Antibiotics: Wondering about the wonder drugs

Rhea Hirshman, editor

Only a century or so ago, people lived in dread of common infections such as pneumonia. But, with the development of readily-available, generally affordable, and easy to use antibiotics in the late 1940s, many previously life-threatening health problems became treatable conditions. Antibiotics, especially when first widely available, were truly “wonder drugs.”

Unfortunately, the overuse of these substances, as well as the current widespread use of antibacterial agents as supplements in livestock feed, has produced consequences that jeopardize the treatment of infectious diseases. Antibiotic overuse has caused a number of bacteria to develop resistance to antibiotics to which they were previously sensitive. As a result, infections may be more difficult to cure or may require the use of antibiotics with more side effects.

Sharon Remillard, RN, MSN, associate director for clinical affairs at YUHS and a member of the infection control committee, explains the basics of how antibiotics work: “An antibiotic invades the bacterial organism and kills or disables it, decreasing the degree of infection. Some antibiotics will work only on certain organisms; others are called “broad-spectrum”—they work on many different strains of bacteria. Using an antibiotic targeted to the bacteria causing an infection is the best approach. That's why we often want a culture to determine which medication to use.”

The increasing level of bacterial resistance to antibiotics creates several problems. Michael Rigsby, MD, an infectious disease specialist and medical director of YUHS, explains “In the past we could reliably pick antibiotics based on the types of bacteria we were treating, but now we often need to do more sophisticated testing of
the bacteria to choose an effective medication. Having to do this testing not only leads to delays in effective treatment, but also encourages the use of antibiotics with a wider spectrum of activity; these drugs are often more expensive and have higher rates of side effects.”

Maureen Polizzi, LPN, employee health nurse and an infection control nurse for YUHS cites the example of MRSA (methicillin-resistant Staphylococcus aureus). “This organism used to be found almost exclusively in hospitals, and generally infected only those who were very ill or with weakened immune systems. Now MRSA is much more common, and appearing in the community among otherwise healthy people. We now need to assume that many skin infections are caused by MRSA until we can prove otherwise.”

A significant consequence of the use of broad spectrum antibiotics is that they destroy bacteria that are harmless and even beneficial to us. For instance, when the bacteria that normally populate the gastrointestinal tract are killed off, harmful strains may take their place such as Clostridium difficile—a bacterium that produces toxins causing severe, and even fatal, diarrhea. (While C. difficile is in normal gastrointestinal tracts, it overgrows when not killed off by other bugs.)

The temptation to think of antibiotics as a cure-all is understandable but dangerous, explains Rigsby. “Many infections are not caused by bacteria. The most obvious example is the common cold, which is caused by any one of a number of viruses. Many ear infections and cases of bronchitis and pneumonia are also caused by viruses. Antibiotics are useless in these situations. Even when some antibiotics are shown to be effective in the laboratory, they may not be appropriate as treatments because the conditions for which they might be used usually improve by themselves. Although a cold may be frustrating, taking antibiotics for it is not only useless, but potentially harmful. You are better off letting the cold run its course, with medications for symptomatic relief if needed.”

Polizzi says, “Our bodies are wonderful and mysterious and very complicated. The immune system is built to fight infection, and it is often best to allow your body the time to do its job naturally.”

Remillard also points out the value of non-medical approaches to preventing and resolving infections. “Good basic hygiene is extremely important—especially proper hand-washing. Wash hands with regular soap and a lot of friction under running water for at least 15 seconds, making sure you go above the wrists and between your fingers.”

If you do need an antibiotic, Rigsby, Remillard and Polizzi offer suggestions for proper use:

• If your clinician recommends taking a culture to determine the exact nature of the infection, be sure to do so.
• If you are given an antibiotic, take the entire course. The fact that you may feel better after a day or two does not mean that the germs have been killed off. They have just been suppressed and, if not destroyed entirely by the full course of medication, they can multiply again or come back as a more virulent or antibiotic-resistant strain.
• Make sure your clinician knows about any other medications you are taking, including oral contraceptives.
• Never take someone else’s antibiotics—or give yours to someone else—even if you seem to have the same ailment. Your problem may not be bacterial, or may be caused by a different strain of bacteria and need a different medication. And someone else’s medication could make you very sick.
• Follow directions carefully. Some antibiotics must be taken with food, others need to be taken on an empty stomach, and some must be timed precisely. How you take the medication can affect its effectiveness.
• Ask your clinician about potential side effects so that you can monitor your reactions and report them to your clinician immediately.

