Studies have shown that aerosols can increase updraft velocity in deep convective clouds; this is known as updraft invigoration. Many of these studies have examined the relationships between aerosols, updraft velocities and different environmental conditions (namely Convective Available Potential Energy (CAPE), wind shear and entrainment) and have concluded that updraft invigoration occurs in low CAPE and shear scenarios, whilst environments with high entrainment inhibit updrafts in polluted scenarios. However, this has largely been studied using idealized models and theoretical calculations. Here, we use a suite of real-case simulations to examine how updraft velocities change using a low (200 cm^{-3}) and high (1000 cm^{-3}) aerosol concentration for a range of CAPE, shear and entrainment values. We find that there was no change in updraft velocities in convective clouds, in a high or low aerosol scenario, for a range of environmental conditions. Furthermore, we find that there is no dependence of this on the environmental conditions investigated, suggesting that aerosol-induced changes to updraft velocities are independent of their environment. This, for the most part, disagrees with previous work. A possible reason for the discrepancy is the methodology used in this investigation. Future work will need to examine these relationships for a wider range of times and perhaps consider select cases in more detail to capture the true complexity of these relationships.