# Chapter 39

#### Learning Objectives:

* Understand what the normal partial pressures of gases in the circulatory system are and how they change with depth and altitude.
* Define and know the symptoms of hypoxia and hypercapnia.
* Understand what leads to decompression sickness and its treatment options.
* Understand how marine mammals such as dolphins and whales cope with and often avoid decompression sickness.

**Directions:**

Distribute the “The Deep” case study to class ~1 week prior to in-class case study time. Have students get into groups of 3-4 students or assign students into groups of 3-4 students. Have students discuss the case study amongst their group. Each group submits a paper with their respective group’s answers to each of the questions.

You can also distribute the case study part by part so the case study work can encompass several weeks (weeks dependent on how often class meets, etc.). Give students ~20-30 minutes per class to work on the respective part.

Or this case study can be distributed as the instructor sees fit.

Access the case study at this website - <http://sciencecases.lib.buffalo.edu/cs/collection/detail.asp?case_id=707&id=707>