But we pop them like Skittles, and if we keep it up, they’ll soon become useless against potentially lethal superbugs (imagine this; fatal UTIs). Erin Zammett Ruddy lays out the problem, the risks, and the unexpectedly simple solutions.

On New Year’s Eve 2009, Jacquie Allen, 42, was told by doctors that her son Brody might not live through the night. What started a few days earlier as a strange pimple on his knee had morphed into a full-blown attack on the 12-year-old’s body. “One day he was perfectly healthy and the next he was in septic shock,” says Jacquie, who lives in Southern California with her husband and their five children. “He became completely swollen and jaundiced, and his organs were failing. They tested him for everything, but no one could figure out what was wrong. I felt like I was on an episode of House.” Finally, doctors determined that Brody had methicillin-resistant staphylococcus aureus, or MRSA. It’s a type of staph (a bacteria many of us have on our skin) that has become resistant to most antibiotics and can cause infections that are hard to diagnose, tricky to treat, and sometimes fatal. The infection quickly spread to Brody’s joints. “They pumped him full of antibiotic after antibiotic, but nothing was working,” Jacquie says. Eventually, Brody’s elbow became so inflamed that the only option was risky surgery. “The surgeon came in and said, ‘Your son is going to die if we don’t get that infection out now.’”

Brody made it through the surgery, but the MRSA was relentless. It took two more major operations to remove the infected tissue and stop the MRSA’s spread. The Allens spent 19 days in the ICU. Before they left, Brody had a catheter implanted in a large vein in his arm so his parents could administer high doses of strong, specialized antibiotics around the clock for the next four months. He was told he’d never have full use of his arm again. The doctors were wrong: Brody ultimately recovered completely, and now pitches for his Little League baseball team with the arm he almost lost. But we should all commit his story to memory, particularly any of us who have ever taken an antibiotic “just in case,” or called the doctor asking for a prescription to help our child kick a stubborn cough. You see, every time we use an antibiotic, we...
The other major antibiotic issue: Farm animals

These drugs are also given to cows, chickens, and pigs—and it’s hurting everyone’s health.

Farmers feed their herds antibiotics, and not just when they’re sick. On factory farms, for example, healthy broiler chickens ingest small doses of antibiotics (the same ones we need to cure human diseases) in their food daily to help them grow faster and prevent them from getting sick. “This would be like if your kids were going to day care and you said, ‘Let’s give them some antibiotics, just in case,’” says Arjun Srinivasan, M.D., a medical epidemiologist at the CDC. Moreover, without antibiotics, life-saving treatments like chemotherapy, organ transplants, and even simple surgeries would not be possible. “These drugs dramatically improve our lives,” says Srinivasan. But the magic is at serious risk as resistant bacteria pick up steam. MRSA is the most well-known superbug, but it’s certainly not the only one. “We’ve seen new forms of resistant disease emerge over the last decade, and they’ll keep coming until we can get a handle on the overuse of antibiotics,” Mollen says. The CDC, for example, has warned of the potential threat of untreatable gonorrhea. The second most commonly reported infectious disease in the United States, it has become less susceptible to a strong class of antibiotics called cephalosporins, typically the last line of defense. There are also resistant strains of E. coli causing hard-to-treat urinary tract infections. (Believe it or not, one strain of E. coli, causing hard-to-treat urinary tract infections, was passed to humans (see sidebar at right).)

The unkillable bug is coming

Ever get two days into your course of antibiotics, feel miraculously better, and think, Wow, that’s magic? Well, it is. “When antibiotics came about in the 1940s, they completely transformed medicine, saving the lives of millions who would’ve died of these infections,” says Arjun Srinivasan, M.D., a medical epidemiologist at the CDC. Moreover, without antibiotics, life-saving treatments like chemotherapy, organ transplants, and even simple surgeries would not be possible. “These drugs dramatically improve our lives,” says Srinivasan. But the magic is at serious risk as resistant bacteria pick up steam. MRSA is the most well-known superbug, but it’s certainly not the only one. “We’ve seen new forms of resistant disease emerge over the last decade, and they’ll keep coming until we can get a handle on the overuse of antibiotics,” Mollen says. The CDC, for example, has warned of the potential threat of untreatable gonorrhea. The second most commonly reported infectious disease in the United States, it has become less susceptible to a strong class of antibiotics called cephalosporins, typically the last line of defense. There are also resistant strains of E. coli causing hard-to-treat urinary tract infections. (Believe it or not, one strain of antibiotic-resistant UTIs has been traced back to the chicken we eat.) When a UTI isn’t stopped, it can progress to a kidney infection and then to a blood infection, says Lance Price, Ph.D., a microbiologist at the Translational Genomics Research Center.
in Flagstaff, AZ. “Blood infections have a 40 percent mortality rate. You can basically flip a coin to see whether you’ll live or die.” Srinivasan cites another example: “A type of bacteria called Enterobacteriaceae or CRE, has become resistant to all antibiotics,” he says. If you pick up the infection, which can cause kidney, bladder, or blood infections, there is no treatment—and you’re four times more likely to die from it than if you get a similar infection that isn’t resistant to antibiotics.

Making matters worse, there are no new antibiotics in the pipeline. “It takes about a decade for a medication to go through the approval process, so we can be pretty sure we won’t have new antibiotics to turn to when the current ones stop working,” says Mellon. It’s a real wake-up call, adds Srinivasan. “The doomsday scenario some doctors said would never arrive, in some cases, is already here.”

