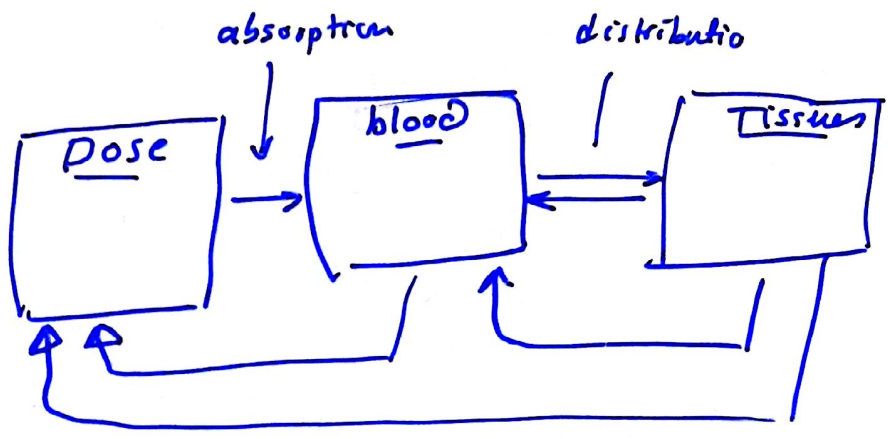


# Dose Response Relationships



⊛ Variations - on absorption  
- - - distribution

physiological = - age

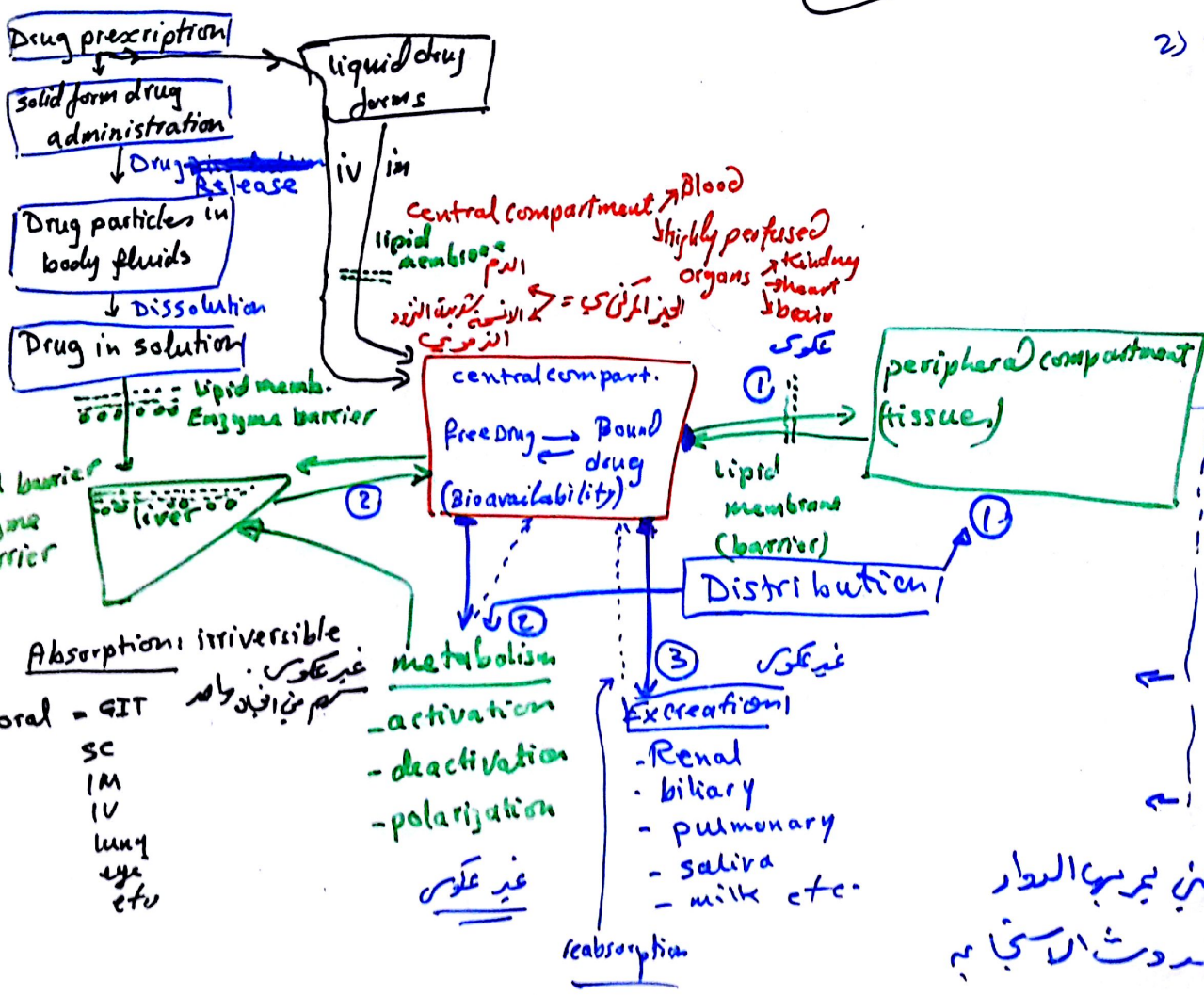
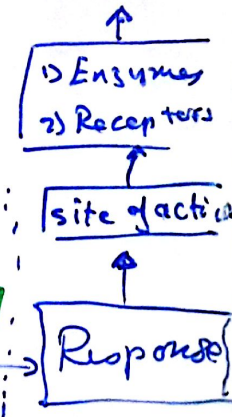
- sex
- weight
- genetic
- etc