Working with your clinician, you can obtain optimum medical care while keeping your immune system healthy and safe. The prudent use of antibiotics will also help to ensure that these “wonder drugs” continue to be effective.
What is in a name?

At Yale we have no shortage of initials beginning with the letter Y—and I can think of at least ten local health care institutions and entities whose names start with “Yale” and whose titles include words like “health,” “medical” and “hospital.” A very partial list includes: Yale Health Plan (YHP); Yale University Health Services (YUHS); Yale School of Medicine (YSM); Yale Medical Group (YMG); and Yale School of Nursing (YSN). Within our large School of Medicine, there are dozens of Y-departments and Y-sections. To make matters even more confusing, many years ago Yale-New Haven Hospital (Y-NHH) and more recently Yale New Haven Health System (Y-NHHS) annexed Elihu Yale’s family name—but neither one is part of Yale University.

I contemplated this dilemma of the alphabet soup of initials and thought that our readers might appreciate some clear definitions.

Yale University Health Services. This umbrella organization includes Yale Health Plan, and also Yale University Employee Health (I will spare you the initials), Varsity Athletic Medicine, Student Health Education, the SHARE Center (Sexual Harassment and Assault Resource Center) and Yale Emergency Medical Service (YEMS). Most of YUHS is located at 17 Hillhouse Avenue. We will be moving to 55 Lock Street in 2010.

Yale School of Medicine. This name reflects actual identity. Yale’s medical school is famous for its scientific research, education and clinical practice.

Yale Medical Group. The faculty practice of the School of Medicine—the entity through which physicians in YSM practice clinical medicine. Most of Yale Health Plan’s specialist consultants are part of YMG.

Yale School of Nursing. Again the name reflects the function. YHP has many close ties with our School of Nursing, including staff members with joint appointments on YSN faculty and YHP clinical staff.

Yale-New Haven Hospital. (Y-NHH) is part of the Yale New Haven Health System (Y-NHHS), which also includes Bridgeport and Greenwich Delivery Networks (hospitals and clinical practices). The hospital, located adjacent to Yale School of Medicine, is its principal teaching hospital and it is the hospital most often used by YHP members. Yale University has partnerships with Y-NHH but a distinct corporate structure.

What is in a name? We picture a great institution when we hear “Yale,” so everyone wants that four-letter word in their institutional title. “Health” is why YHP exists. But to me, “Plan” sounds too much like an insurance company and doesn’t properly reflect our mission. It is one word that I would like to drop from our vocabulary; others are “clinic” and “provider,” neither of which is particularly inviting. My challenge to our membership: send me your suggestions for a new name that reflects YHP’s clinical excellence; our unique combination of medical care and insurance coverage within a designated health center; and Yale University’s dedication to the health and well-being of its extraordinary community.
Keep food safe. Food left out of refrigeration for more than two hours may not be safe to eat. Above 90°F, food should not be left out over one hour. Put leftover perishables back on ice once you finish eating so they do not spoil or become unsafe to eat. When in doubt, throw it out!

Wash your squash. Foods that come in contact with dirt or manure will contain a certain number of microorganisms, and these naturally-occurring organisms can cause a variety of gastric disturbances. And any foods that are handled by people can likewise become contaminated. Give a thorough washing to fruits and veggies—such as squashes, cucumbers, and melons—that you plan to peel, because bacteria on the outside can be transferred, via the knife, to the inside when an unwashed fruit/vegetable is peeled or cut.

Use running water rather than a bowl of standing water. If you want to eat the peel, scrub produce with a stiff vegetable brush to remove dirt and wash thoroughly to remove bacteria. Scrubbing with vinegar will strip the wax coatings on veggies such as cucumbers and some apples. And remember to cut away any bruises or scars.

Protect your eyes from the same ultraviolet rays that can damage skin. Wear sunglasses labeled as blocking 99–100% of UV-A and UV-B rays, or labeled “UV absorption up to 400 nm” (nanometers, a measurement of wave length). These phrases mean the lenses are chemically coated to block UV light.

