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## ■ Antibiotics useless in upper respiratory infections

Antibiotics are of no value in fighting common upper respiratory infections such as tonsillitis and sinusitis according to two studies from the *British Medical Journal* in March of 1997.

In the first study, 700 patients with sore throats got better in three to five days whether they took antibiotics or not.

The second study compared amoxicillin with a placebo in patients with badly infected sinuses during periods when the infection bothered them and for a year afterward. There was no difference between the amoxicillin and the sugar pills used for the placebo. ▲

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## ■ Antibiotic resistant bacteria reaches United States

The August 22, 1997 issue of the *Atlanta Journal* reports that the Centers for Disease Control and Prevention in Atlanta found the first case of a vancomycin-resistant bacterial infection in a Michigan man. Vancomycin is the strongest antibiotic used against bacteria.

The bacteria involved is *Staphylococcus aureus* and the discovery that it had become vancomycin resistant first came in Japan approximately three months previous. Dr. William Jarvis, acting director of the hospital infections program at the CDC's National Center for Infectious Diseases says, "We are very concerned." If the staph continues on its present course and develops complete resistance, Jarvis continued, "it places us back in the pre-antibiotic era, when there were enormous outbreaks in the community and in hospitals, with many deaths, and with health care workers becoming infected and dying as well."

Authorities and the CDC have warned for many years that "superbugs", those able to develop resistance, would evolve due to indiscriminate use of antibiotics. After vancomycin, Jarvis says, "there are no other drugs available." ▲

## ■ Antibiotics still most common drug despite negative research

The May/June 1997 *American Chiropractor* reports that 7 out of 10 of the most common “new prescription only” drugs of 1996 were antibiotics, despite the fact that medical researchers suggest severely limiting their use.

The article says that “Widespread use of antibiotics persists, in spite of objections to the practice, the well-demonstrated lack of efficacy, and growing concern about bacterial resistance to antibiotics”.

A letter to the editor of the British journal *Lancet* speculates the reasons are due to physicians not believing the research, patients demanding antibiotics (often for situations not requiring antibiotics such as colds & flu) and because it’s easier for the doctor to simply prescribe an antibiotic than to perform the proper tests to find the cause of the problem. ▲

## ■ Research: Antibiotics not needed for ear infections

Research reported in the November 26, 1997 issue of the *Journal of the American Medical Association* concludes that routinely treating children's ear infections with antibiotics is medically unwarranted.

The research indicates that using antibiotics is unnecessary not only because of the danger of developing antibiotic-resistant organisms but also because many children will recover from ear infections on their own.

Every year, doctors write more than 23 million prescriptions for antibiotics to treat ear infections. ▲

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## ■ Antibiotic overuse: doctors blame parental pressure

The February 1999 issue of the journal *Pediatrics* reports on a study that finds parental pressure is the main reason doctors give when pressed for reasons why they prescribe antibiotics to children in inappropriate situations.

610 pediatricians, all members of the American Academy of Pediatrics from around the country were surveyed. One in three of the surveyed doctors said they often or occasionally prescribed antibiotics they believed to be unnecessary to appease the parents.

Antibiotic overuse is a major health problem. in 1980, 4.2 million prescriptions were written for amoxicillin, most commonly used for ear infections. by 1992, the number of prescriptions increased by 194% to 12.4 million. The use of cephalosporin antibiotics grew 687% during that same time.

The problem with antibiotic overuse, the researchers note, is that doctors continue to prescribe antibiotics for viral problems such as colds and flu that they know the drugs are ineffective against. ▲

## Antibiotic causes severe problems in newborns

The *Associated Press* reported on December 17, 1999 that the Centers for Disease Control and Prevention found that erythromycin, one of the more common antibiotics in use today, can cause a severe stomach disorder if used in infants.

