

## Drug Related Problems:

- ① Untreated indication
- ② Improper drug selection
- ③ Sub therapeutic dosage
- ④ Over dosage / toxicity
- ⑤ Failure to receive the right drug
- ⑥ Adverse drug reactions
- ⑦ Interactions
- ⑧ drug use without indication

## Types of prescription

Hospital

Office

generic name

Trade / Proprietary

Identification of Doctor  
of Patient

Rx (Receive Thou)

"Superscription"

drug, dose, ...

"Inscription"

Dispense; ...

"Subscription"

Re-fill

"signature"

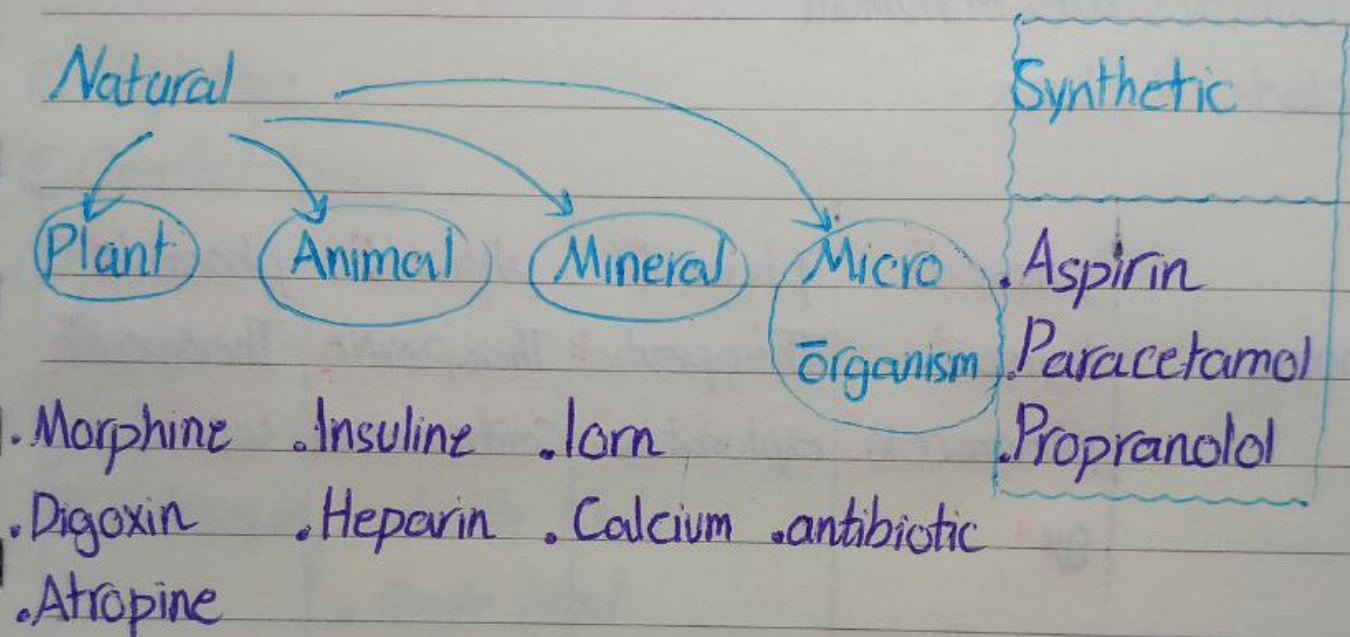
~~Re-fill~~

abbreviation	Meaning
ac	ante cibum (before meals)
pc	post cibum (after meals)
bid	twice daily
tid / tds	three times daily
qid	four times daily
prn	when needed
qd	every day
qh	every hour
qhs	every night at bedtime
ss	one half
stat	at once
OD	right eye
OL	left eye
OU	both eyes
one tea spoonfull	5 ml
one table "	15 ml
one ounce (oz)	30 ml
one quart	1000 ml
one drop	0.05 ml = 50 ul
one ml	20 drops

14 lec New drugs : their development + Evaluation NG Date

the process of drug development may be abandoned at any stage.

### Origin of Drugs



### Medicines

active  
drug

EXCIPIENTS

shape, stability, size

e.g: starch + Arabic gum

Conditions that do not require to use placebo :-

- ① Therapeutic Studies
- ② The active compound can be identified. (Vasodilator + nitisinone)
- ③ Dose Finding studies
- ④ Pharmacokinetic studies

## - Phases of Drug Development :-

① Pre-clinical studies in animals

A) General pharmacology studies

B) Toxicology Studies

② Clinical studies in Human

Include 4 phases

	phase 1	phase 2	phase 3	phase 4
name :	Human	Therapeutic	Therapeutic	Therapeutic
	pharmacology	exploration	Confirmation	use
carried out on :	20-50 healthy	50-300 pt (limited)	250-1K pt (large)	2K-10K pt
Notes :	Study of general pharmacology of drug	study of general pharmacology of drug in pt. comparision with placebo	comparision with exist drug. short term efficacy + safety	post-market /authorization surveillance long term efficacy + safety

## - Patients excluded from clinical trials :-

- ① Children
- ② Pregnant women
- ③ Mentally ill patients

## - Criteria of Clinical trials (CCT)

- ① Objective
- ② Careful design
- ③
  - Crossover design ~ Pt acts as his own control
  - non Crossover design ~ different subjects as control group
- ④ Technique
  - double blind
  - single blind
- ⑤ Statistical analysis