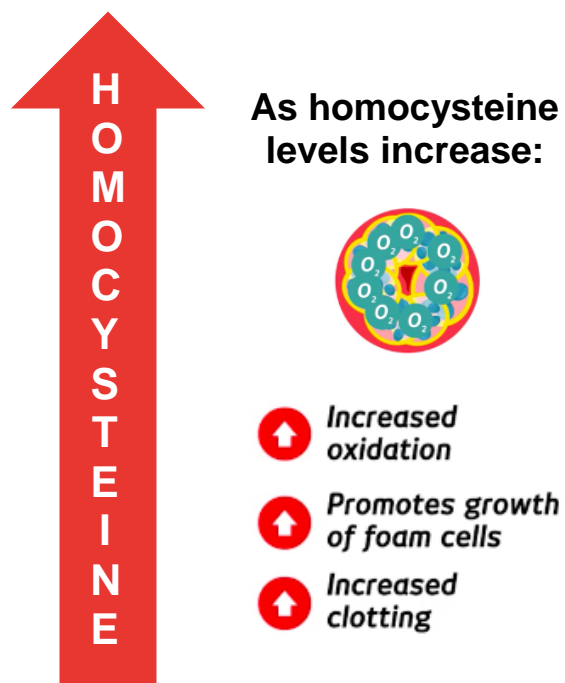


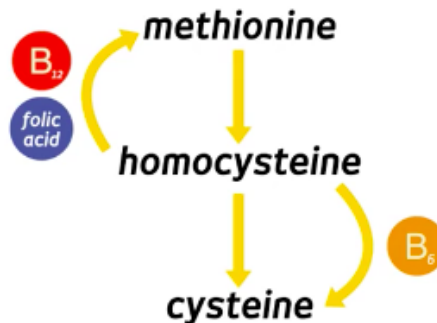
## Tool: Vitamins and Atherosclerosis

Because atherosclerosis can have such deleterious consequences, it is important to understand the biological mechanisms that are causing it to occur or accelerate. While the most common factor in the development of atherosclerosis is a high intake of “bad fats” over time, the level of homocysteine in your blood can also play an active role.

Recall that homocysteine is an amino acid that, when present in high levels, is correlated with accelerated atherosclerosis. In order to keep homocysteine levels low, your body requires three vitamins: B<sub>6</sub>, B<sub>12</sub>, and folic acid.



### There are two ways to keep homocysteine levels in check:



*B<sub>12</sub> and folic acid work to revert homocysteine back into its parent amino acid, methionine. A deficiency in either vitamin would prevent this reaction and increase blood homocysteine levels.*



*B<sub>6</sub> works to convert homocysteine into an amino acid called cysteine. A deficiency in this vitamin would prevent this reaction and cause blood homocysteine levels to rise.*