

Antibiotic Resistance: Traditional Chinese Medicine Can Prevent Epidemics

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The US Centers for Disease Control and Prevention (CDC) are monitoring the soaring increase in what they call CREs (carbapenem-resistant enterobacteriaceae), which is a little known class of antibiotic-resistant bacteria. The CDC's Director, Thomas Frieden, calls it a "catastrophic threat" because the CREs are resistant to the class of antibiotics called carbapenems, physicians' last resort when treating infections.

Antibiotic resistance is nothing new; [Alexander Fleming](#) (penicillin founder) predicted it in the 1940s so physicians have used the most powerful antibiotics sparingly keeping them as a last resort. In my town, Denver at the University of Colorado Hospital there was the largest cluster of patients infected with the drug resistant Klebsiella bacteria; three patients with pneumonia and five who were asymptomatic carriers. The hospital is still trying to contact and test more than 1,700 patients who may have been exposed to that bacteria during a hospital stay. In a Brooklyn hospital 9 out of 19 patients died from an infection that was antibiotic resistant. Sometimes patients with antibiotic resistant bacteria can be given a cocktail of drugs but these are notorious for damaging the kidneys. Then the question becomes to treat or not to treat.

So what. This is just a bunch of hysterical talk, medical terrorism, a way for pharmaceutical companies to make more money by convincing us that we need to take more drugs - specifically antibiotics - every time we get some sort of infection. Many epidemiologists feel that it's not too late to intervene (somehow) to prevent the CREs from becoming more common.

In step TCMs (Traditional Chinese medicines): what can we do to boost people's immune function to prevent rather than treat infections? From a traditional standpoint we can do our best to protect people' original *qi* beginning prenatally with treatment of the pregnant woman.

Chinese medicine treatment and nutritional advice will keep the mother's digestion working well, *qi* and blood flowing, and emotional state in balance thereby fostering a healthy prenatal environment that will hopefully result in a full term healthy baby. For example, we could advise her to avoid really cold foods (eg., iced drinks) and foods that are cold energetically (eg. bananas). Once a child is born, encouraging healthy digestion is key. Digestion precedes the immune system in the pulses and when digestion/Earth is weak, the immune system suffers. And, when our digestion does not make good quality *qi*, our original *qi* suffers. Protect children's original *qi* with acupressure, acupuncture, and nutritional advice. Other lifestyle advice may include keeping out of wind and away from air conditioning and protecting children (and adults) from excess damp conditions. These are steps toward building and protecting immune systems.

From the modern era, scientists have determined that acupuncture can enhance the body's production

of natural killer cells, our primary immune system defense mechanism. It also helps regulate white blood cell production, enhances platelet count while preventing leukocyte decrease in radiation therapy patients, and helps chemotherapy patients maintain healthy levels of T cells. Some studies have shown that TCMs perform dual roles on immunological regulation: immunological activation and immunological suppression.

A review by Ma and colleagues highlights studies that focused on "*the immunomodulatory effects of TCMs describing their stimulatory effect on immune cells, immune organs, cytokine production, tumorigenesis, as well as their inhibitory function on inflammation, allergy, autoimmune disease, and graft rejection.*" In their review they say that "*components of both innate and adaptive immunity may be modulated by specific TCMs*" and that "*TCMs may have antitumor effects and may play a role in regulating apoptosis. Immunomodulatory effects of TCMs may lead to new medications to treat allergic and autoimmune diseases*".

In his article [Acupuncture and Immunomodulation](#), Mehmet Cabioglu begins by reminding everyone that acupuncture is a well known form of medicine that is used for prevention and homeostasis. Studies on acupuncture and the immune system generally accept an increase in the release of endogenous opioid peptides as a key pathway that affects the immune system after the acupuncture treatment. Cabioglu wrote his paper to look at other data that explain how acupuncture affects the immune system. He references a number of studies that show acupuncture treating immunodeficiency, increasing resistance to infection, reducing autoimmunity and hypersensitivity, and enhancing cellular immune function in patients who have malignant tumors. Further, acupuncture has demonstrated its effectiveness in treating a variety of immune related conditions including but not limited to Hashimoto's thyroiditis, ulcerative colitis, and rheumatoid arthritis.

Most of the time when someone gets sick it's because his or her immune system has become overwhelmed. Some bacteria, viruses, parasites invade so quickly that the immune system can't manage the attack or the person's immune system is somehow compromised - long term stress can do that. And we know that acupuncture can counteract the negative effects of stress and/or emotional anxiety thereby protecting the immune system. Can acupuncture prevent things like the flu or the common cold? I don't think I've read any studies that suggest that. But there is enough evidence to say that acupuncture affects our immune systems in a positive way potentially make us better able to fight off infectious diseases. I know that my patients who receive regular acupuncture treatments, take herbs when recommended, and follow various lifestyle recommendations absolutely recover faster if they do catch a bug and suffer less severe and fewer symptoms than their colleagues who do not receive acupuncture. From a financial standpoint, this means fewer missed days of work. From a humanistic standpoint, it means fewer people to spread infectious diseases. Prevention.

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