Think about all the things you touched today... your computer keyboard, an ATM machine, your kitchen sponge, the flush handle on a toilet. Now think about all the people that touched those things before you. Roughly 3 to 4 million germs live on just one cubic centimeter of the palm of your hand. And every time you touch something, you pick up germs from other's hands... hands that may not have been washed well.

ON THE SURFACE

Even if a surface looks clean, there's a good chance that it's covered with illness-causing organisms such as:

- **Bacteria** Also known as germs, these microscopic cells are everywhere. Some types can causes disease, but most are very useful to us.

- **Viruses** Ultra-microscopic infectious agents that grow and multiply within our bodies to cause disease.

- **Fungus** These organisms include yeast, mold and mushrooms and can often cause disease.

Some germs have the potential to cause illnesses such as the flu, colds, rotavirus and other intestinal diseases. These organisms can live up to a few hours or a few days on surfaces, depending on the conditions. A single bacteria can multiply to eight million cells in less than 24 hours. It may take as few as 10 or up to a million to make you sick.

PREVENTING ILLNESS

With the onset of winter, germ-related illnesses will soon be on the increase. Cold, flu, rotavirus and others are easily shared from person to person and the number of cases peak during winter months. While most people can recover from these illnesses, more than 160,000 Americans die from infectious diseases each year. A little common sense goes a long way when it comes to preventing illness at home, work and school.

With the help of a volunteer, we set out to illustrate the impact that hand washing has on disease prevention. We had our volunteer place her unwashed hand in a special Petri dish designed to grow bacteria. Then she washed her hands and placed the same hand, now clean, into another Petri dish. Three days later, we checked to see what was growing.

As you can see above, the Petri dish on the left shows just how much bacteria was living on our volunteer's hand before she washed it. The Petri dish on the right has fewer bacteria growing and shows just how important it is to wash your hands. The results are remarkable.

HAND WASHING 101

**How to wash your hands**

- Wet your hands with warm water.
- Soap up and scrub your hands for at least 15 seconds. Be sure to scrub in between fingers.
- Rinse while pointing fingers downward so the germs run off your hands. Don't touch the sink in the process.
- Dry your hand with a paper towel.
- Use the towel to turn off the water and to open the door to avoid picking up new germs.

**Wash your hands...**

- After going to the bathroom
- After changing a diaper
- Before cooking or eating
- After shaking someone’s hand
- After touching things in a public place
The best way to cut your risk is to wash your hands and wash them often. Always avoid touching your nose, eyes and mouth with your hands no matter how clean you think they are as this allows germs to enter your body and thrive.

If you’re feeling sick, don’t go to work or school where you’ll only spread the germs to others. Use alcohol wipes to wipe down shared computer keyboards and other office equipment as often as possible.

Germs and bacteria also live on surfaces throughout your home. It’s a good idea to regularly disinfect doorknobs, the refrigerator door handle, knobs on sinks and the toilet flush lever. If a family member is sick, be sure to thoroughly clean all surfaces more often, especially the bathroom. Pets are a source of germs as well, especially if they spend time outside. Always wash your hands after touching animals.

Kitchens can be a large source of food borne illnesses. To minimize your risk, always disinfect food preparation areas and use separate cutting boards for vegetables and meat to prevent cross-contamination. Cook foods to proper temperature and make sure everything is promptly and properly refrigerated.

Harmful bacteria such as salmonella, E. Coli, Listeria, Staphylococci and others have been shown to thrive on kitchen sponges and dishtowels. To prevent infection, wash dishtowels in hot water, allow them to dry completely between uses and replace them often. Pop wet sponges into the microwave for two minutes or soak in a bleach/water solution.

NOT ALL GERMS ARE BAD

While millions of germs live on the surface of your skin, not all are bad. Some of the bacteria is actually good. The germs that Jeanne washed off her hands are known as “transient” germs, or bacteria that she picked up from other surfaces. The bacteria that remained on her hands after washing are most likely the good germs that she needs to fight illness. It’s important that she wasn’t able to wash these good germs away as they help build immunity and attack the “transient” germs that may carry illness.

For additional information and helpful tips, visit www.cdc.gov and search for “Seven Keys to a Safer Healthier Home.”

A LITTLE COMMON SENSE GOES A LONG WAY when it comes to preventing illness

POTENTIAL HEALTH RISKS

- **Millions of germs, bacteria and viruses live on surfaces everywhere and each one has the potential to cause illness. If you don’t wash your hands and touch your nose, mouth or open skin, you could be at risk for these common illnesses:**
  - **MRSA** A bacteria that causes infections in different parts of the body and is difficult to treat because it is immune to commonly used antibiotics.
  - **Rotavirus** A highly contagious infection that can cause severe vomiting, diarrhea and dehydration. It is spread through water, food or surfaces that are contaminated with fecal matter.
  - **Cold & Flu** Respiratory infections that can be serious for children, the elderly or anyone with a compromised immune system.
  - **RSV** Respiratory syncytial virus (RSV) is the most common cause of bronchiolitis and pneumonia among infants and children under 1 year of age.
  - **E. coli** A bacteria often causing food borne illnesses. Most strains live harmlessly in our digestive tracts but some can cause serious infections and symptoms such as severe stomach cramps, diarrhea, nausea and vomiting.
  - **Salmonella** This food borne bacteria can cause diarrhea and vomiting.

Germs live everywhere, even places you might not think, like bacteria we found living on a steering wheel (top photo) and a nickel. The germs on the steering wheel are most likely the bacteria commonly found in the soil.