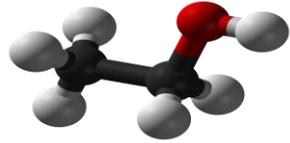


4

Ethanol has been found to reversibly stimulate the function of GlyR (in the case of all receptors in the spinal cord). This therefore enhances the activity of Glycine in the CNS.



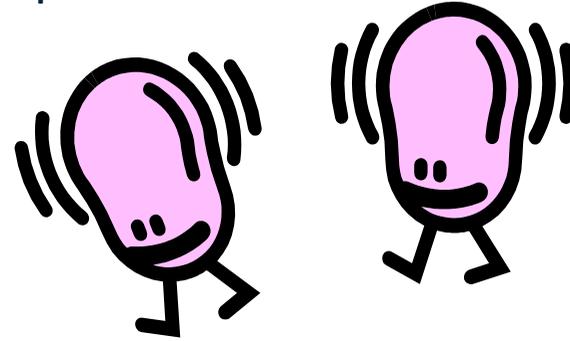
3

Glycine is mainly concerned with the processing of motor and sensory information which controls movement, vision, and hearing. Additionally, Glycine is also involved with the moderation of the release of excitatory neurotransmitters.



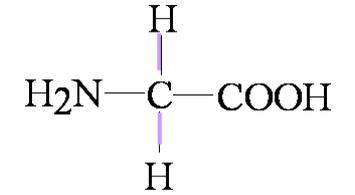
2

Glycine is an inhibitory neurotransmitter, meaning it restores balance in the brain. It is found in the central nervous system of all humans, and is most prevalent in the brainstem, spinal cord and the retina.

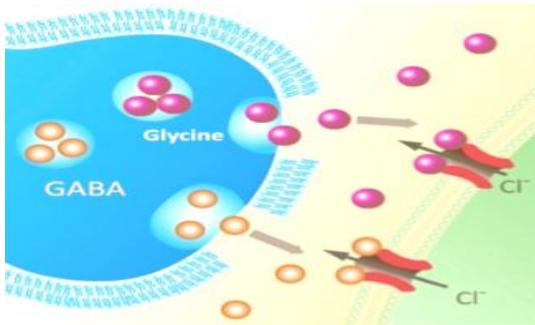


Glycine (also known as aminoethanoic acid) belongs to the amino acid class of neurotransmitters, with the general formula NH<sub>2</sub>CH<sub>2</sub>COOH. As the general formula shows, Glycine has a side chain of one Hydrogen atom, meaning that it can sustain itself in both hydrophilic and hydrophobic environments.

Glycine is known for being the smallest of the twenty amino acids found in proteins within the body.



The glycine receptor, GlyR, allows the influx of Cl<sup>-</sup> ions into the neurons. The inhibitive effect of Glycine is following the movement of several Cl<sup>-</sup> into the neuron. The Cl<sup>-</sup> permeability of the Glycine receptor can be blocked by the rat poison Strychnine, which is highly competitive. When Glycine binds to the receptive site on its outer surface, Cl<sup>-</sup> ions diffuse across the membrane through open pores.



**fun facts:** Glycine was the very first amino acid to be isolated from a protein (which in this case was animal Gelatin)

In 2009 NASA scientists discovered traces of Glycine in some of the samples of comet Wild 2 when NASA's Stardust spacecraft returned back to Earth!

6



## Sources

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