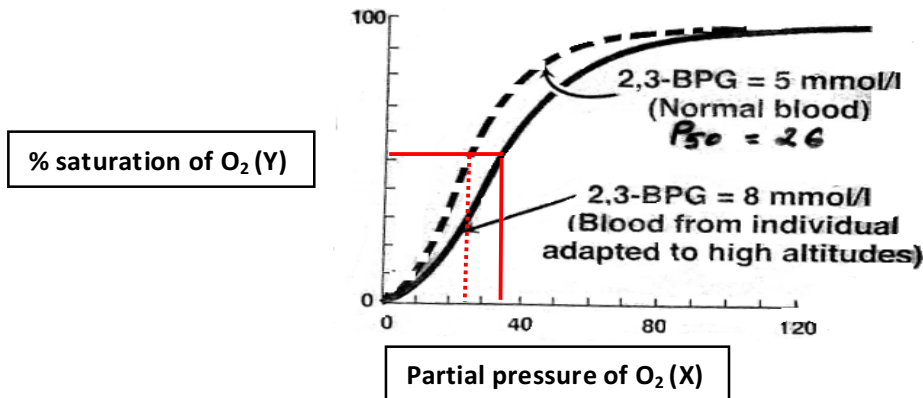


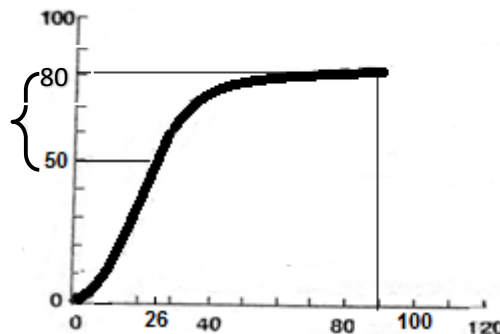
- The steepest area in the curve is the area affected by the allosteric activators/inhibitors, so any increase or decrease in oxygen will affect this area.



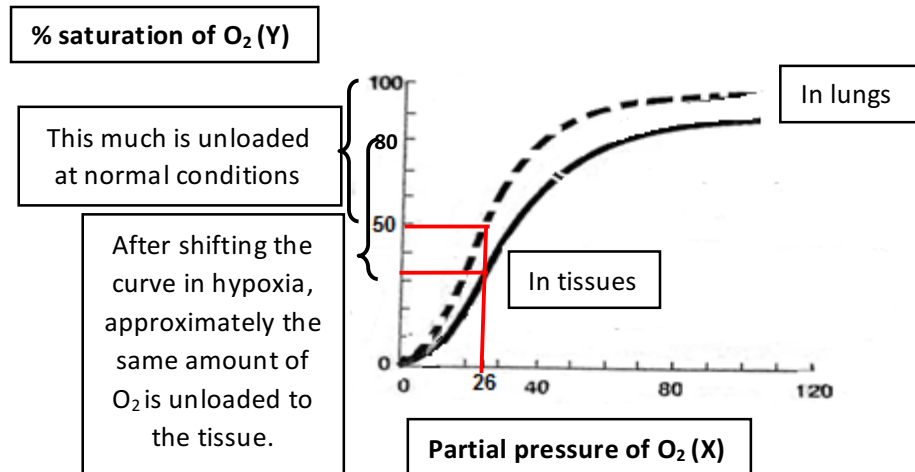
Oxygen-dissociation curve for Hb when a **negative** allosteric effector is added (BPG in this example).

When BPG is released, the curve has a p<sub>50</sub> of about 26 mmHg. However, when BPG is added, the curve is shifted to the right. This shift means higher p<sub>50</sub> and lower affinity to O<sub>2</sub>.

This shift is useful under the effect of hypoxia, to understand this please refer to the following figures:



In hypoxic conditions (Pulmonary diseases, anemia..), hemoglobin is not going to be fully saturated but about 80% saturated. So the amount of O<sub>2</sub> unloaded to the tissue will be less than needed (around 30% in the figure).



However, this doesn't occur in our body because BPG will increase in such conditions & will shift the curve to the right. Shifting the curve to the right means less affinity of Hb to bind to  $O_2$  (releasing more amount of  $O_2$  to the tissue). So the amount unloaded will be the same as in normal situations.

Sorry for this confusion!

Wish you best of luck.