pharmacokinetic = absorption  
factor                      distribution  
                                    metabolism  
                                    excretion

pathological = - liver disease  
factor                      - kidney disease  
                                    - metabolic disease  
                                    - heart disease  
                                    - etc -

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- 1) Therapeutic
- 2) toxic effect



**Absorption: irreversible**  
 -oral - GIT  
 SC  
 IM  
 IV  
 lung  
 eye  
 etc

**metabolism**  
 - activation  
 - deactivation  
 - polarization

**Excretion**  
 - Renal  
 - biliary  
 - pulmonary  
 - saliva  
 - milk etc.

المراحل التي يمر بها الدواء قبل حدوث الاستجابة

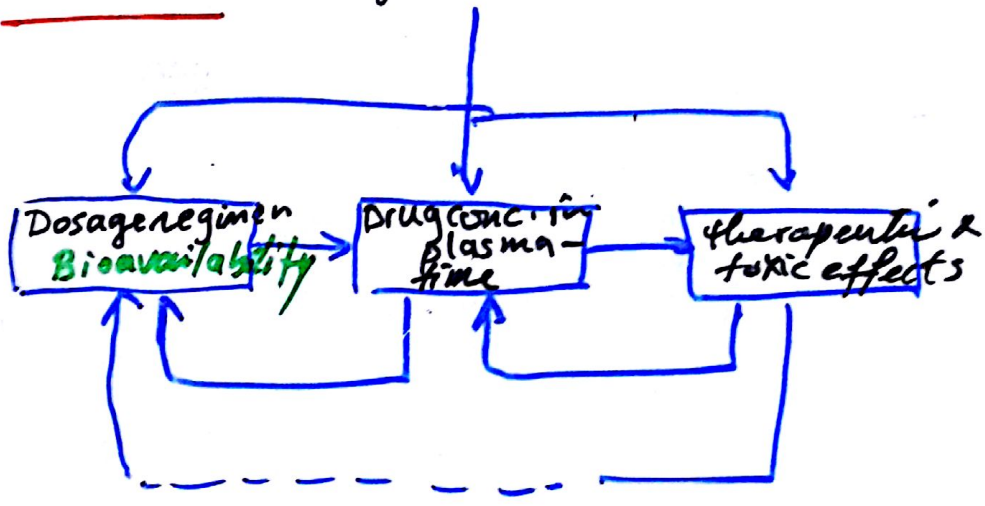
# Absorption and distribution of drugs

Note :- It is important to know how drug concentration in the tissues changes with time.  
ie To understand the pharmacokinetic aspects of drug action

genetic factors  
physiological factors < age  
pathological " < gender  
chemical factor  
drugs, chemical  
food etc.

