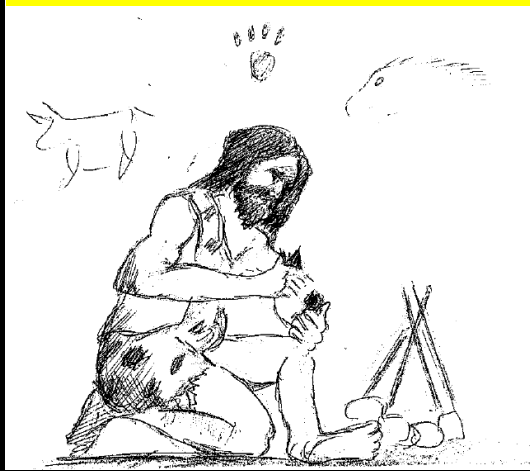


An illustrated history of antibiotic resistance. Drug resistant infections and why it matters to you

Since the very dawn of mankind the human race has struggled for survival..



Our adversaries have been war, famine, death and DISEASE.....

This battle has ranged throughout the centuries and across the globe. At times in our history DISEASE has claimed the lives of up to a quarter of the world's population.....



During the Crimean war ten times more soldiers died from diseases such as typhoid, cholera and dysentery than from battle. Nearly 80% of soldiers admitted to field hospitals died from infections caused by poor hygiene or sanitation.



Even as late as 1900, the infant mortality rate was almost 17% and about 50% of 5-9 year olds in 1911-1915 died of infectious diseases. Life expectancy was just under 50 in 1900



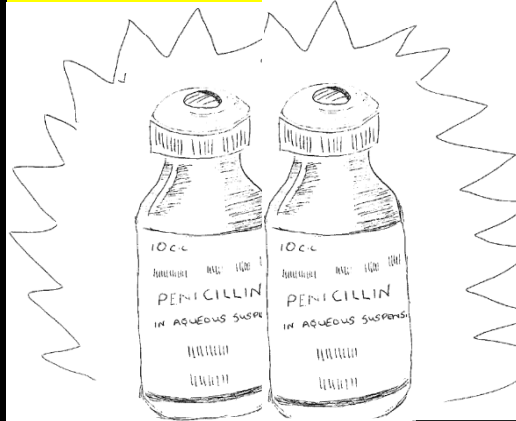
Gradually improvements in sanitation and nutrition and the use of vaccinations drove down infant mortality. Then in 1928, Alexander Fleming working at St Mary's hospital in Paddington discovered something growing in his petri dish....



The growth, a fungi called penicillium had killed the bacteria Fleming had been growing. The "mould juice" was also found to work against other bacteria. Two chemists, Florey and Chain managed to isolate, purify and produce what became known as penicillin in small quantities.....



Penicillin, the new wonder-drug went into commercial production in 1942, just in time to be given routinely to wounded soldiers and thus become a genuine life saver in the second world war.



But Fleming fore saw a problem. At a Nobel lecture in 1945 he told the audience...

There may come a time when penicillin can be bought by anyone in the shops. Then there is the danger that the ignorant man may easily underdose himself and by exposing his microbes to non-lethal quantities of the drug make them resistant....Mr. X has a sore throat.

He buys some penicillin and gives himself not enough to kill the streptococci but enough to educate them to resist penicillin. He then infects his Wife. Mrs X gets pneumonia and is treated with penicillin. As the streptococci are now resistant to penicillin the treatment fails and Mrs X dies. Who is primarily responsible for Mrs X's death?

Meanwhile, despite the warning antibiotics became the back bone of modern medicine. By stopping infections attacking the body, antibiotics made new medical treatments like chemotherapy for cancer possible....



Delivery of babies by caesarean section became less risky with antibiotics reducing infections after surgery.....



...and operations like hip replacements could be carried out routinely with minimal risk of infection..



Antibiotics made all of this possible, meaning that the average life expectancy for someone born today is around 80 years old....



However, this triumph of medicine is now being reversed. Rather than treating antibiotics as the precious resource they are we have used them rashly, demanding them from our GPs when they were not needed, and becoming careless about taking them in line with the instructions



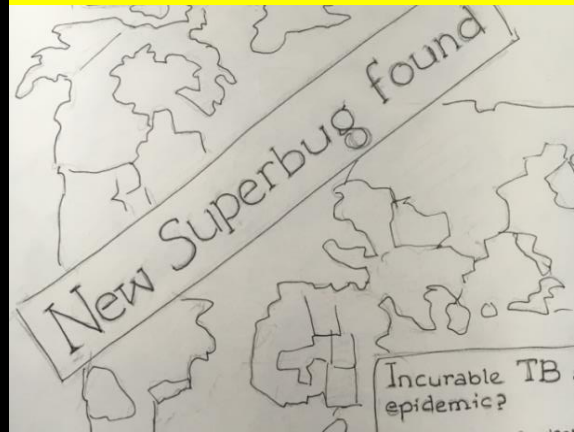
We have also come to use million of tonnes of antibiotics per year in food production and in animal health, creating resistant bacteria in the process..... just as Fleming predicted. These superbugs, also known as drug-resistant infections are now reported in increasingly high numbers across the world. In some cases bacteria are even resistant to the drugs-of-last resort, with no new antibiotics in the pipeline.



Disease, for so long held at bay by the antibiotic miracle, has learned, through our carelessness, how to overcome these precious drugs and is staging a deadly return.



It is estimated that by 2050, **over 10 million extra people a year** worldwide will die because of drug resistant infections. More than currently die of cancer.



Now, at the start of the 21st Century antibiotic resistance threatens the globe..... action is required from every man, woman and child, but will it be too late?

What **you** can do.



- Don't ask for antibiotics, treat the symptoms with pharmacist advice and over-the-counter medicines
- Take antibiotics exactly as prescribed, never save them for later and never share them
- Practice good hand hygiene to prevent the spread of infection
- Spread the word. Tell your family and friends about antibiotic resistance