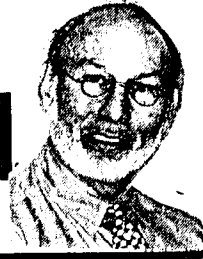


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## **All Things Medical**

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### **An antidote to antibiotics**

Health care consumers are voting with their wallets, choosing to spend more healthcare dollars on supplements and alternative medicine than on traditional care, even though it may be subsidized by third party carriers. This trend is admirable and hopefully will decrease some of the problems we are having with microbial resistance to our antibiotics, not only on the market now, but those that are coming in the future. As practicing community physicians, we are accused of abusing rather than using antibiotics appropriately. Hence we are blamed for the increasing antimicrobial resistance that the modern world is experiencing. Hopefully, the new medicine will not implicate the doctor, but the real determinants for this problem. The significant factors associated with bacterial resistance are increased antibiotic use in hospitals, where these drugs are used empirically rather than after bacterial cultures and sensitivities to the drug are obtained, repeated course of antibiotics and the use of broad spectrum shotgun drugs. Instead of a narrow spectrum antibiotic for a specific bug, many hospitals use a broader spectrum drug. Repeated antibiotic courses, prolonged hospitalizations, especially add insult to injury. Intensive-care unit ecology, immunocompromised state of the patient, increases use of invasive

devices and catheters, ineffective infection control procedures, inter-hospital transfers or colonized patients should also be considered.

International travel also has been implicated, but the real culprit is animal husbandry and agriculture use. Antibiotics use in veterinary medicine and agriculture breed resistance. Annually, in the United States, approximately 8 million kg of antimicrobial agents are used for animals, and 22,000 kg is used for fruit trees. Antibiotics used in agriculture and agrifood industries are numerous. Veterinarian drugs such as ormetoprim (similar to trimethoprim used in humans) have been known to cause the problem. Antibiotics for animals and plants, similar to those in research that will not be on the market for several years for humans, will exert selective pressure to increase resistance to related human antibiotics when they finally are used in humans. Society is moving in the direction of curbing antibiotic use in the food industry, although it is moving faster abroad than in the U.S.

With the advent of boosting the hosts immune defense by herbal and complimentary medicine techniques; the new medicine will decrease the amount of antibiotic usage. This will prevent the emergence of resistant bacteria strain. The development of antiviral agents, which is coming at an incredible pace, will complement this process. So, I advice not to take an antibiotic for a minor infection which is, more likely than not, viral. Children, perhaps at the parent's insistence, are given antibiotics for trivial reasons. This may be good for the pharmaceutical companies, but bad for the patient and our planet.