

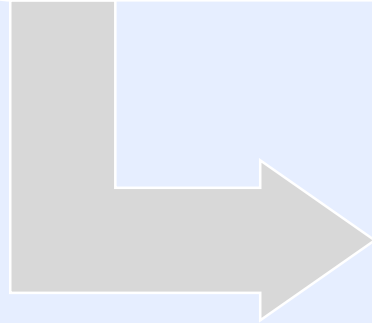
LO: TBAT outline the biological explanation of depression

The main explanations

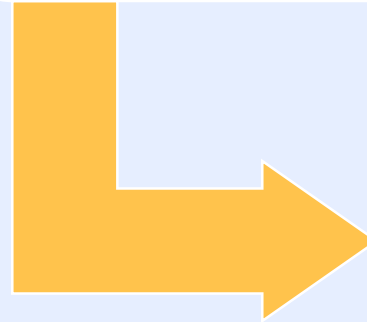
- Monoamine depletion hypothesis (1965)
- **Permissive Hypothesis (2nd version of above)**
- **BDNF Hypothesis (2007+)**

Monoamine Hypothesis

Serotonin,
noradrenaline,
dopamine are all
monoamine
neurotransmitters

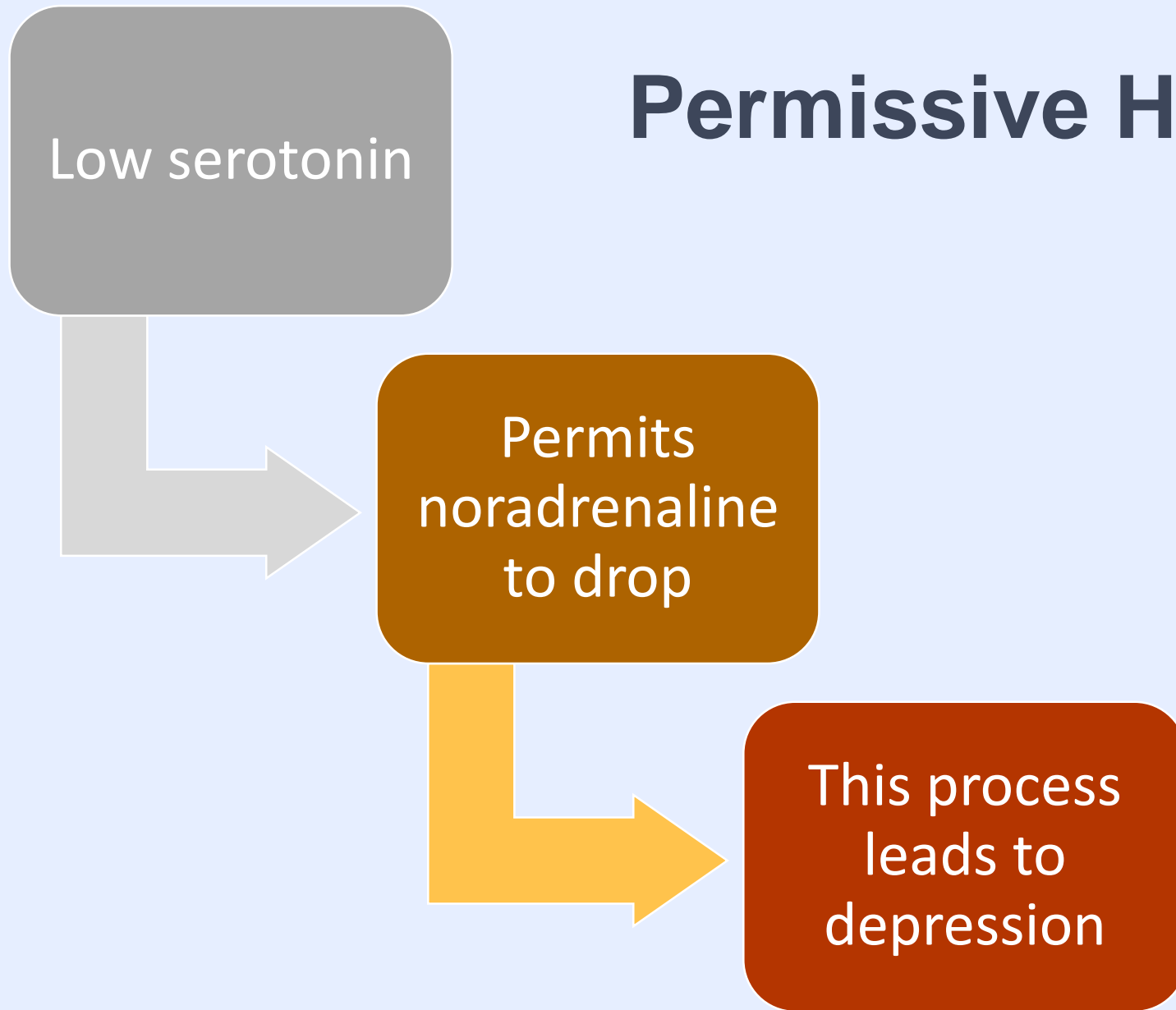


Regulate the emotion
centres of the brain
(amygdala,
hypothalamus,
hippocampus)