pharmacokinetics

pharmacodynamics



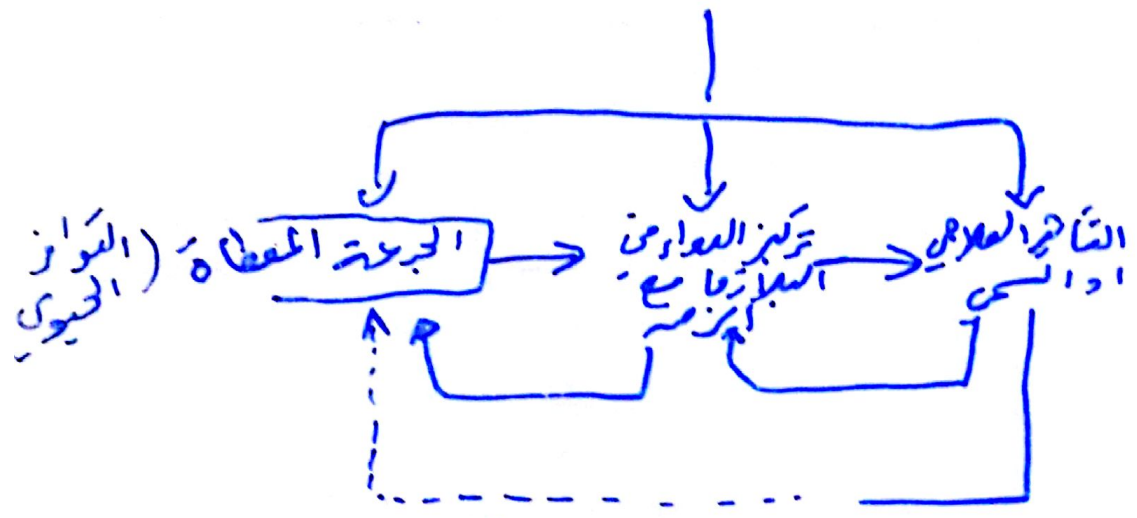
factors influencing drug response

disability } The time course of drug action usually follows that of the concentration at the target site

slightly } Drugs that bind irreversibly e.g organophosphorus anticholinesterases: where the effect can outlive the concentration.

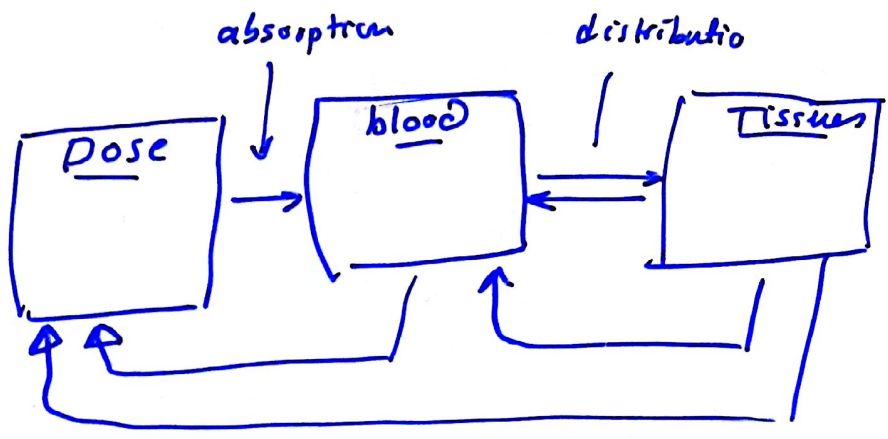
# Quantitative determination of Drug effects المحضات الكمية لتأثير الدواء

عوامل: وراثية  
فيزيولوجية  
مرضية - العمر - الجنس - المرض  
المرض - طعام - ادوية



عوامل الاختلاف في الاستجابة  
الدوائية لدى الافراد

# Dose Response Relationships



⊛ Variations - on absorption  
- - - distribution

physiological = - age

- sex
- weight
- genetic
- etc

pharmacokinetic = absorption  
factor                      distribution  
                                    metabolism  
                                    excretion

pathological = - liver disease  
factor                      - kidney disease  
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                                    - etc -