

# Glutamate

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## 1 Overview

- Glutamate is an excitatory neurotransmitter<sup>1</sup>
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## 2 Dysfunction

### 2.1 Excitotoxicity caused neurodegeneration

- Excess glutamate triggers a cascade of events leading to cell death<sup>1</sup>

## 3 Related pathologies

### 3.1 Amyotrophic Lateral Sclerosis

- [Amyotrophic lateral sclerosis](#) via [excitotoxicity](#)

- Increased levels of glutamate in the cerebrospinal fluid (CSF), plasma, and in post-mortem tissue of individuals with ALS have been reported<sup>1</sup>
  - Researchers attribute a deficiency in [excitatory amino acid transporter 2 \(EAAT2\)](#) in the motor cortex and spinal cord of postmortem ALS tissue was reported and lends support to the theory of excitotoxicity causing neurodegeneration.
1. O’Sullivan SB, Schmitz TJ, Fulk GD, eds. *Physical Rehabilitation*. 7th ed. F.A. Davis Company; 2019.