



HOW GROSS IS YOUR BATHROOM?



What do norovirus, salmonella, E.coli, and staphylococcus aureus have in common? They're all illness-inducing germs, and they all thrive wherever there's a throne. In fact, your bathroom is probably secretly harboring a village of germs that you know nothing about.

But before you enter the bathroom in a hazmat suit, let's take a look at just how germ-laden your bathroom might be.

Friend or Foe?

Before we dive too deep into the bathroom, let's discuss what germs really are. The term germ refers to any microscopic particle that can cause humans to become ill. The most common germs that you'll find living in your bathroom are bacteria and viruses.

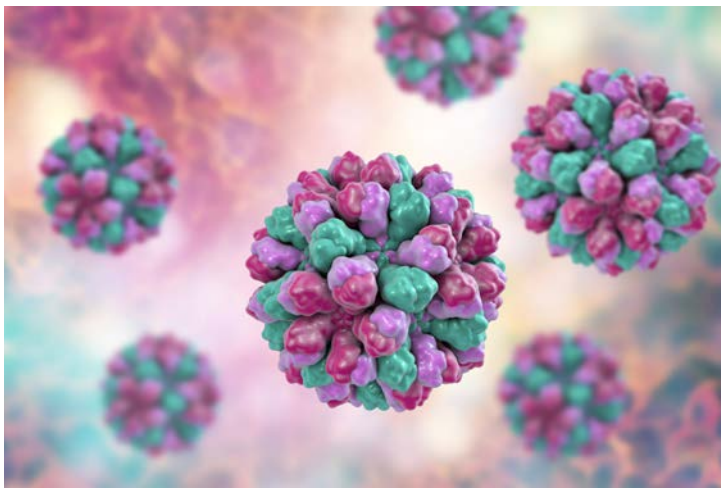
Bacteria are microscopic, single-celled organisms that can live almost anywhere. Most bacteria are harmless, and some are even beneficial to the human body. For example, Bifidobacterium Longum live in human intestines and actually prohibit colonization by pathogenic, or harmful, bacteria. Bacteria can enter your body through any opening such as your mouth, nose, or even the tiny pores in your skin! Once pathogenic bacteria enters your body, it can cause illness in a number of ways. Because there are so many types of bacteria that live and

thrive in feces, the bathroom is an obvious place it can end up. Fortunately, many bacterial infections can be treated with antibiotics, substances that kill or slow bacteria and help your immune system to fight them off.



E.coli bacteria, 3-D illustration

Viruses are another type of germ that can make humans sick. A virus is made up of a small piece of genetic material surrounded by a small protein capsule. After entering your body in the same ways that bacteria can, a virus comes into contact with your cells. The virus attaches itself to one of your cells and injects its genetic material. Your cell is actually tricked into replicating the virus' DNA, causing the virus to spread throughout your body. One example of a bathroom-invading virus is norovirus. You may have heard it called the stomach flu. Antibiotics are not effective in treating viruses, but many viruses can be prevented through immunizations.



Norovirus, 3-D illustration

Believe it or not, it isn't necessary to become a full-on hypochondriac. It's important to know that every nefarious virus or bacteria that you come into contact with won't make you sick. Your body's immune system is constantly working to fend off these predators so only a tiny fraction of germs that you encounter lead to any symptoms at all.

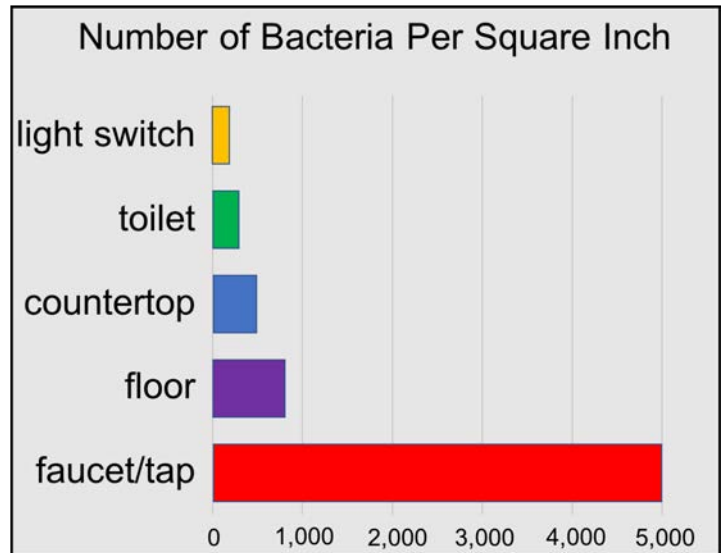
Now that you're caught up on germ jargon, let's take a closer look at your bathroom.