Even when it’s not life-threatening, dealing with a stubborn infection is frightening. I know firsthand: During the month I breastfed my son, Alex, I had repeated bouts of mastitis, an infection common in nursing moms. I went on antibiotic after antibiotic, but the infection kept returning—because, it turned out, it was MRSA. I got on a speciality drug (as in $7,000 a week) and had a few surgical procedures on my breast, which cleared the bacteria. Meanwhile, Alex was battling the superbug too—he got it from the hospital nursery and gave it to me—causing stantly erupting with boils in his diaper area that had to be drained and treated. In the four months we dealt with MRSA, I spent $800 in copays alone. But that was nothing compared to the emotional toll. Every bloom we saw on Alex’s body led us into a what if it’s MRSA spiral. As if caring for a tiny new human weren’t stressful enough. Forget the personal price of these run-ins with superbugs, “the loss of effective antibiotics is also a huge drag on our economy,” says Mellon. One recent study pegs the cost to the U.S. health-care system at upwards of $26 billion a year. The good news is we can do something about it. “The better we use antibiotics, the less of an opportunity we give these bacteria to develop and spread,” says Srinivasan. “You do a really good job of reducing antibiotic use, not only in your household, but also in the medical community. If we do that, we have the power to reverse this crisis. And we must.”

You—and your doctor—can help

Savvy ourselves from the scary but all-too-real attack of the superbugs means we have to change our habits and attitudes, fast. “We’re a society that seeks a quick fix to every problem,” says Hicks, “and for a long time, people have thought that the magic pill for any illness is an antibiotic.” But antibiotics only work on bacteria, not viruses—meaning they do nothing for a cold, the flu, bronchitis, and even most sinus infections. (See “What Illnesses Actually Need Antibiotics?” page 150.) Doctors know this, of course, but they often dole out the meds anyway, mostly to please their patients. “People get a runny nose and they think they must have an antibiotic,” says Srinivasan. “They either ask for it outright or the doctor thinks, Oh, if I don’t give her a prescription, she’ll be disappointed.” It seems crazy, but fear of letting down a patient can compel a doc to grab her prescription pad. “We’ve also heard from doctors that not writing a prescription would take additional time, because they’d have to sit and explain to the disgruntled patient why she doesn’t need it,” says Hicks. My friend Liz only has to call her doctor and say, “I think I have strep,” and a prescription arrives at CVS within the hour. She also takes a Z-pak with her on vacations just in case she gets sick. That overuse may have caught up with her; Liz often comes down with bronchitis in the winter, but this year, it turned into pneumonia. She needed two types of antibiotics and an anti-inflammatory steroid to clear it. It’s a lesson for all of us, reminds Hicks: You may not care about the larger public health threat, but if you want antibiotics to continue to work for you, use them sparingly. Just as important, we need to quit stuffing our kids full of these meds at the first sign of a sniffle. Three out of 10 children who visit their pediatrician with a simple cold hodgepodge with a prescription. So when you or your kids see the doctor, let her know you’re not desperate for a script, that you just want advice on the best way to treat the illness, suggests Hicks. When it comes to colds, instead of plying ourselves with drugs, we should be treating the symptoms with OTC meds and nasal sprays, and do what we results-oriented Americans hate most: wait it out.

The point is not to avoid antibiotics at all costs, it’s to use them correctly. This is the idea behind the CDC’s Get Smart: When Antibiotics Work campaign, with the arguably catchy line “Snort, sniffle, sneeze, no antibiotics, please!” The message seems to be making its way into the national dialogue. It even showed up last season in a scene on 30 Rock: When Jack told Liz Lemon to take something for her cough, she deadpanned, “I’d rather see it if it gets better on its own. Do you want what ‘What Illnesses Actually Need Antibiotics?’ says? It’s endless. You’ll beg for death.” Go ahead and rant, experts say. “This truly is a national emergency,” warns congresswoman Louise M. Slaughter. She introduced the Preservation of Antibiotics for Medical Treatment Act, a bill that limits the use of antibiotics on farms to treating sick animals. But five years later, Congress has yet to pass it. “We’re taking what I think was the best medical breakthrough of the last century and destroying its efficacy,” she says. “But if we band together, we have the power to solve this problem.”

1 Use antibiotics correctly. Work with your doctor to determine if an antibiotic will truly help what’s ailing you, then follow her instructions. Any time you skip doses, don’t finish a course, or drink alcohol when you’re on the meds, you make the antibiotic less effective and give bacteria a chance to become resistant.

2 Buy meat labeled “raised without antibiotics” or “organic.” Those exact phrases mean that antibiotics were not given to the animal needlessly. Watch out for wording; labels that say “all natural” guarantee nothing. Some good, antibiotic-free brands: Applegate Farms, Murray’s Chicken, Bell & Evans, and Niman Ranch. Can’t find these in your market? Tell your grocer to stock up and that you and your friends will buy! Also ask your kids’ school to serve meat that was raised without antibiotics. (Go to saveantibiotics.org to download a letter you can send.)

3 Ask your favorite restaurants if they use meat raised without antibiotics. If a company like Chipotle can do it, why can’t others? “Things will only change if we ask for changes,” says Gail Hansen, a public health advocate with the Pew Campaign on Human Health and Industrial Farming.

4 Spread the message. “Like” the group “Moms for Antibiotic Awareness Campaign” on Facebook, and get friends to do the same. Awareness is key: Most people have no idea which illnesses require anti- biotics, nor do they know how much the drugs are used in food animals. “Unless you grew up on a farm, why would you know that?” says Hansen.

5 Tell Congress to pass a law. The Preservation of Antibiotics for Medical Treatment Act would withdraw the use of antibiotics that are vital to humans from food-animals production unless the animals are diagnosed with illnesses. Says U.S. Representative Louise M. Slaughter, who introduced the bill: “Send a letter to your member of Congress—along with this article!—and tell them to sign the bill and get it passed.” Personalize your own letter at saveantibiotics.org/moms /action.html, then get your reps’ addresses at senate .gov and house.gov.

Please, join the fight against superbugs.