

Scientists are continuing their quest to understand virus. As part of this they need to better understand what is a virus vice bacteria since humans need bacteria as part of a symbiotic relationship we have with them, a relationship that does not exist, that we know, with virus'. Since we need bacteria to do a range of things for us to include help us digest our food, the over use of antibiotics is of growing concern, to include its use in our food supply.

Strangely 80% of all antibiotics in the U.S. are given to animals to make them grow faster and stay healthy in crowded barns, not dosed to humans to make them recover from infections or disease.

Cows are fed antibiotics to fight mastitis. One of the many problems caused by the use of rBGH is that when cows are artificially forced to over-produce milk, their udders swell and become infected with mastitis, requiring farmers to employ a wide variety of antibiotics. The General Accounting office warned the FDA in 1993 not to approve rBGH for this very reason - fearing increased antibiotic residues in rBGH-derived milk and dairy products.

Force-feeding of antibiotics in industrial agriculture (banned on organic farms and all farms in the EU), combined with doctors' over-prescribing antibiotics to their human patients, has turned into a major public health issue, with animal and human pathogens steadily developing resistance to antibiotics.

Since 1993, when rBGH was approved, and more importantly when the feeding of antibiotics to animals on factory farms skyrocketed, the number of people dying from infections acquired in hospitals in the United States jumped from 13,000 to 100,000 per year.

Finally in mid-April 2012 citing concerns over potentially deadly strains of drug-resistant bacteria, the Food and Drug Administration called on pharmaceutical companies to help limit the use of antibiotics given to farm animals. Under the new FDA guidelines, the agency recommends antibiotics be used "judiciously," to keep animals healthy. The agency also wants to require a veterinarian to prescribe the drugs. The draft recommendations by the FDA are not binding, and the agency is asking for drug manufacturers' cooperation to put the limits in place. Drug companies would need to adjust the labeling of their antibiotics to remove "production uses," which include increased weight gain and accelerated growth. The FDA hopes drugmakers will phase out that language within three years. "This is not an issue where trust should be the measure," said Richard Wood, Chair of the Keep Antibiotics Working coalition, said in a statement.

In March 2012 a federal court judge ordered the agency to take action on its own 35-year-old rule that would have banned non-medical use of two popular antibiotics, penicillin and tetracycline, in farm animals because antibiotics could lead to resistant bacteria in humans. The FDA however never took action, which led to four public safety groups lawsuits.

The waning effectiveness of antibiotics has been a global health concern for several decades as more deadly forms of malaria and staph infections present. World Health Organization (WHO) Director-General Dr. Margaret Chan recently warned if the trend continues, "Things as common as strep throat or a child's scratched knee could once again kill."

Consumers can fight back by purchasing dairy free options, or at least antibiotic free milk, if one trusts milk labeling. Likewise, consumers can boycott animal products or again insist on organic products. Buying local organic products over imported products is probably one of the few ways to verify the veracity of organic claims.

## Antibiotics in sea animals:

Most of us assume that by the time food arrives at the grocery store, it's been checked for any chemicals that might harm us. That's not necessarily the case: food manufacturers and federal employees test for some known culprits in some foods, but the search isn't exhaustive, especially when it comes to imported items. Recently, scientists working with ABC News checked to see whether imported farmed shrimp bought from grocery stores had any potentially dangerous antibiotic residue, left over from the antibiotic-filled ponds in which they are raised. It turns out, a few of them did.

Out of 30 samples taken from grocery stores around the US, 3 turned up positive on tests for antibiotics that are banned from food for health reasons. Two of the samples, one imported from Thailand and one from India, had levels of carcinogenic antibiotic nitrofurazone that were nearly 30 times higher than the amount allowed by the FDA. The other antibiotics the team discovered were enrofloxacin, part of a class of compounds that can cause severe reactions in people and promote the growth of drug-resistant bacteria, and chloramphenicol, an antibiotic that is also a suspected carcinogen.

These findings aren't entirely surprising. In 2011, the US Government Accountability Office warned that imported farmed shrimp might be contaminated with dangerous drugs: they are raised in dirty, crowded pond operations that involve heavy use of antibiotics. And since foreign fish farms are not held to US regulatory standards, those antibiotics might include those that US fish farmers aren't allowed to use, like nitrofurazone, enrofloxacin, and chloramphenicol. But the findings are nonetheless a little worrying, as 90% of the shrimp Americans eat comes from such operations, and only 2% of imported shrimp is inspected by the FDA. Clearly, even heavily contaminated shrimp can make it to grocery store shelves, though how frequently this happens is not known.

[http://blogs.discovermagazine.com/80beats/2012/05/23/some-imported-shrimp-on-grocery-store-shelves-are-contaminated-with-antibiotics/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+80beats+%2880beats%29](http://blogs.discovermagazine.com/80beats/2012/05/23/some-imported-shrimp-on-grocery-store-shelves-are-contaminated-with-antibiotics/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+80beats+%2880beats%29)