Check the expiration date on your sunscreen, which is a perishable product. Out-of-date sunscreen will not provide adequate sun protection.

Reduce the presence of mosquitoes which, besides being annoying, can carry a number of illnesses, by eliminating standing water in your surroundings. For example: turn over cans in your recycling bin so that rain water does not collect; remove standing water from outside potted plants; keep birdbaths away from walkways, entryways and windows.

Any time you have been out of doors, whether in a grassy yard or in the woods, check yourself and your pets for ticks, which are potential carriers of diseases such as Lyme disease—the most common—and erlichiosis, babesiosis and rocky mountain spotted fever. To remove a tick, grasp it firmly with fine tipped tweezers as close to your skin as possible, and with a steady motion pull the tick’s body away from your skin. Do not use petroleum jelly or other substances because that will make the tick difficult to hold onto. Cleanse the area with antiseptic afterwards. Be alert for a rash, fever, headaches or flu-like symptoms. If these occur, consult your clinician.

Nix the poisons. Chemicals used to create a “perfect” lawn pose significant health risks to adults, children and pets. These substances eventually move into the groundwater and that groundwater travels into the public water supply. Lawn pesticides are poisons designed to kill living organisms and they are linked to higher rates of cancer, birth defects, nerve damage and learning disabilities in mammals. According to the (federal) EPA (Environmental Protection Administration), over 90% of the pesticides used on residential lawns are possible or probable carcinogens. If you want to encourage the traditional turf lawn look while eliminating the poisons, do the following:

- Choose grasses appropriate for this environment.
- Mow high and mow often, with a well-sharpened mower.
- Water deeply but infrequently. This encourages deeper root growth, resulting in a more stable and disease-resistant lawn instead of one whose roots remain near the surface.

Don’t worry about drought. Well-established lawns will not die under drought conditions. They will just turn brown and then green up again when the rain falls.
Read this!

Members of the YUHS staff offer summer reading suggestions.

Ivy M. Alexander, PhD, CANP, APRN, Internal Medicine

Water For Elephants by Sarah Gruen. An interesting read that provides background about the circus and gives some perspective into circus life during the Depression, while weaving an engaging story. (Also recommended by Pamela Sheppard of the YUHS Finance Department, who adds: “Though the story itself is fiction the author uses accounts and records from the traveling circus to give a ring of truth.”)

The Interpretation of Murder by Jed Rubenfeld. Intriguing story that combines history—Sigmund Freud’s visit to the US—and a murder mystery.

Fran Batesole, RN, Health Promotion & Ed.

Dreams from my Father by Barack Obama. Beautifully written, heartfelt and genuine.

Linda Bell, MS, RD, CD/N, YHP nutritionist

Anna Karenina by Leo Tolstoy. A timeless story of love, adultery, and family dynamics. “Happy families are all alike; every unhappy family is unhappy in its own way” is how the book begins. Don’t let the length intimidate you; it is beautifully written and broken up into smaller sections so that you can put it down for a while and pick up where you left off.

Tiffany Blount, MA, Internal Medicine

The Pact by Jodi Picoult. Two teenagers in love—a Romeo & Juliet story with a twist!

Joann DellaValle, receptionist, Student Med.

The Summerhouse by Jude Deveraux. A great read about women friends who, on a get-away weekend, visit a psychic who gives them the prediction of one man’s decision to make a difference in the world by building schools for girls in remote Pakistani villages.

Elise DeMayo, LPN, Health Promotion & Ed.

Eat, Pray, Love by Elizabeth Gilbert. A poignant and humorous memoir of a woman who, recovering from a broken marriage, travels to Italy to learn the language and enjoy the food, to India to learn to meditate, and to Indonesia to reconnect with a healer.

Danielle Egervari, senior administrative assistant, Director’s Office

I Know This Much is True by Wally Lamb. Lamb gives amazing emotional depth to his characters. By the time I finished I felt like I knew each one personally and was saddened that this epic had ended for me.

Paul Genecin, MD, director—YUHS

Middlemarch by George Eliot (Mary Ann Evans). Re-reading this reminded me of what a splendid Victorian novel it is. Dorothea is a young lady of good family and some wealth, who imagines herself to be quite grown up and sophisticated. She has high ideals and naive fantasies about a life of Good Works and Good Values. Blinded by her fantasies, she decides, disastrously, to marry Casaubon, a despiscible, hypocritical old cleric. There are lots more characters and relationships in Dorothea’s provincial town, wonderfully described by this great British author.

