

# Carbonic anhydrase

The carbonic anhydrases (or carbonate dehydratases) form a family of [enzymes](#) that catalyze the interconversion between [carbon dioxide](#) and [water](#) and the dissociated ions of [carbonic acid](#) (i.e. bicarbonate and hydrogen ions).

The active site of most carbonic anhydrases contains a [zinc ion](#). They are therefore classified as [metalloenzymes](#).

The enzyme maintains acid-base balance and helps transport carbon dioxide.

Carbonic anhydrase helps regulate pH and [fluid balance](#). Depending on its location, the role of the enzyme changes slightly. For example, carbonic anhydrase produces acid in the stomach lining. In the kidney, the control of bicarbonate ions influences the water content of the cell. The control of bicarbonate ions also influences the water content in the eyes, and if the enzyme does not work properly, a buildup of fluid can lead to glaucoma.

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