ARE WE KILLING ANTIBIOTICS?

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I was very enlightened by participating in a recent CME at Pushpagiri Medical college, Tiruvella, (1st August 2015) on ANTIBIOTICS, I learnt from many speakers, that the Antibiotics are going through the last face of survival giving the way for Simple and commoner bacteria to take over body in a violent from as we call it as opportunistic infections, we have no way we are pouring antibiotics in the terminal stages of the patients in ICU's and MICU's, unfortunately to simple viral infections, One of the questions of the enlightened speaker that the life of many Antibiotics is few years then question remain what next? I do not know how long the patient on salvage treatment lives but creates drug resistant strain in the environment where more healthy and less serious patients are admitted, It is certain our Hospitals and critical care are areas become the HOT BED for Hospital associated Microbes spreading all over the vicinity. Before we had antibiotics, there were few choices when it came to treating infections: You could wait and see if the infection improved on its own, or you could cut the infection off of your body. It wasn't until 1928 that the very first antibiotic was discovered -- accidentally, at that -- when researcher Alexander Fleming came back to work after a weekend away from his lab and found a certain type of mold, *Penicillium notatum*, had halted the growth of *Staphylococcus*. Not only did it lead to a cure for bacterial infections that were once deadly, but it also led a big interest in finding new antibiotics. Today many different types of antibiotics are available, and they fight infection in several ways. And not only did it kill *Staphylococcus*, it also worked when he tried it against other bacteria, including *Streptococcus*, *Meningococci* and *Diphtheria bacillus*. Antibiotic-resistant bacterial infections take longer to treat and cause more and longer hospitalizations. Indeed, modern antibiotics act either on processes that are unique to bacteria-- such as the synthesis of cell walls or folic acid--

or on bacterium-specific targets within processes that are common to both bacterium and human cells, including protein or DNA replication. The CDC estimates that annually more than 2 million Americans develop antibiotic-resistant infections -- and more than 23,000 people die from these infections and their complications each year [source: CDC]. As an adult human, we have three to four pounds of beneficial bacteria and yeast living within your intestines. IT JUST MEANS the bacteria flora in the body is 10 x more than the cells we possess in body these microbes compete for nutrients from the food we eat. Perhaps you are wondering about the use -- and abuse -- of antibiotics in general. Let me give you an example. One of the most common diagnoses given at a doctor's office is the upper respiratory infection (URI). It accounts for up to 70 percent of all antibiotics dispensed (Annals of Internal Medicine. American College of Physicians. American Society of Internal Medicine. March 20, 2001). When you take antibiotics often or for long periods of time, your risk for long-term health effects increases. Simply upsetting the balance of resident microbes can have a complex impact on your health that goes beyond increasing your vulnerability to opportunistic infections. Asking antibiotics when you have a virus may even hurt you, because it hurts your resident microbes. When you do need to take an antibiotic, you can help minimize damage to friendly bacteria by taking one that targets bad bacteria as specifically as possible. This increases the chance that enough friendly microbes will survive to repopulate their environment and continue to help you stay healthy. Never forget we are all living healthy with our own normal flora living as commensals friendly bacteria help keep you healthy in many ways, so when antibiotics kill friendly bacteria, your health can suffer because you lose these benefits. Additionally, losing friendly bacteria can give other types of bacteria room to

multiply, leading to opportunistic infection. Sometimes opportunistic infection happens when bacteria from the environment get into your body and overrun friendly bacteria damaged by an antibiotic. Other times opportunistic infection begins when antibiotics disturb the balance of your resident microbes, and normally friendly bacteria multiply too quickly and become harmful. New ECDC data has shown that there has been a considerable increase over the last four years of combined resistance to multiple antibiotics in *E. coli* and *Klebsiella pneumonia* in over one third of EU and EEA (European Economic Area) nations. Consumption of carbapenems, a major class of last-line antibiotics, increased significantly from 2007 to 2010. Antibiotic resistance: how has it become a global threat to public health? Then there is the danger that the ignorant man may easily undergoes himself and by exposing his microbes to non-lethal quantities of the drug, make them resistant," said Alexander Fleming, speaking in his Nobel Prize acceptance speech in 1945. As predicted almost 70 years ago by the man who discovered the first antibiotic, drug resistance is upon us. Even the Microbiology department will be a great source of misinformation testing the Antibiotics are per whims and fancies of Clinicians who are more interested in present moment of success leaving the little space next patients and tomorrow, Even the patients kills the antibiotics with noncompliance as Compliance is a massive problem. The vast majority of people taking antibiotics are non-compliant. Noncompliance is the number one reason bacteria develop resistance to antibiotics. According to the International Journal of Antimicrobial Agents, only one in 10 patients on a three-a-day regimen take the drug at the right intervals. That means 90% of prescription takers are breeding more resistant bacteria rather than killing them. No wonder we're running out of effective antibiotics.

If we do not control the matters, the last laugh is from the microbes. Are we ready?

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