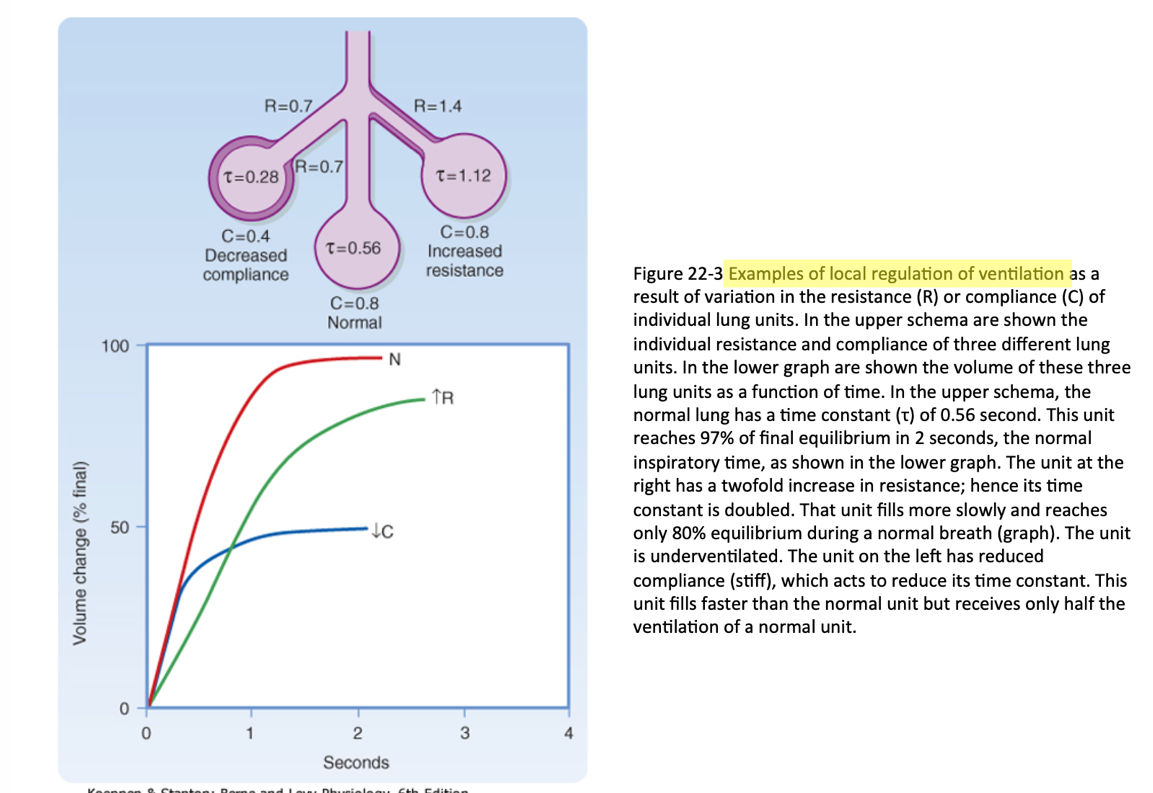
Describe/discuss/explain how an obstructive airway disease might affect V/Q matching in the lungs.

An obstructive airway disease might cause local changes in the airway resistance and

the ventilation is preferably distributed to lung units with less resistance compared to lung units with increased resistance (module 12, video 1, slide 7) which makes the alveolar ventilation distribution non uniform: ratios vary between lung regions.

When alveolar ventilation is no longer evenly distributed between two gas-exchange units receiving the same amount of blood flow, ratio varies between the two units, the unit with decrease ventilation has a lower (in Fig. below less than 1) whereas the unit with increased ventilation has a higher (in Fig below greater than 1).



Both the arterial O2 content and CO2 content are abnormal in the blood that has come from the unit with the decreased ventilation ( < 1). The unit with the increased ventilation (( > 1) has a lower CO2 content and a higher O2 content because it is being overventilated (B&L[7] p.476).