In February, a Knoxville, Tennessee hospital gave erythromycin to 200 babies after they were exposed to whooping cough. 7 (3.5%) of the babies developed pyloric stenosis, a closing up of the valve that empties the stomach into the small intestine. Pyloric stenosis blocks digestion, causes projectile vomiting and must be corrected surgically.

Aside from use connected to whooping cough exposure, erythromycin is also used in newborns to treat chlamydia and gonorrhea infections transmitted from their mothers during the birth process.

By way of commentary, 3.5% is an incredibly high complication rate for any procedure or drug, especially if those complications require surgical correction. At some point we must ask ourselves whether exposure to a normal childhood disease is worth the trade-off of a dangerous preventative intervention.

## ■ Wait-And-See Approach Reduces Use Of Antibiotics

The February 10, 2001 issue of the *British Medical Journal* reports that adopting a wait-and-see attitude in regard to children's ear infections is a feasible and practical way of reducing the use of antibiotics.

In the study, performed at the University of Southampton, UK, the wait-and-see attitude was responsible for a 76% reduction in the use of antibiotics.

Indiscriminate use of antibiotics has led to a dangerous increase in the amount of antibiotic-resistant strains of super bacteria that cause difficult-to-treat infections.

# Latest Antibiotic Already Becoming Ineffective

The April 14, 2001 issue of *The Lancet* reports that the latest antibiotic designed to work against antibiotic-resistant bacteria is starting to become ineffective. The researchers report that the resistant bacteria are adapting to the new drug and developing resistance to it as well.

The new drug, linezolid, is just over a year old and was designed to replace vancomycin, the previous drug that was designed to fight antibiotic-resistant bacteria.

Lead researcher Dr. John P. Quinn, of the University of Illinois College of Medicine in Chicago, found five cases of linezolid-resistant infection in the last 3 months of 2000. All five cases had been treated with long courses of the drug which increases the chances that resistance will occur. Three of the five cases had initially improved on linezolid but later developed resistance to it.

According to Quinn, he and his colleagues have come up with a novel approach to taking care of patients with bacterial infections; they actually test bacterial samples to see whether the samples will respond to the drug rather than simply throw antibiotics at every problem they find.

Bacteria, like other living things, have an inborn, innate ability to adapt to their environment. When they are repeatedly exposed to antibiotics they are able to change themselves to avoid the effects of the drugs designed to kill them.

By way of commentary, we find it incredible that doctors are only now catching on to the idea of "test first, then treat." Indiscriminate use of antibiotics over the years has led to the problem of antibiotic resistant bacteria. The severity of this situation likely could have been lessened by proper testing before the application of antibiotics rather than an irresponsible, "shotgun" approach to treatment without testing for the effectiveness of the drug to be used.

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## ■ Antibiotic Linked To Intestinal Disorder In Infants

The September, 2001 issue of the *Journal of Pediatrics* reports that giving infants the antibiotic erythromycin, especially within the first two weeks of life, can increase their chances of developing an intestinal disorder that likely will require surgery.

The disorder, called infantile hypertrophic pyloric stenosis (IHPS), occurs when the tube leading from the stomach to the small intestine (the pylorus) becomes enlarged, blocking the stomach's outlet. This results in projectile vomiting, dehydration and weight loss. IHPS is the most common cause of abdominal surgery in infancy.

The researchers also found that there may be a link between IHPS and a mother using the antibiotic during the last 10 weeks of pregnancy as well.

The study also saw some evidence that two related antibiotics, azithromycin and clarithromycin may also be linked to IHPS.

## One In Five Taking Cipro Experience Side Effects

The November 9, 2001 issue of the CDC's *Morbidity and Mortality Weekly Report* finds that one in five (20%) of people taking the antibiotic Cipro after presumed exposure to anthrax are experiencing adverse reactions to the drug.

Dr. Julie Gerberding, acting deputy director of the CDC's National Center for Infectious Diseases, says that percentage of side effects was expected. "We have had no surprises," she said. "These adverse events are no different from what we typically see with ciprofloxacin and doxycycline."

