Defeating the superbug

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Vancouver CoastalHealth
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The very name suggests it is something special: SUPERBUG! But unlike it's comic book hero namesake, a superbug is hardly beneficial. The term refers to bacteria that have successfully developed resistance to even our most powerful antibiotics.

At one time we used to just throw antibiotics at illnesses, even if they probably would not help. After all, what could survive that new, all-powerful form of penicillin? It can't hurt was how some thought. Unfortunately, they were very wrong.

As antibiotics have been developed since the discovery of penicillin, we have come to see that they have lost effectiveness. What was once a guaranteed cure became less so. No problem, we'll just use a newer/better version.

Over the past 50 years, the pace of adaptation and resistance of bacteria has accelerated. Where the original penicillin served for many years, as new antibiotics were developed, their 'complete' effectiveness dropped off more and more quickly. Soon, we found some resistant to all of them. The superbug was born.

The best way to keep the infections from spreading is handwashing.

Bacteria, like every other organism, adapt to their environments. Survivors of one 'attack' by antibiotics replicate, making themselves stronger against future treatments. Eventually, they become entirely resistant.

Superbugs evolve best in hospital settings, though not exclusively as they have moved out into the community. Why hospitals? That is where people with compromised immune systems are. Superbugs are opportunistic and thrive in places with weak immunity. These include people who are already sick, but it also includes people who are being treated with antibiotics.

Our bodies are host to multitudes of bacteria, most of which have no effect on us, many of which are actually beneficial, and some of which can become harmful. Antibiotic treatment kills bacteria, including the beneficial ones. Harmful bacteria usually cannot invade if the immune system is strong and populated with good bacteria. Remove them, however, and opportunistic superbugs move in.

The most common superbugs include: Methicillin resistant Staphylococcus aureus (MRSA) which can overcome most penicillin based antibiotics and is the most worrisome of the superbugs; Vancomycin resistant Enterococcus which resists one of our most powerful antibiotics; and C. difficile which affects the intestinal tract.

Fighting superbugs is best done by prevention. The best way to keep the infections from spreading is handwashing. Simple, isn't it? And there are other things that can help. First, don't take antibiotics for viral infections (like a cold) as viruses are not affected by antibiotics, only bacteria. If you are on antibiotics, take them exactly as prescribed, and take the full lot. Do not save some for 'next time' and don't share them, either.

And remember, handwashing (this goes double for your kids) with warm water and soap (not antibacterial soap), or using an alcohol based solution is the best way to fight bacteria, including the superbug!

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