Low levels lead to
depression

Permissive Hypothesis



Evaluation of the monoamine and permissive hypotheses

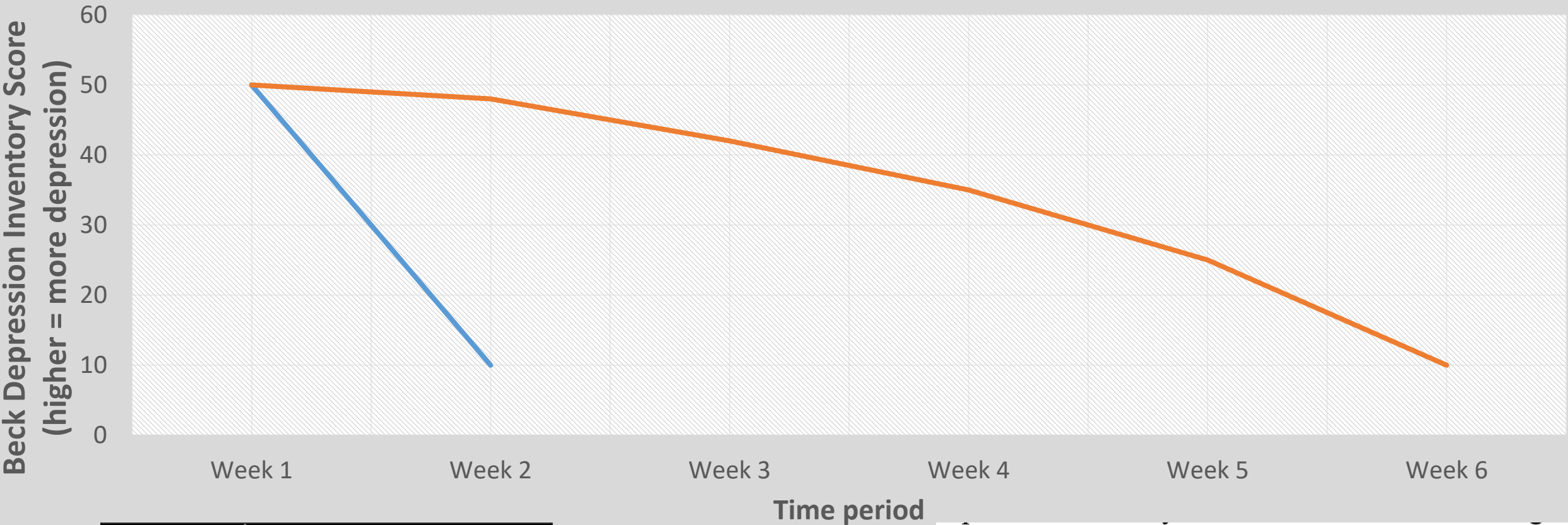
Support

- **Drugs that increase serotonin (e.g., SSRIs) do lead to a reduction in depression symptoms**

Criticism

- **Doesn't explain *therapeutic delay***
- Treatment aetiological fallacy: the drugs may not be treating the cause but a biological result of something psychological (stress)
- **Permissive hypothesis: oversimplistic – misses out environment / social / cognitive factors**

Therapeutic delay in depression symptoms



Raw Scores	Depression Severity
0-13	Indicates minimal depression
14-19	Indicates mild depression
20-28	Indicates moderate depression
29-63	Indicates severe depression

— Ideal — Actual

- 0 I do not feel sad.
- 1 I feel sad
- 2 I am sad all the time and I can't snap out of it.
- 3 I am so sad and unhappy that I can't stand it.

BDNF hypothesis

- **Brain derived neurotrophic factor**
- Chemical which helps neurons grow and function properly
- **Pts with depression → low levels of BDNF**
- As BDNF drops → depression symptoms go up
- **When we are stressed, BDNF gene can switch off → link between depression and stress levels**

Evaluation of the BDNF hypothesis

Support

- **Sen et al. (2008) -ve correlation between BDNF levels and depression symptom severity**
- Post-mortem studies found very low levels of BDNF in hippocampus and prefrontal cortex in depressed pts

Criticism

- **Not all depressed patients show low BDNF levels – so individual diffs issue**
- Doesn't tell us whether BDNF caused the depression – just that there is a relationship between them
- **BDNF treatment would be very invasive (brain surgery, gene therapy) so ethically and practically difficult to do**

A01 and A03 notes

A01 - Description

- **Monoamine hypothesis**
- Permissive Hypothesis
- BDNF

A03 - Evaluation

- **Strengths and weaknesses of each of these**
- Particularly focus on those that are **study / evidence based**