Handwashing in Schools

June 2012
Handwashing is the best way to stop the spread of infections.
Germs and Schools

Researchers at the University of Arizona found that 44% of playground surfaces were contaminated with bacteria*

* Fecal coliform bacteria

35% of bus rails contaminated*
Germs on Desks

Which desk had the most germs?

- Accountants
- Bankers
- Doctors
- Lawyers
- Teachers
TEACHERS!

Followed by:
Accountants
Bankers
Doctors
Lawyers
Handwashing

- 80% of common infections can be spread by the hands
- Handwashing is the best way to stop the spread of infections
Germs Are Everywhere
Germs in the environment → Hands → Mucous membranes
Does handwashing work?

Margaret Ryan, Naval Health Research Centre, San Diego

• Naval recruits ordered to wash hands at least 5 times during the day
• Result: 45% reduction in respiratory illness
Handwashing and Child Health
Squatter settlements in Karachi Pakistan

Households given:
- Regular soap
- Antibacterial soap
- No Soap
Handwashing and Child Health

Results

Households with soap:

- 50% reduction in pneumonia
- 53% reduction in diarrhea
- 34% reduction in impetigo

IMPORTANT
No difference between plain soap and antibacterial soap
How to Wash Your Hands

1. Wet your hands
2. Apply soap
3. Rub your hands together for 20 seconds (sing twinkle twinkle)
4. Rinse your hands for 10 seconds
5. Dry your hands with a clean towel
6. Use the towel to turn off the taps and open the washroom door

Leave the washroom neat and tidy
Wash all parts of your hands

1. Palms
2. Between fingers
3. Backs
4. Wrists
5. Thumbs
6. Fingertips
7. Nails
Hand Drying

- Removes 42% more germs than washing alone
- Do not share towels
- Hot air dryers promote bacterial growth because hands are left warm and moist
WHEN TO WASH YOUR HANDS

Principles:

- Whenever the hands might be significantly contaminated
- Whenever the hands might transfer germs to the mucous membranes
WHEN TO WASH YOUR HANDS

Before eating or preparing food
After Touching Shared Objects

Computers

Pens & Pencils

Library & text books

Cell phones
After Touching Shared Objects

Gym equipment

Lab equipment

Musical instruments

Remember, don't share recorders or mouth pieces
After recess
After using the washroom
Other good times for handwashing
Respiratory etiquette

Cough and sneeze into a tissue or your sleeve
Barriers To Good Handwashing
Barriers To Good Handwashing

- No Soap
- No paper towels
Barriers To Good Handwashing

No Water...
Barriers To Good Handwashing

Sinks, taps, soap and paper towels too high to reach . . .
Barriers To Good Handwashing

- Push faucets don’t stay on long enough
- Recontamination is hard to avoid
Barriers To Good Handwashing

- Friction from drying with a towel removes germs from the hands
- Using towels to turn off the tap or open the washroom door prevents recontamination
- Hot air dryers leave the hands moist and warm, ideal conditions for bacteria to grow on hands
Barriers To Good Handwashing

Antibacterial soap leads to antibiotic resistance. . .
Soaps and Hand Sanitizers
Bacteria: Good or Bad Germs?

• 60% of life on earth
• 2-3 billion kinds of bacteria
• Older than plants or animals
• Important for the environment
• Important for human health
Good Bacteria

• On your skin and in your body
• Don’t make you sick
• Protect against disease
• More bacteria cells than human cells in your body
• Stay with you all of your life
Bad Bacteria

- Survive less than 24 hours
- Don’t multiply on the skin
- Make you sick
- Easily removed by handwashing
Use plain soap

- Removes bad bacteria
- Leaves good bacteria alone
- Doesn’t cause antibiotic resistance
- Antibiotic soap is no better than plain soap
Ingredients to avoid
Triclosan

- Most common antibacterial ingredient
- Bacteria become resistant to triclosan
- Also become resistant to antibiotics used in medicine
Quaternary ammonium compounds = Quats

- “-nium” products
- Although used to disinfect hard surfaces, does not kill germs on the skin
- Cause resistance to antibiotics used in medicine
Hand sanitizers
Alcohol Based Hand Sanitizers

- Need to be $\geq 60\%$ alcohol to kill germs
- Kill many bacteria and viruses
- Do not cause antibiotic resistance
- Should not contain triclosan or quats
Alcohol Based Hand Sanitizers

Disadvantages

• Don’t work if hands are greasy or dirty
• Will not kill some germs that cause diarrhea
• Flammable
• Poisonous if consumed
Alcohol Based Hand Sanitizers

NOT A SUBSTITUTE FOR HANDWASHING
Alcohol free hand sanitizers

Active ingredient = benzalkonium chloride = quaternary ammonium compound

Does not kill germs on the hands

Not recommended
Hand Hygiene

Plain soap

Alcohol based hand sanitizers
(alcohol the only active ingredient)

Antibacterial soap (triclosan, quats)

Non-alcohol hand sanitizers (quats)
How to spread the word, not the germs
K - Grade 3 Authorized Resources for Teachers

www.dobugsneeddrugs.org/teachers

Easy SMART board access

Developed by Do Bugs Need Drugs in collaboration with Alberta Health and Wellness and Alberta Education
Handwashing video for elementary grades
Handwashing video for older students and adults
Wash Your Hands!
Resources for Schools

- Background information
- Information sheets for school personnel
- Articles for school newsletters
- Checklist for assessing handwashing in student and staff washrooms
- Practical solutions to handwashing problems
- Handwashing signs
What can you do?

• **Soap.** Ensure plain soap is provided in all washrooms.

• **Paper towels.** Make sure paper towels are available in all washrooms.

• **Hand sanitizers.** Use products whose only active ingredient is alcohol. Make sure dispensers and bottles are properly located.
What can you do?

To avoid recontaminating hands

- Move trash can outside the washroom door to encourage opening the door with the towel
- Prop open the washroom door, if possible
- If school is renovating, consider motion-sensitive taps, hospital taps that can be pushed with the wrist, doorless washrooms
What can you do?

Make handwashing a priority in your school

- Inform K-Gr 3 teachers of the authorized resources for handwashing
- Help lunch room aides to make handwashing a routine practice before eating
- Work with computer room teachers, librarians, etc. to promote handwashing to reduce the spread of germs through contact with shared objects
What can you do?

Washroom courtesy

- Speak with custodians and help them to understand that soap and towels need to be available all the time
- Encourage students to be neat and tidy in the washroom
What can you do?

Work with parents

• Include articles about handwashing in your school newsletter

• Ask School Councils to assist with promoting handwashing in your schools

• Be a positive role model for staff, students and families
Apply rules at home
Be role models in the community
For more information

Public Health Agency of Canada

Alberta Health Services

Do Bugs Need Drugs?
http://www.dobugsneeddrugs.org

Disinfectant Overkill
http://www.womenandenvironment.org/

US Department of Health and Human Services
Product Ingredient Database
Contact Us

info@dobugsneeddrugs.org

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