With approximately 32,000 people taking antibiotics to prevent anthrax since October 8, 2001 and more expected, thousands of people are expected to experience Cipro's side effects including nausea, vomiting, dizziness, convulsions, rashes, itching, swelling of the face, neck or throat, breathing problems, ruptured tendons, heart rhythm irregularities and psychiatric illness.

In a related story in the October 29, 2001 *Atlanta Journal*, American Medical Association Chairman Timothy Flaherty cautioned against unnecessary use of antibiotics. Noting that all antibiotics have risky side effects, he said, "in the absence of an actual infection, only the risk remains."

In commentary, your immune system is responsible for your resistance to disease. By correcting vertebral subluxations, chiropractic care allows increased resistance and proper function of all body systems, including the immune system. Who needs to be under chiropractic care? Everyone who needs increased resistance to disease and a properly functioning immune system.

# Report: Antibiotics Overused, Not Working

A February 2002 report by industrial analysts *Datamonitor*, shows that as antibiotics are being overused in the United Kingdom their effectiveness is decreasing. This has the effect of accelerating the development of antibiotic resistant strains.

Despite many years of warnings, doctors continue to prescribe antibiotics for even minor infections such as respiratory tract infections. In the UK, the report says, doctors rely on two types of antibiotics, penicillins and macrolides. As these drugs become more and more useless due to bacterial resistance, stronger and more expensive drugs are needed and the cycle continues.

The report says that currently, 15% of patients taking antibiotics have to have another round of treatment with another antibiotic because the first one proved ineffective.

Why do doctors keep writing antibiotic prescriptions even though they are aware of the problem? Apparently doctors are too busy to take the time to explain why antibiotic use may be dangerous. “For a time-stretched GP, it is, instead, far easier to take one minute off to print a prescription,” the report says. “Doctors find that they simply do not have the time to explain why antibiotic treatment could actually do more harm than good.”

Commentary: The doctor's too busy to explain? What nonsense. Your doctor's responsibility is to make sure you know what's going on with your health. If you ever have a doctor dismiss one of your questions with an I'm-too-busy or it's-too-complicated-you-wouldn't-understand-just-trust-me" attitude, get up and run out of that office. No matter who they are or how good they are, if they won't explain things to you, you don't need them.

## ■ Allergies And Asthma Linked To Antibiotic Use In Infants

On October 1, 2003, HealthDayNews highlighted research reported at a conference of the European Respiratory Society in Vienna, Austria finds that children who take antibiotics are more likely to develop Allergies and Asthma later in life.

In the study, researchers from the Henry Ford Health System in Michigan examined information from earlier research that followed 448 children from infancy to the age of 7. All the children had taken antibiotics for one reason or another and all had been tested for allergies.

By the age of 7, 38% of them developed allergies to pets, ragweed, grass and dust mites. 5% of them had asthma. Children who had taken antibiotics within the first six months of life were 1.5 times more likely to have developed allergies and 2.5 times more likely to develop asthma.

In the past few years, scientists have been coming to the conclusion that human immune systems are more likely to develop the way they are supposed to as long as they are exposed to germs during infancy.

It's felt that antibiotic use in infants may help allergies develop by killing off the normal bacteria in the intestines that are important in proper immune system growth and function. As a result, there is a higher occurrence of allergies.

Acknowledging that the overuse of antibiotics has also been shown to lead to antibiotic-resistant strains of bacteria, Dr. Keoki Williams, researcher and clinical epidemiologist, concludes the findings of this study indicate "there's potentially more than one reason to use antibiotics judiciously in young children."

## ■ 100,000 die each year from Adverse Drug Reactions

The April 15, 1998 issue of *The Journal of the American Medical Association* reports that Adverse Drug Reactions (ADRs) in hospitals may cause more than 100,000 deaths in the U.S. every year. This does not include ADR deaths outside hospitals such as those at home or in nursing homes.

