

# [The first regulator in our body is](https://assignbuster.com/the-first-regulator-in-our-body-is/)

The first regulator in our body is the balanceof pH in our blood. When individuals exercise, the heart rate, systolic pressure, and the amount of blood pumped per heartbeat increases. Exercising causes our metabolismto become more active, which produces more CO2 and H+ in themuscles.

The increased concentration of H+ ions drops the pH. A significantly low pH causes acidosis (Figure 3), which affectsthe protein functions; their dependent on pH change alters their structure and denaturesthe enzymes purpose. Proteins don’t function adequately with low ph values. Theexcess amount of H+ then enters the cell; however, to maintain homeostasisproper chemical composition of fluid is needed outside the cell for properchemical composition inside the cell. The body has buffers that kick in to fixthe pH levels – the kidneys eliminating H+ from the body through the excretorysystem. The process, known as metabolic acidosis, is very slow and takes a longtime to secrete the urine and bring down the pH values.

The lungs, through excessivebreathing, provide a faster and efficient process to eliminate the CO2 concentrationand increase the pH, when needed.