Self Care Health Facts Column
By John Bell – 13 April 2011 No. 1251

http://www.psa.org.au/selfcare

No action today, no cure tomorrow

Each year World Health Day is celebrated on 7th April to mark the founding of the World Health Organization (WHO) on that day in 1948.

The '40s were also significant in that they saw the introduction of the first antibiotics. At the time, these medicines were hailed as "wonder-drugs" – the miracles of modern medicine – titles that proved to be well justified, as the widespread infectious diseases that killed millions of people every year, could now be cured.

In her World Health Day address, WHO Director General, Margaret Chan stated that with the advent of antibiotics the risk of death from something as common as a bacterial throat infection, or a child's scratched knee, virtually vanished. And major diseases like syphilis, gonorrhoea, leprosy and tuberculosis, lost much of their sting.

However, according to WHO, we are on the brink of losing this precious arsenal of medicines. The emergence and spread of drug-resistant organisms has accelerated; more and more essential medicines are failing; and the speed with which these formerly effective drugs are being lost far outpaces the development of replacement drugs.

Drug resistance, or antimicrobial resistance as it is sometimes called, is described on the WHO website (www.who.int). It occurs when micro-organisms such as bacteria, viruses, fungi and parasites change in ways that render ineffective the medications used to cure the infections they cause. When the micro-organisms become resistant to most antimicrobials they are often referred to as "superbugs". This is a major concern because a resistant infection may kill, can spread to others and imposes huge costs to individuals and society.

The development of resistance is a natural biological process that will occur, sooner or later, with every antimicrobial. The use of any antimicrobial for any infection, in any dose, and over any time period, forces microbes to either adapt or die in a phenomenon known as "selective pressure". The microbes which adapt and survive carry genes for resistance, which can be passed on from one person to another and rapidly spread around the world.

Inappropriate use of infection-fighting drugs (underuse, overuse or misuse) causes resistance to emerge faster. Furthermore, the growth of global trade and travel allows resistant organisms to spread worldwide within hours.

"On World Health Day 2011, WHO has issued a policy package to get everyone, especially governments and their drug regulatory systems, on the right track, with the right measures, quickly," Dr Chan said. "The trends are clear and ominous. No action today means no cure tomorrow. At a time of multiple calamities in the world, we cannot allow the loss of essential medicines – essential cures for many millions of people – to become the next global crisis."

Although governments need to take the lead and develop national policies to combat drug resistance, health professionals and health-care consumers can also make important contributions. For example, doctors and pharmacists can prescribe and dispense only the drugs that are required to treat a patient, rather than automatically giving either the newest or best-known medicines. And patients can stop demanding that doctors give them antibiotics when they may not be appropriate. As well, strict attention to hygiene can help prevent the spread of infection in the home, in hospitals and other healthcare facilities.

It's ironic that here in Australia, because of anticipated Federal Government budget cuts, we are contemplating the possible loss of funds for scientific and medical research. According to WHO, today, less than 5% of products in the research and development pipeline are antibiotic drugs. Innovative incentive schemes are needed to stimulate industry to research and develop new antimicrobial drugs for the future.

Meanwhile, individually, we can make a difference. We should only use antibiotics when necessary (the common cold needs common sense, not antibiotics). And if antibiotics are prescribed, we should finish the course of treatment. For more advice about using antibiotics wisely ask for an *Antibiotic* fact card from pharmacies providing the Pharmaceutical Society's Self Care health information. Check out the website www.psa.org.au for the nearest location.