

# Chemistry in Everyday Life

\* Drugs: are chemicals of low molecular masses ( $100-500 \mu$ ) which interacts with macro-molecular targets and produces a biological response.

\* Medicines: - When the biological response is therapeutic and useful, these chemicals are called medicines, and used in diagnosis, prevention and treatment of diseases.

\* Chemotherapy: - Use of chemicals for therapeutic effect is called chemotherapy.

## Classification of Drugs

a) On the basis of pharmacological effect:

- It is useful for doctors because it provides whole range of drugs available.

Ex) \* Analgesics have pain killing effect

\* Antiseptics kill or arrest the growth of microorganisms.

b) On the basis of drug action :-

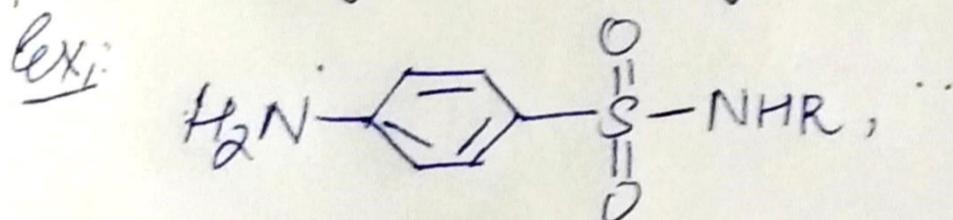
It is based on the action of a drug on a particular biochemical process.

- Ex) \*
- All ~~the~~ antihistamines inhibit the action of the compound.
  - \* Histamine which causes inflammation in the body.

c) On the basis of chemical structure:

It is based on the chemical structure of the drugs.

Drugs ~~are~~ classified in have common structural features and often have similar pharmacological activity.



Sulphonamides

d) On the basis of molecular targets:-

Target molecules: Drugs usually interact with biomolecules such as carbohydrates, lipids, proteins and nucleic acids.

These are called ~~a~~ target molecule or drug target.

\* The classification is very useful for the classification for medicinal chemists.