

RSPT 53B: ADVANCED RESPIRATORY THERAPY PHARMACOLOGY

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2022
Units:	2
Hours:	2 lecture per week (24 total per quarter)
Prerequisite:	RSPT 53A.
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	CSU
Grade Type:	Letter Grade Only
Repeatability:	Not Repeatable

Student Learning Outcomes

- Identify anti-infective agents.
- Compare and contrast the effects of sedatives, hypnotics, anti-anxiety agents, anti-psychotics, and analgesics.
- Student can identify cardiac drugs and their uses

Description

An in-depth study of drug groups commonly encountered in intensive respiratory care. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

Course Objectives

The student will be able to:

1. Identify anti-infective agents.
 - a. Describe treatment for tuberculosis.
2. Identify and describe appropriate neuromuscular blocking agents.
3. Identify and describe appropriate CNS drugs.
 - a. Identify a barbiturate overdose from a narcotic overdose.
 - b. Compare and contrast the effects of sedatives, hypnotics, anti-anxiety agents, anti-psychotics, and analgesics (narcotic and non-narcotic).
4. Identify and describe appropriate cardiovascular agents.
5. Evaluate the patient's need for various diuretic agents.
6. Evaluate the patient's need for selected respiratory therapy agents.
7. Calculate the pediatric dosage for various respiratory care drugs.

Course Content

1. Anti-infective agents
 - a. Antibiotics
 - i. Mode of action
 - ii. Penicillins
 - iii. Cephalosporins
 - iv. Amino glycosides
 - v. Tetracyclines
 - vi. Miscellaneous antibiotic and anti-infective agents
 - vii. Sulfonamides
- b. Antifungal agents
- c. Antituberculosis agents
- d. Antiviral agents
- e. Aerosolized anti-infectives

2. Skeletal muscle relaxants
 - a. Physiology of the neuromuscular junction
 - b. Neuromuscular blocking agents
 - i. Non-depolarizing agents
 - ii. Depolarizing agents
3. Drugs affecting the central nervous system
 - a. The central nervous system
 - b. Sedatives and hypnotics
 - i. Barbiturates
 1. Mechanism of action
 2. Clinical uses
 3. Overdose
 - ii. Nonbarbiturate hypnotics and minor tranquilizers
 - c. Antipsychotic drugs
 - i. Neuroleptics
 - ii. Antidepressants
 - iii. Lithium
 - d. Analgesics
 - i. Narcotic analgesics
 1. Pharmacologic properties of morphine
 2. Therapeutic uses of narcotics
 3. Overdose of morphine and its derivatives
 - ii. Narcotic antagonists
 - iii. Non-narcotic analgesics
 1. Salicylates
 2. Aniline derivatives
 3. Pyrazole derivatives
 4. Nonsteroidal anti-inflammatory drugs
 - e. Respiratory stimulants
4. Cardiovascular agents
 - a. The heart (cardiac drugs)
 - i. Cardiac glycosides
 - ii. Antiarrhythmic agents
 - iii. Cardiac stimulants
 - b. The circulatory system (drugs affecting circulation)
 - i. Antihypertensive agents
 - ii. Coronary vasodilators
 - iii. Vasoconstricting agents
 - c. Anticoagulants
5. Diuretic agents
 - a. Renal structure and function
 - b. Acid base balance
 - c. Diuretic groups
 - i. Osmotic diuretics
 - ii. Carbonic anhydrase inhibitors
 - iii. Thiazide diuretics
 - iv. Loop diuretics
 - v. Potassium-sparing diuretics

6. Selected agents used in respiratory disease
7. Pediatric respiratory care pharmacology
 - a. Factors affecting drug therapy in the young
 - i. Pharmaceutic factors
 - ii. Pharmacokinetic factors
 - iii. Pharmacodynamic factors
 - b. Calculating pediatric dosages
 - c. Aerosolized drug delivery in neonates and children

Lab Content

Not applicable.

Special Facilities and/or Equipment

When taught online, students must have access to a computer with internet access.

Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

Quizzes
Midterm
Final examination

Method(s) of Instruction

Methods of Instruction may include but are not limited to the following:

Lecture

Representative Text(s) and Other Materials

Gardenhire. [Rau's Respiratory Care Pharmacology, 10th ed.](#). 2019.

Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments

Assigned reading from textbook, approximately one chapter per week, averaging 30-40 pages.

Discipline(s)

Respiratory Technologies