What You Can't See Might Hurt You

When you think about the bacteria living in your bathroom, your mind automatically thinks about the toilet. But believe it or not, the surface of the toilet is not the dirtiest part of your

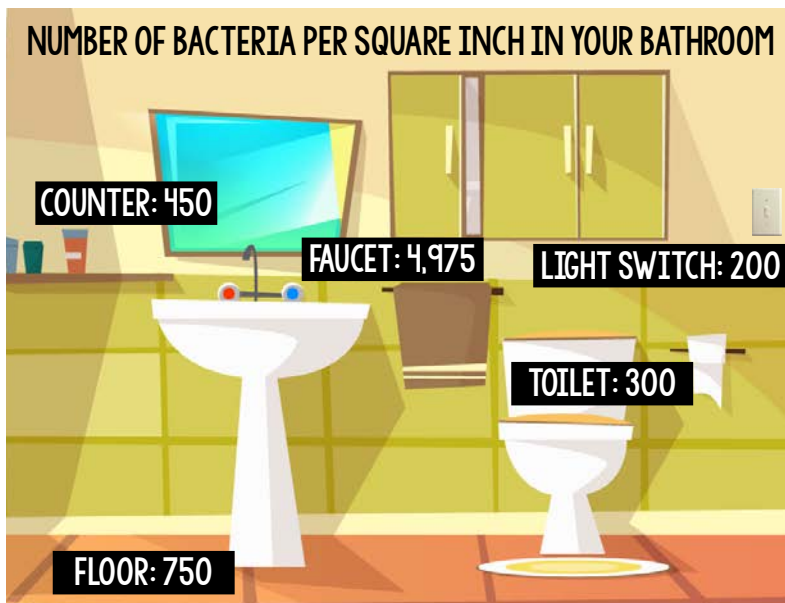
bathroom! If you were to take sample swabs of several surfaces in your bathroom, you'd likely get results that are similar to these.

The folks at *Digital Health Reporter* collected data from several different bathrooms in order to determine which surfaces contained the most bacteria, and the results will probably surprise you. The most obvious place for germs -- the toilet seat -- only contains about 300 bacteria per square inch. And while that sounds like a lot, it's not as bad as you might fear.



Let's compare that with the amount of bacteria living on other surfaces near the loo. The light switch contains a surprising 215 bacteria per square inch while the countertop hosts 450 bacteria per square inch. Be sure to wear your shoes to the potty or you'll expose your bare feet to the 750 bacteria per square inch living on the floor. And perhaps most shockingly of all, think twice about how you wash your hands. The faucet or tap contains 4,975 bacteria per square inch! That's over sixteen times the bacteria on the toilet seat. Experts recommend that you use a clean paper towel to turn off the faucet after washing your hands to avoid one of the most dangerous surfaces in the bathroom.

So when nature calls, go forth and brave the elements. You'll probably survive. Just make sure you scrub that bathroom well before you do. And take your vitamins!



Comprehension Quiz

Choose the best answer.

1. What is a germ?

2. What are the most common types of germs found in your bathroom?

3. Germs can enter the body in many ways. Name one way.

4. How can a bacterial infection be treated?

5. How do viruses spread throughout the human body?

6. Are all forms of bacteria dangerous?

7. According to the article, which area below is probably the dirtiest part of the bathroom?

8. What suggestion does the article give for avoiding the germs on the countertop and faucet?

Finding Text Evidence

Find each piece of text evidence in the article and highlight OR underline it with the color specified.

For items 1-4, you'll be citing textual evidence to support what the text says explicitly.

1. Find the sentence that explains what a germ is and highlight it in **blue**.
2. Find the sentence that gives an example of a good bacteria and highlight it in **green**.
3. Find the sentence that explains why so many bacteria live in your bathroom and highlight it in **purple**.
4. Find the sentence that tells how many bacteria per square inch are probably on the bathroom light switch. Highlight it in **gray**.

For items 5-8, you'll be citing one piece or multiple pieces of textual evidence to support inferences drawn from the text.

5. Find one piece evidence in the article that shows the reader (**you**) why you should care about this article. Highlight them in **orange**.
6. Find two pieces of text evidence that show you how important your immune system is to your body and highlight them in **pink**.
7. Find three pieces of text evidence that prove that germs in your bathroom can actually make you sick and highlight them in **yellow**.
8. Find one piece of text evidence that tells you **why** you should be careful washing your hands and highlight it in **red**.

Main Idea & Details

Use the article to answer the questions and complete the graphic organizers.

- 1. What was the main idea of the entire article? Write it in the box below.
2. What are the names of the subheadings in the article? Write them on the lines provided.
3. What is the first subsection mostly about? Write it in the space provided.
4. What is the second subsection mostly about? Write it in the space provided.

Graphic organizer for 'How Gross Is Your Bathroom?' with boxes for (1), (2a), (2b), (3), and (4).

- 5. Let's take a closer look at the section, Friend or Foe. Divide this section into two main topics and enter them in the spaces labeled 5a and 5b.
6. Now, add the major details (not sentences) in the spaces provided under each main topic.

Friend or Foe

Diagram showing (5a) and (5b) boxes with arrows pointing from the 'Friend or Foe' header.

Main graphic organizer grid with pre-filled text: 'most bacteria are harmless, and some are good', 'bacterial infections can be treated with antibiotics', 'germs made up of genetic material surrounded by a protein capsule', and 'attaches itself to one of your cells and injects its genetic material to spread throughout body'.

7. In your own words, explain how the text develops the central idea you identified for the section, Friend or Foe. (Your answer to Question 3)

Re-read this paragraph from the article.

The folks at Digital Health Reporter collected data from several different bathrooms in order to determine which surfaces contained the most bacteria, and the results will probably surprise you. The most obvious place for germs -- the toilet seat -- only contains about 300 bacteria per square inch. And while that sounds like a lot, it's not as bad as you might fear.

8. What is the main idea of this paragraph?
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9. How is the main idea you identified above developed in this paragraph?
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-
-
10. Notice that there are two different graphics in the second subsection, What You Can't See Might Hurt You. One is an illustration and the other is a graph. Both graphics provide the **same data**. Describe how each graphic **develops** the main idea of this section (your answer to Question 4) in a **different** way.
