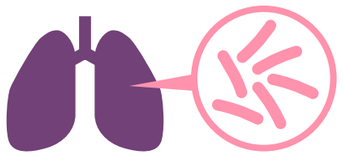
WORLD TUBERCULOSIS DAY

24 March is World Tuberculosis Day. In this graphic, we take a look at the basics of the disease, and how it can be treated.

WHAT IS TUBERCULOSIS?



MYOBACTERIUM TUBERCULOSIS

1/3 OF THE WORLD IS INFECTED WITH **LATENT TB**

10% OF LATENT TB CASES PROGRESS TO **ACTIVE TB**

Tuberculosis (TB) is a bacterial disease which usually affects the lungs. In many cases it is symptomless (latent TB), but can progress to active disease which kills around half of those affected if left untreated.

1.8 MILLION DEATHS IN 2015

95% OF DEATHS IN DEVELOPING COUNTRIES

WHAT ARE THE SYMPTOMS?

COUGHING

WEIGHT LOSS

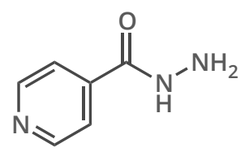
CHEST PAINS

FATIGUE

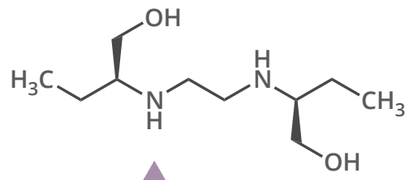
FEVER

LOSS OF APPETITE

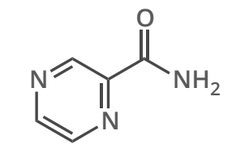
FIRST LINE TB DRUGS



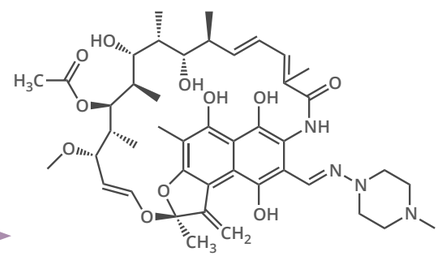
ISONIAZID (INH)



ETHAMBUTOL (EMB)



PYRAZINAMIDE (PZA)



RIFAMPICIN (RIF)

Active TB is treated by taking several antibiotics for six to nine months. The four drugs shown are commonly used first line drugs in treatment regimes.

DIVIDES EVERY 15-20 HOURS

ANTIBIOTIC RESISTANCE

Myobacterium tuberculosis divides more slowly than most bacteria, making development of antibiotic resistance more likely. In addition, the mycolic acids in its cell wall limit the effectiveness of some antibiotics.

TREATING DRUG RESISTANT TB

DRUG-RESISTANT TUBERCULOSIS

TB bacteria that are resistant to at least one first line TB drug.

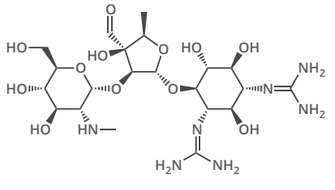
MULTIDRUG-RESISTANT TUBERCULOSIS

Resistant to more than one anti-TB drug and at least INH and RIF.

Tuberculosis that is resistant to first line drugs must be treated with second line drugs. These can include drugs that are usually less effective, which have toxic side effects, or which are unavailable in developing countries. Streptomycin was formerly considered a first line drug, but is now used less due to increased cases of resistance to its effects.

SELECTED SECOND LINE DRUGS

- STREPTOMYCIN
- CYCLOSERINE
- CAPREOMYCIN
- AMIKACIN



STREPTOMYCIN