begins. If the shoes become soiled, germs will spread wherever the child walks after the change. Studies have shown that floors in play areas in child care are heavily contaminated with fecal bacteria, most likely due to footwear that spread germs from contact with feces and urine. The child's clothing may also get contaminated, so have the child hold the upper body clothing up above his/her waist. This keeps the child's hands busy and the teacher/caregiver knows where the child's hands are during the changing process. Another approach is to use a plastic clothes pin that can be washed and sanitized to hold the clothing up and out of the way.



If disposable pull-up underpants were used, pull the sides apart, rather than sliding the garment down the child's legs. The objective is to reduce contact of urine or feces with other surfaces. **If cloth underwear is being changed, remove the soiled underwear and any soiled clothing, doing your best to minimize the contact of soiled surfaces with the child's skin and other surfaces. Place all soiled clothing directly into a plastic bag after the article is removed, to avoid further contamination of surfaces by temporary placement on other surfaces.**

Do not rinse soiled clothing in the toilet or elsewhere. To avoid further contamination of the environment, send all soiled clothing home for cleaning without removing any of the soil from the articles in the child care setting. Any handling of soiled articles increases the risk of spreading germs to other children in the group.

If the child's shoes are soiled, the teacher/caregiver must wash and sanitize them before putting them back on the child. It is a good idea for the child care facility to have a few extra pairs of socks and some donated spare shoes in appropriate sizes for those who are involved in toilet learning, in case these articles become soiled.

3. Clean the child's skin.

Wipe the child's skin with disposable wipes from front to back, using a fresh wipe each time. Dispose of the wipes directly into a hands-free, plastic-lined, covered waste can.

4. Throw away disposable items.

Throw away disposable items directly into a hands-free, plastic-lined, covered waste can. Check for any contamination that is on the disposable surface material under the child's feet. If there is any contamination, fold it over so a fresh, unsoiled surface is now under the child's feet.

If the teacher/caregiver wore gloves during the change, the gloves should go directly into a hands-free, plastic-lined, covered waste can, before touching any clean clothing. Whether or not gloves were used, **use a disposable wipe to clean your hands and then another to clean the child's hands. Put each wipe directly into a hands-free, plastic-lined, covered waste can.**



5. Put on clean underwear and clothing.

Assist the child, as needed, in putting on clean disposable pull-up underpants or cloth underwear, then in re-dressing. Put the child's shoes and socks back on if these items were removed.

6. Child washes hands.

Have the child wash his/her hands at the sink after the change is completed. Wash with liquid soap and running water, lathering for 10 seconds, and turning off any faucet handle with a paper towel. (The teacher/caregiver washes his/her hands after cleaning and sanitizing all surfaces involved in the change.) **Return the child to a supervised area.**

7. Clean and sanitize contaminated surfaces.

Fold the contaminated disposable changing surface material so what is touched as it is discarded is mostly the clean, outer surface. Throw it away into a hands-free, plastic-lined, covered waste can. Make sure that all remaining surfaces that were touched during the change are visibly clean, or clean them with detergent and then rinse them with water. **Finally, sanitize all potentially contaminated surfaces with a sanitizing solution** – a bleach solution or another sanitizer as recommended for diaper-changing tables. **If the 1 tablespoon of bleach in 1 quart of water is used in a spray solution, it must be in contact with the surface for at least two minutes.** The bleach and water spray solution should be made fresh daily.

8. Teacher/caregiver washes hands.

Wash hands at the sink after the change is completed. Wash with liquid soap and running water, lathering for 10 seconds, and turning off any faucet handle with a paper towel.