



**Fig. 39.1** As a person breathes typical ambient air, the upper airway adds 20 mg/L of water vapor and the lower airway adds 13.9 mg/L. If all of that humidity were exhaled, it would represent a humidity deficit of 33.9 mg/L. *AH*, Absolute humidity; *RH*, relative humidity; *T*, temperature. (From Fink J: Humidity and aerosol therapy. In Cairo J, Pilbeam S, editors: *Mosby's respiratory equipment*, ed 8, St. Louis, 2010, Mosby.)