The study, performed at the University of Toronto, found that 2,216,000 hospital patients experienced a serious ADR resulting in 106,000 deaths. This figure accounts for nearly 5% of all causes of recorded death in 1994. This makes Adverse Drug Reactions the fourth leading cause of death in the United States.

According to the U.S. Substance Abuse and Mental Health Administration, 5,212 Americans die each year from illegal drugs such as heroin and cocaine. This means that in the United States alone, properly prescribed and dispensed legal drugs kill 20 times the number of people that illegal drugs do. ▲

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## ■ Prescription drug misuse costs billions annually

In a study presented at an *American Medical Association* science writers meeting, two researchers report that prescription drug related problems cost an estimated \$75.6 billion in medical bills and cause 119,000 deaths every year, the equivalent of a large jetliner crashing every day.

The study was conducted by J. Lyle Bootman, Dean of Pharmacy, University of Arizona, Tucson and co-researcher Jeffrey A. Johnson. They report that 28% (8,8 million) of all hospitalizations are related to problems with prescription drugs, representing \$47.4 billion of the total \$75.6 billion cost.

Side effects range from rashes to death. “Prescription drug-related morbidity and mortality represents a serious medical problem that urgently requires expert attention.” Bootman says. Better prescribing habits by doctors and more counseling by pharmacists could reduce the cost by \$45 billion. ▲

## ■ Hospital Computer Keyboards Can Transmit Resistant Bacteria

A study presented to the 15<sup>th</sup> annual scientific meeting of the Society for Healthcare Epidemiology of America on April 11, 2005 reports that hospital computer keyboards and keyboard covers can allow the spread of resistant bacteria to gloved and ungloved hands and as a result, to patients.

Senior researcher Gary Noskin, MD says “there’s been an increasing trend towards maintaining electronic health records and computerized order entry, and in some hospitals there’s now a computer in every patient’s room that could potentially serve as a reservoir for the transmission of resistant bacteria.”

In the study, researchers contaminated clean keyboards and keyboard covers with various antibiotic resistant strains of bacteria. Samples drawn from the surfaces at regular intervals indicated that some bacteria, such as methicillin-resistant *Staphylococcus aureus* (MRSA) were still thriving after 24 hours.

Next, the researchers wanted to confirm that the contamination could be transmitted to fingers. It was no surprise that transmission increased with more keyboard contact. In the case of MRSA, up to 92% of keyboard touches resulted in transmission after only 1-5 touches. The transmission rate was also higher for ungloved hands (with their built-in ridges and fingerprints) than gloved.

Another problem is that the mild cleaners recommended by computer manufacturers are not enough to kill the resistant bacteria and researchers are unsure whether or not the equipment will hold up under repeated use of harsher hospital chemicals.

Commentary: Our suggestion is to keep yourself healthy so that you do not end up in a hospital. If you do find yourself in one, make sure that anyone who has contact with you washes their hands before coming near you or after touching computers, bedrails, phones and blood pressure cuffs.

## ■ Long-Term Antibiotic Use Increases Risk Of Colds & Flu

The September 2005 issue of the Archives of Dermatology reports that patients under long-term antibiotic therapy run a risk of developing upper respiratory tract infections at more than twice the rate of people not using the drugs.

The findings highlight the dangers that prolonged antibiotic use raises the risk for infection from bacteria that have developed resistance to the drugs.

Researchers at the University of Pennsylvania School of Medicine studied 118,000 patients with acne and discovered that those receiving the standard treatment of oral or topical antibiotics for more than six weeks developed colds, flu and other upper respiratory infections at more than twice the rate of those who were not being treated with antibiotics.

The researchers point out that even though antibiotics generally have no effect on the viruses that are associated with colds and flu, they believe that the activity of drug-resistant bacteria may change the upper respiratory tract in such a way as to allow the viruses to gain a stronger foothold that results in higher rates of viral infection.

The authors conclude that the implications for acne patients taking antibiotics remains unclear.