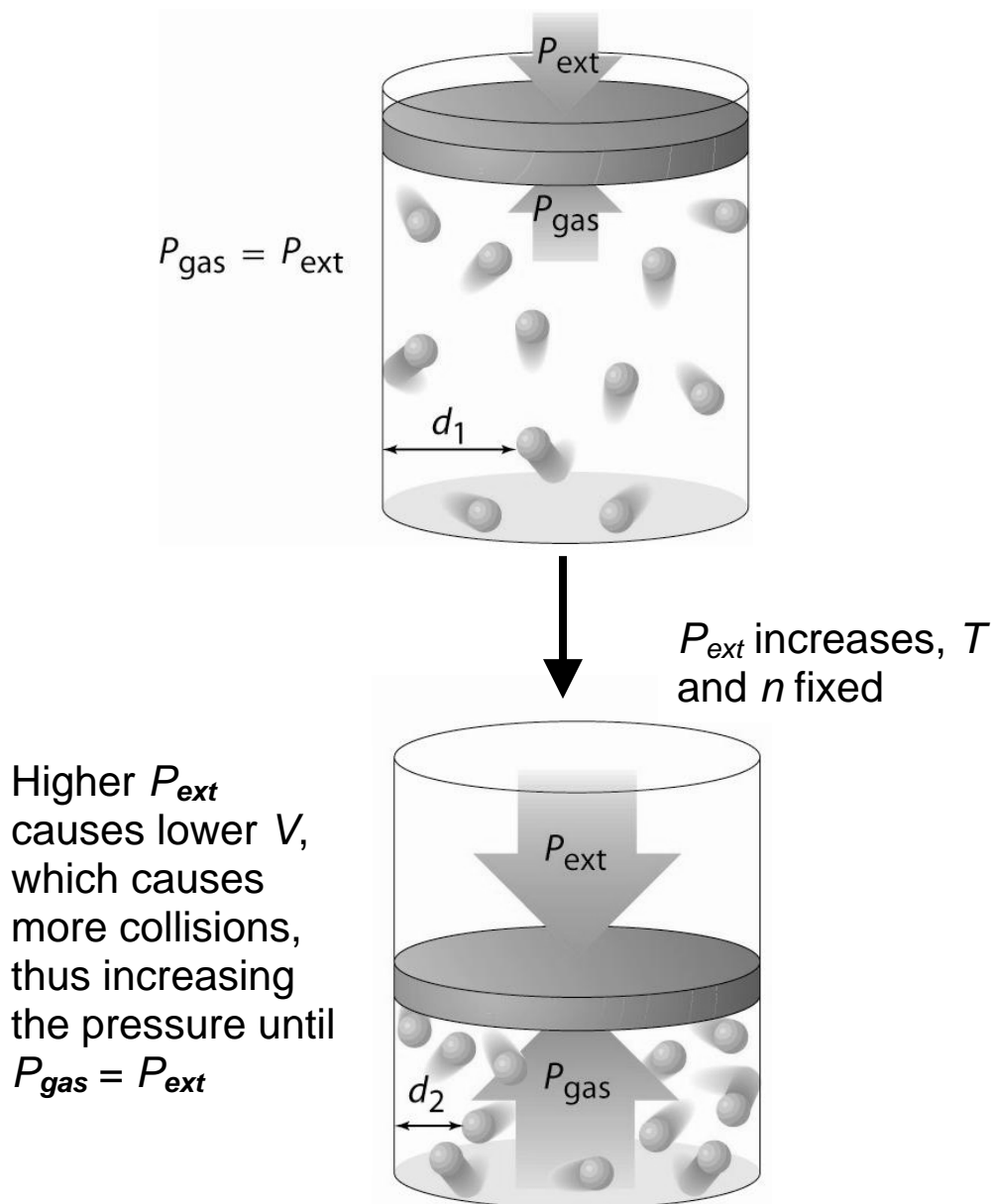


Boyle's Law and the Motion of Molecules



If the temperature and the amount of gas remain constant and the external pressure increases, it will be larger than the internal pressure. Therefore, the piston will begin to go down and decrease the volume. As the volume decreases, the molecules will be closer together and will collide with the walls of the container and with one another more frequently. (The arrows labelled d_1 and d_2 represent the average distance between the molecules and the walls of the container.)