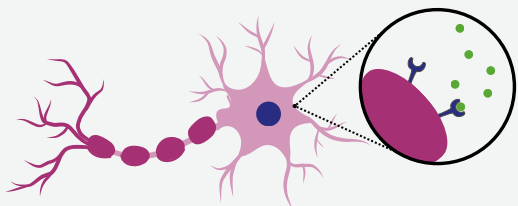


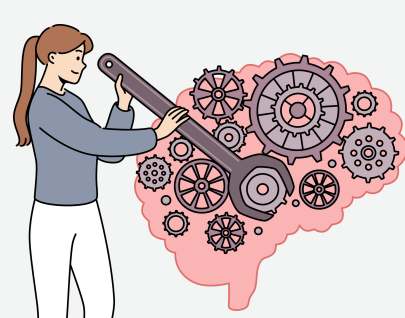
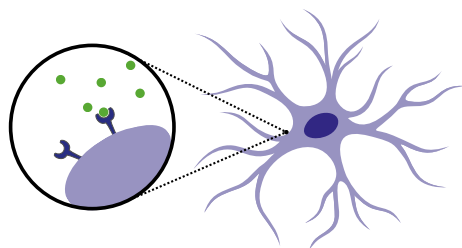
# How does your brain respond to cannabis?

A new study shows how brain cells may respond to **cannabis** and what impact this could have on the flexibility of our brain.



Cannabis binds to the **CB1 receptor** on brain cells, one of the most common receptors in our brain. For a long time, it was believed that this receptor was only present on nerve cells (**neurons**).

However, it turns out that other important players are involved: **astrocytes**. These supporting cells play a crucial role in brain development.

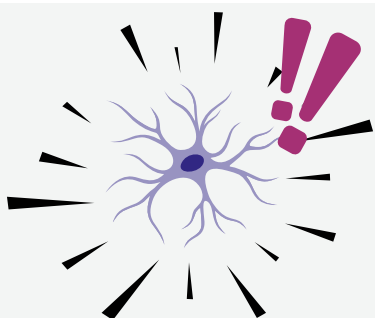
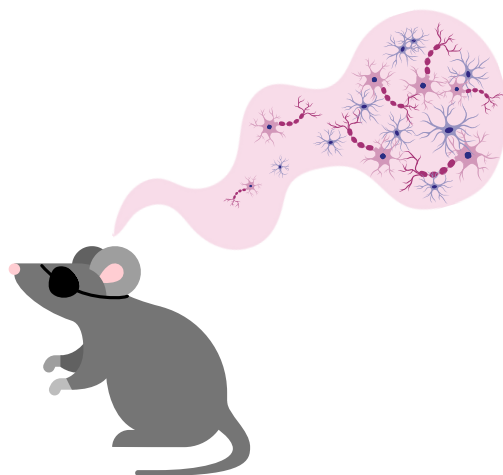


## Critical periods

There are certain periods during early life when the brain is particularly sensitive to changes and can adapt easily: these are known as **critical periods**.

To investigate the role of the CB1 receptor during critical periods, the CB1 receptor was **deactivated** in inhibitory nerve cells (interneurons) or astrocytes in mice.

Next, one eye of young mice was temporarily **covered**. Normally, the connections to the functional eye become stronger, **but does that still happen in this case?**



The brain's adaptability was only disrupted when the CB1 receptor on **astrocytes** was deactivated. There was no difference when it was deactivated on interneurons.

## Why is this important?

CB1 receptors on astrocytes play a crucial role in brain development and adaptability. **Cannabis use** during critical periods of brain development, such as puberty, could potentially disrupt this process.



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