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Antibiotics are one of the most important discoveries of modern medicine, saving millions of lives by treating bacterial infections.

Although antibiotics kill most bacteria, some will survive. These surviving bacteria have developed resistance. Antibiotic resistance occurs when the bacteria survives in the presence of an antibiotic. Inappropriate antibiotic usage, when not needed can lead to resistance. Antibiotics will not kill resistant bacteria and worse yet, resistance can be transferred from one bacterium to another. Antibiotics are specific and are only effective against bacterial infections not viruses or other microbes. Remember that it is the bacteria that are resistant, not the individual. Even very healthy people who have never taken an antibiotic can become infected with antibioticresistant bacteria from others in society. That is why antibiotic resistance is a public health issue: a person needs to use antibiotics wisely so others are not adversely affected. In addition, an allergic reaction as a child (for

In addition, an allergic reaction as a child (for example to penicillin), may not be a true allergy. There are "adverse reactions" or gastrointestinal issues or concurrent fungal overgrowth all of which are not true allergies. So in order to rule this out, you may need to be tested again for a "true" allergy if a prescription of penicillin needs to be prescribed for you as the best antibiotic choice.

New research has proved that antibiotics can also destroy your own immune cells and the body's own "good" microbes and thus they can worsen an already acute oral infection. In essence, working against your own microbes which are effective in maintaining immune cells and killing certain oral infections.

Researchers examined "resident" bacteria and their fatty acids which can affect certain types of white blood cells, which combat infections in the mouth. Specifically, "Tregs and Th-17 cells" in fighting fungal infections, such as Candida in a laboratory setting. They found that those natural defenses were very effective in reducing infection and unwanted inflammation and antibiotics **prevented** these natural defenses.

Antibiotics are still needed for life threatening infections. No question, but our bodies have many natural defenses that we shouldn't meddle with and needless overuse of antibiotics is not helpful. We also know there is a definite link between oral health and overall health and thus there are broader implications on the protective effects of "resident microbiota" in other types of infections.

Think critically before you ASK a health care provider for an antibiotic rather than being prescribed one for an acute infection.

