

14.1. ANALEPTICS

14.1.1. Introduction

Analeptics are a diverse chemical class of agents ranging from plant alkaloids (e.g., picrotoxin and strychnine) to synthetic compounds (e.g., pentylenetetrazol and doxapram). The wide range of chemical structures makes this class difficult to categorise on the basis of their absorption, distribution, and metabolism. However, analeptics mostly get absorbed orally and have short duration of action. Their pharmacological effect is terminated by hepatic metabolism, and not by renal excretion of unchanged drug.

14.1.2. Classification

Analeptics are classified as follows:

- 1) **Based on their Prior Influence on the Definite Domain of the CNS**
 - i) **Drugs that Influence the Brain Cortex:** Coffeinum-natrii benzoas.
 - ii) **Drugs that Influence the Medulla Oblongata:** Aethimizolum, Cordiaminum, Camphora, and Sulfocamphocainum.
 - iii) **Drugs that Influence the Medulla Spinalis:** Strychninine nitrate.
- 2) **Based on Their Type of Action**
 - i) **Analeptics of Direct Action:** Coffeinum-natrii benzoas and Aethimizolum.
 - ii) **Analeptics of Reflexive Action:** Lobeline hydrochloridum and Cytitonum.
 - iii) **Analeptics of Mixed Action:** Cordiaminum, Sulfocamphocainum, and Camphora.

14.1.3. Individual Compounds

The following drugs are studied in detail:

- 1) Theophylline,
- 2) Caffeine,
- 3) Coramine, and
- 4) Dextro-amphetamine.

14.1.3.1. Theophylline