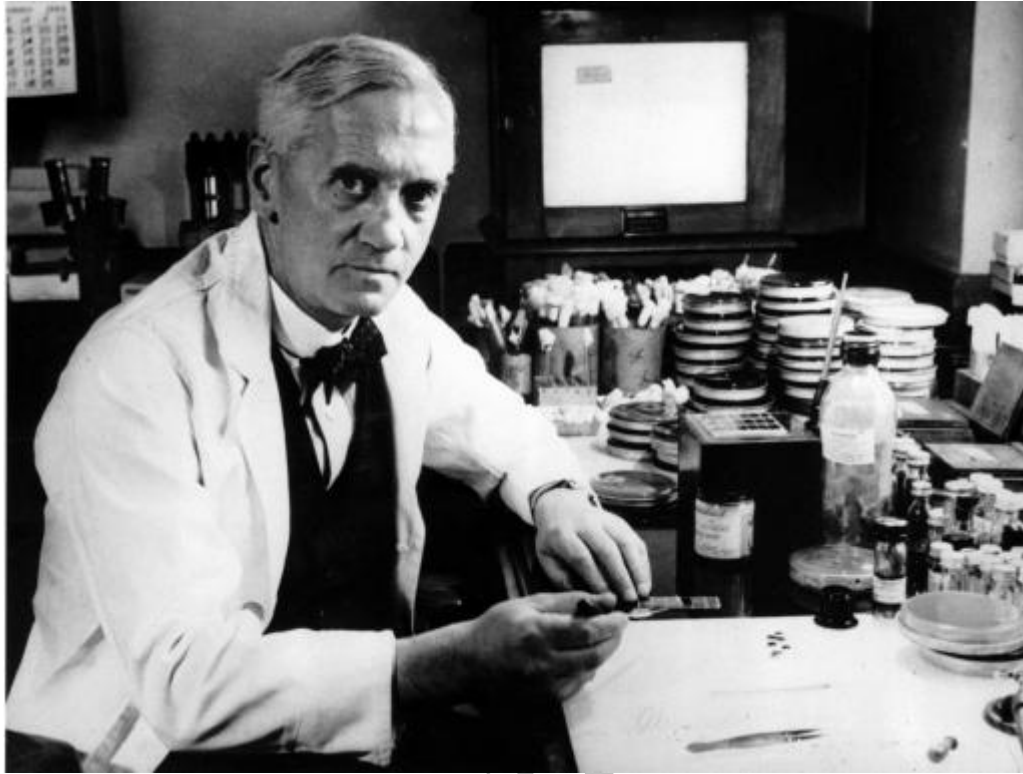


## ***What are Antibiotics?***



### ***Alexander Flemming who discovered Penicillin***

Antibiotics are special kind of medicines which inhibit the growth of or destroy bacteria and some other disease producing micro-organisms. They help our body to fight against diseases hence they are used in the treatment of many diseases.

The word 'antibiotics' is derived from 'antibiosis'. 'Anti' means 'against' and 'biosis' means 'life'. Antibiotics act only against certain types of micro-organisms like bacteria. In fact, 'antibiotics' are chemical substances derived from the bodies of micro-organisms such as bacteria, moulds or some plants.

The antibiotic era began around 1928 with the discovery of a species of Penicillium by Sir Alexander Flemming. Flemming named the substance Penicillin. This antibiotic was effective in the treatments of pneumonia, cough, inflammation of throat, boils, sores etc. Streptomycin is another antibiotic which is used in the treatment of Tuberculosis. In addition to these, Ampicillin, Tetracyclin, Chloromycetin and many other antibiotics are used for curing various diseases. In fact there are more than 80 known antibiotics. Some antibiotics are effective against just some micro-organism while some other are effective against a large range of microorganisms. Those which cover a large

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range are called broad-spectrum antibiotics. When an antibiotic is brought into the body either by injection or capsules, it kills the disease spreading micro-organism.

Do you know how antibiotics are made? Most of the antibiotics are made from bacteria and fungi. Scientists have not been really able to know the complete mechanism by which antibiotics kill the germs of diseases. Some scientists think that antibiotics prevent oxygen from reaching the germs of diseases and in the absence of oxygen they die. Some other scientists say, antibiotics prevent the germs from taking food from the body and they die for want of food. Whatever may be the mechanism of the action of antibiotics, it is an established fact that these medicines have proved very useful for mankind. Every year millions of people in the world suffering from various diseases are saved by these medicines. In 1930, 20% to 85% of total deaths in America were due to pneumonia. In 1960, this figure came down to 5%. Similarly, the deaths due to typhoid have come down from 10% to 2%. Infectious diseases can also be checked with their help. They are also useful in preventing diseases like throat infection, rheumatic fever, venereal diseases etc.

They have their adverse effects also, such as reaction of the body to them, rashes and other symptoms may develop or they may cause other diseases. An extreme reaction may even lead to death. Sometimes, they are ineffective on the germs of the diseases.