Carole Goldberg, PsyD, Mental Health & Counseling

Tender Violences: Domestic Violences in an Age of U.S. Imperialism by Laura Wexler. Compels the reader to look at history in a more informed and meaningful way through the eyes of the first American female photojournalists, with more than 150 photographs taken between 1898 and 1904. These women photographers, white and middle class, construct images of war disguised as peace through a mechanism that Wexler calls the “averted eye.” By studying photography as another text to examine historical events, Wexler invites readers to expand their observations of how impressions are manipulated in the context of the time. Fascinating, and informative.

Camille Gooden, senior administrative assistant, Health Promotion & Ed.

Bananas, Beaches and Bases by Cynthia Enloe. If you like international politics and are interested in the roles women play, you will enjoy this book, which offers a deeper understanding of how gender factors into the workings of a globalized society.

Douglas Idelson, MD, chief of Pediatrics

Extremely Loud and Incredibly Close by Jonathan Safran Foer. This powerful and poignant novel examines the way a precocious 10-year-old boy comes to terms with his father’s death on 9-11. Beautifully written, it treats the process of mourning from the perspective of a child without banality.

Heather Liberman, communications coord.


Three Cups of Tea by Greg Mortenson and David Oliver Relin. A highly readable account of one man’s decision to make a difference in the world by building schools for girls in remote Pakistani villages.

Patricia Mastriniati, ophthalmology assistant, Ophthalmology Department

The Glass Castle by Jeannette Walls. Memoir which helps us understand homelessness in America—how it can happen to anyone and how some manage to rise above it.

Naida McKelvey, Member Services rep


Christa Mrowka, manager, Admin. Services

The Great Bridge by David McCullough. One of the great masters of our history chronicles not only the story behind the rise of the Brooklyn Bridge—one of our most enduring national landmarks—but also the transformation of the US in an age when Americans believed anything was possible.

Rosemary Payne, senior administrative assistant, Staff Relations

Year of Wonders by Geraldine Brooks. An historical novel about how the plague affects the townspeople of a small English village.

Also, any of the novels by Philippa Gregory starting with The Other Boleyn Girl, recently made into a movie.

Michael Rigsby, MD, medical director—YUHS

This year I’ve selected two books about my favorite subject: food!

The Kitchen Diaries by Nigel Slater. Recounts a year in the kitchen of the British cook and journalist who knows the importance of gathering around a table for a meal one has selected and prepared oneself. The book highlights seasonal fare with well-chosen, easy to follow recipes and enticing illustrations. I have tried a number of the recipes and all have been successful. More than anything, it approaches cooking and eating as one of life’s great simple pleasures, setting this apart from other cook books.

In Defense Of Food: An Eater’s Manual by Michael Pollan. Pollan has written several important books on the way we eat and the way our food is produced, and he does not like what he sees. Among his arguments: we should return to traditional diets, using products that are close to their point of origin and bypassing extensive processing. There is a lot of interest in this easy-to-read book, well summarized in Pollan’s distillation of three essential principles: (1) Eat food. (2) Not too much. (3) Mostly plants. I think he and Nigel Slater would very much enjoy a meal together.

continued on page 7
New benefit year begins July 1st

The benefit year for faculty and staff YHP members renews on July 1, 2008. All medical services rendered and prescriptions filled on or after July 1st will be applied to the new benefit year maximums and deductibles (as applicable). If you have questions about coverage, contact Member Services at 203.432.0246.

Summer hours

Extended evening hours in primary care departments ended as of Monday, May 19 and will resume again in mid-September.

Pharmacy

May 19–July 3:
Monday–Wednesday 8:00 am–6:30 pm
Thursday 8:30 am–6:30 pm
Friday 8:00 am–6:30 pm
Saturday 8:30 am–3:30 pm

July 5–August 23:
Monday–Friday 8:30 am–6:00 pm
Saturdays 8:30 am–2:30 pm

The Pharmacy will be closed July 4 and September 1.

