

J. Remmers

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1. The first unit will relate to Neurogenesis of Respiratory Rhythm, providing a review of types of the various types of rhythm generators and exploring in some detail the coupled respiratory oscillators that underlie the generation of inspiratory activity.
2. In the second unit Control of the Upper Airway Muscles and Pharyngeal Patency will be evaluated. The effects of the interaction of passive properties and pharyngeal dilators during inspiratory flow limitation will be outlined.
3. The third unit will examine the behavior of chemoreceptors in controlling breathing. The location and mechanisms for peripheral and central chemoreceptions will be evaluated.
4. In the fourth unit Chemoreflex Control of Breathing will be reviewed and the overall behavior of the system with two chemoreflex loops will be considered. The importance of relative delay involved in the two chemoreflexes will be explored.
5. In the fifth unit an exposition of sleep as a global phenomenon will be presented. In addition, the importance of REM and nonREM sleep as well as specific alterations in chemoreflex control will be described.
6. In the final two units both central and obstructive sleep apnea will be considered. Each will be described as classically presented and, as well, common pathogenic factors will be explored. These phenomena will be related to more detailed understanding derived from the Topor model.