

Introduction pharmacology

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History

- The story of pharmacology is rich in exiting and filled with accidental discovery.
- The oldest forms of healthcare is the herbal medicine.
- Modern pharmacology is thought to have begun in the early 1800s, at which the chemist were making a remarkable progress in isolating active ingredients from a complex mixture such as morphine and cocaine.
- In the 20th century, grow in the phramacology became exponential:
 - a. no longer needed to rely on the natural sources, hundred of new drugs could be synthesized and tested in relatively short time.
 - b. it became possible to understand how drugs produced their effect.

Medical pharmacology course

- The study of pharmacological substances which can be used in the treatment, management, and cure of disease.

you should learn

1. How pharmacological agents work through understanding their **actions** on the body.
1. how they can be applied to **patient management**.
1. Determining why drugs are toxic to the body, and how to avoid **toxic** reactions or bad drug **interactions**.

The optimum goal

Pharmacology is a keystone for a prescribing doctor, as they can impact proper dosage, what time a drug should be taken, and how a drug should be delivered.

Responsibilities

- You need to know the intended use, **effect on the body, contraindications.**
- How the medication is to be administered, including dosage ranges.
- How to Avoid many series adverse drug effect in their patients.

The role of the Pharm D

1. They participate in **patient education**
2. They need to be able to **catch problems** with prescriptions
 - a. an unusually **high dosage**,
 - b. **conflict** with another drug a patient is taking.

Terms

- Drug :
- **Medication:** is a substance administered for diagnosis, cure, treatment, mitigation or prevention.
- **Prescription:** the written direction for the preparation and the administration of the drug.

Cont.....

- **The therapeutic effect:** is the primary effect intended that is the reason the drug is prescribed such as morphine sulfate is analgesia.
- **Side effect:** secondary effect of the drug is one that unintended, side effects are usually predictable and may be either harmless

Conti.....

- **Drug toxicity:** deleterious effect of the drug on an organism or tissue, result from overdose or external use.
- **Drug interaction:** occur when administration of one drug before or after alter effect of one or both drug.

Conti.....

- **Drug misuse:** Is the improper use of common medications in way that lead to acute and chronic toxicity for example laxative, antacid and vitamins.
- **Drug abuse:** is an inappropriate intake of substance either continually or periodically.

Conti.....

- **Drug dependence:** is a persons reliance on or need to take drug or substance there are two type of dependence:
- **Physiological dependence:** is due to biochemical changes in the body tissue these tissue come to require substance for normal function.
- **Psychological dependence:** is emotional reliance on a drug to maintain a since of wellbeing accompanied feeling of need.

Conti....

- **Drug habituation:** denotes a mild form of psychological dependence.
- **Illicit drug:** also called street drug are those sold illegally.

Drug Naming

- **Chemical Name** - describe chemical structure (rarely seen in medical literature)
- **Generic Name** - a name assigned to drug that can be used by anyone (not proprietary)
- **Trade Name** - Proprietary name given to the drug by the manufacturer

Table 1-1

EXAMPLES OF DRUG NOMENCLATURE

Chemical	Generic (Nonproprietary)	Trade/Brand-Name (Proprietary)
<i>N</i> -Acetyl- <i>p</i> -aminophenol	Acetaminophen	Tylenol, Panadol, many others
3,4-Dihydroxyphenyl-L-alanine	Levodopa	Larodopa
5,5-Phenylethylbarbituric acid	Phenobarbital	Luminal, Eskabarb
7-Chloro-1,3-dihydro-1-methyl-5-phenyl-2 <i>H</i> -1,4-benzodiazepin-2-one	Diazepam	Valium

Over the counter

Are they effective?????

Are they safe?????

do they have interactions???????

do they have contraindications?????