Radiology

Monday–Friday 8:00 am–5:00 pm
Saturday 9:00 am–1:00 pm

Help With Your Child’s Asthma

Learn how to keep asthma from interfering with your child's activities such as:
• succeeding in school
• competing in sports
• going to camp or on field trips
• taking part in sleep-overs at the homes of friends and relatives
• keeping up with friends’ activities

Schedule a personalized parent-child education session about controlling childhood asthma through YHP’s Care Coordination Department to learn more about:
• proper use of asthma medications
• managing asthma triggers
• the impact of allergies on asthma

Sessions last 30 minutes and are free for YHP members. Call Elisabeth Reilly, APRN, CPNP at 203.432.5266.

YHP staff

New Medicare coordinator

Darlene Evans has joined YHP as the new Medicare coordinator. A long-time employee of the University, Evans most recently served as a senior benefit specialist in the Office of Human Resources. Previously, she held positions as a benefits assistant in that department and was on the Member Services staff at YHP. She received her B.A. at Gannon University in Pennsylvania and her Master’s of Public Health at Southern Connecticut State University.

Wu joins Dermatology staff

Jian Wu, PA-C, is the new physician associate in YHP’s Dermatology Department. A graduate of Shandong Medical University in Jinan City, China, he worked for five years as an internal medicine physician at Xiang Union University in Xiang City, China and later obtained his PA training at Union College in Nebraska. Prior to coming to Yale, he worked as a PA in private practices and in the Neurosurgery Department of Johns Hopkins Bayview Medical Center. He has a particular interest in issues of aging and senior health care.
Some additional travel health and safety tips from the YUHS Travel Clinic

- Pack a travel medical kit, specific to your destination and personal needs. Some important general items are sunscreen, insect repellent, lip balm, and moleskin and band aids for blisters.
- Pack enough medications for your entire vacation, including any over-the-counter (OTC) drugs that you take regularly or that you might need at your destination, since medications that are over-the-counter here are not always OTC overseas.
- Carry prescription medications in original labeled containers and place in carry-on luggage.
- Keep, in separate location, a listing of your prescription medications and drug and food allergies, as well as an extra pair of glasses and spare contact lenses.
- Make sure your immunizations are up-to-date.
- If traveling to areas where mosquitoes and other insects are a problem, wear long-sleeved shirts and pants and remember that neutral colors and unscented products are less attractive to insects.
- Wide-brimmed hats and sunglasses provide important sun protection.
- Don’t swim if the locals aren’t swimming: the number two accident risk for travelers (after motor vehicle accidents) is drowning.
- Frequent hand washing is essential. Always wash your hands or use hand sanitizer before eating and after toileting.
- Traveler’s diarrhea is caused by contaminated food or drink. High-risk foods are dairy products, unpeeled fruits, salads, and undercooked meats, poultry and shellfish.
- Water that is at all questionable should be boiled, chemically treated, or filtered—or use sealed bottled water. Avoid tap water and remember that ice made from contaminated water will also be contaminated.
- If you require a specialized diet have you made the necessary arrangements?
- Make sure to leave a detailed itinerary with at least three people who also have each other’s contact information.
- Bring your MEDEX card!

The Travel Clinic provides comprehensive pre-travel assessment, as well as services such as immunizations, on a fee-for-service basis. Clinicians provide individual and group consultation, including destination-specific health and safety information. Check the website for current fees and call 203-432-0093 for an appointment.

To register on line with MEDEX:

Go to http://yale.medexassist.com and click register now.

After you have logged in, you can access all the site’s features and information. Those planning travel abroad should pay particular attention to MEDEX 360 for country-specific health and safety information—not a substitute for a visit to the Travel Clinic, but an invaluable resource for overseas travelers.

Books

continued from page 5

Rebecca Schrier, MSW, MPH, CHES, student health educator

My Life and Other Unfinished Business by Dolly Parton. The inspiring, tell-it-like-it-is autobiography of one of America’s best known stars, who shares the rags-to-riches story of her life with honesty, a Tennessee twang, and an unflinching sense of humor. Singer, songwriter, actress, theme park owner, and dedicated humanitarian, Dolly has done a bit of everything in a career that keeps on going.

Dawn Shuby, MA, Student Medicine

Where The Heart Is by Billie Letts. Friendship, love and coming of age.

