

# Summary

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Acute stress causes a cascade of neurochemical changes. Together, these increase alertness, activate emotional centres in the brain and engage the 'fight or flight' response, to deal with the acute stressor.

Prolonged stress causes substantial brain changes, including:

- Loss of neurons in areas of the brain involved in learning, memory and decision making,
- Increased activation of brain regions involved in emotion processing,
- A reduction in connectivity between brain regions necessary for learning, memory and decision making,
- A reduction in the birth of new neurons in brain regions mediating learning and memory
- DNA changes which can be passed down to offspring

Techniques for mitigating stress include exercise, meditation and mindfulness, reframing challenges, spending time in nature, and having good social support.