Peter Steere, RPh, MBA, assistant director of Pharmacy and Medication Management

The Secret River by Kate Grenville. An ambitious book that tells many stories at once, from struggles against poverty, to the traps of ambition and a family’s attempt to start a new life in a country soon to be known as Australia. Beautifully written, it’s a wonderful chance to find yourself in another time and place.

Patricia Stumpf, RN, MS, assistant director of Clinical Administration

The Wild Trees by Richard Preston. A great nonfiction book about tree climbing and the environment at the top of the earth’s tallest trees—a breathtaking adventure that transports you to an unknown world.

Michael Thorns, RN, BSN, Urgent Care

Road Fever by Tim Cahill. The adventures of two young men as they journey from the tip of South America to the tip of North America.

The Three Musketeers by Alexander Dumas. One of the few books I have read several times, filled with action, adventure and romance, and includes a 17th century French history lesson.

Ken Watkins, PA-C, Employee Health and Student Medicine

The Tender Bar by J. R. Moehringer. About fatherless boys, working class moms trying to make ends meet, the search for a father figure in a crowd of bartenders, the genesis of a journalist, the life of a blue-collar “Yalie” and much more.

Denise Whelan, MPH, coordinator, Population Health Management

Here If You Need Me by Kate Braestrup. A moving true story about a woman whose husband dies in a car accident. She decides to pursue his dream of becoming a minister and becomes the chaplain for the Maine Game Warden Service. Interweaves stories of her life as a single mother, her co-workers, and the people she comforts in her job, with writing that is both funny and insightful.
Latest on prostate cancer screening

YHP adult preventive health guidelines recommend that, beginning at age 50, men discuss prostate cancer screening with their clinicians. Those in high risk groups (including those with a strong family history of prostate cancer and African-Americans) should discuss screening beginning at age 40 or 45.

Prostate cancer screening involves testing for cancer in men who have no symptoms. Tests can find cancer at an early stage, when it may be more easily and effectively treated. However, medical experts disagree about whether this screening is right for all men, and whether the benefits of screening outweigh the risks.

What is prostate cancer?
The prostate, a walnut-sized gland in the male reproductive system, makes the fluid that carries sperm. It is located just below the bladder, and the urethra (the tube that carries urine from the bladder to outside the body) runs through the center of the prostate. As men age, the size of the prostate tends to increase. Prostate cancer is made up of cells that do not grow normally and may form a tumor. The risk of getting prostate cancer increases with age. While some prostate cancers become a serious threat by growing quickly and spreading, others grow slowly and never become a serious threat to health or life-span.

Screening tests
The two most common tests to detect prostate cancer are a clinical exam—the digital rectal examination (DRE)—and the prostate-specific antigen (PSA) blood test. PSA is an enzyme produced only by the prostate. As a rule, the higher the PSA level, the more likely a serious prostate problem is present. But many factors, such as age and race, can affect PSA levels, and a significant percentage of men with “normal” PSA levels also have prostate cancer. Some prostate glands produce more PSA than others. PSA levels can also be affected by:
- certain medical procedures
- an enlarged prostate, with no cancer present
- a prostate infection, with no cancer present

Because many factors can affect PSA levels, test results should be interpreted by your clinician.

Should I have prostate cancer screening?
Although good evidence indicates that screening can detect prostate cancer early, evidence is mixed about whether early detection improves outcomes. Those who encourage regular PSA screening cite studies indicating that it is effective in finding and treating prostate cancer early. However, PSA screening can lead to false positive results which can in turn lead to undergoing needless and uncomfortable procedures to find cancers that do not exist. In addition, screening may detect small cancers that do not necessarily pose a danger. Treating these slow-growing cancers can result in serious side effects such as temporary or long-lasting impotence and incontinence (urine leakage). Therefore, some experts have expressed doubt about the value of using the PSA screening test routinely for those not otherwise at high risk. Ultimately, the decision about screening is an individual one that men should make with their primary care clinicians.

When will we know more?
Every man needs information on the pros and cons of prostate cancer screening to help him make an informed decision. Researchers are working on clinical trials to help determine whether men who are screened regularly are less likely to have negative outcomes than men who are not. Discuss the pros and cons of prostate cancer screening—and whether it is right for you—with your clinician.