

# LO TBAT explain the biological treatments for depression

# The main drug treatments

- MAOI (1950s)
- **SSRI (1980s)**
- SNRI (Early 1990s)
- **NaSSA (Mid to late 1990s)**

# Which antidepressant type to use?

1

## SSRI

**Most common type**  
**Fewest and least serious side effects**  
**Examples: sertraline**

## SNRI

**Work better than SSRIs for some**  
**Side effects more severe than SSRIs**  
**Example: duloxetine**

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## MAOI

**Rarely used nowadays**  
**Potentially severe side effects**  
**Example: tranylcypromine**

## NaSSA

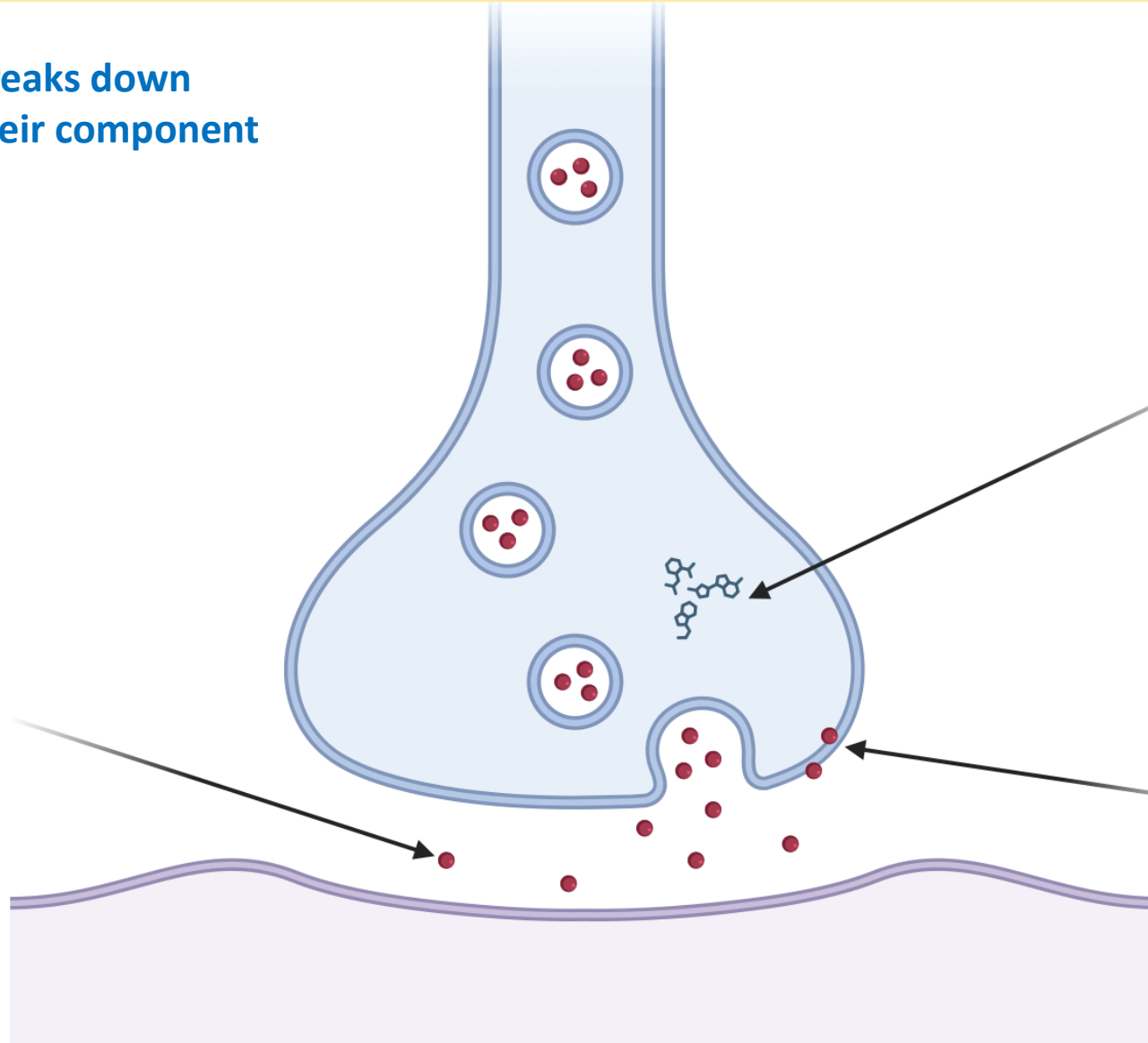
**Used for those unable to take SSRIs**  
**Similar side effects to SSRIs**  
**Example: mirtazapine**

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# MAO (Monoamine Oxidase) Enzyme Action

The MAO enzyme breaks down monoamines into their component chemicals for reuse

1. Serotonin Neurotransmitters diffuse across the synaptic gap

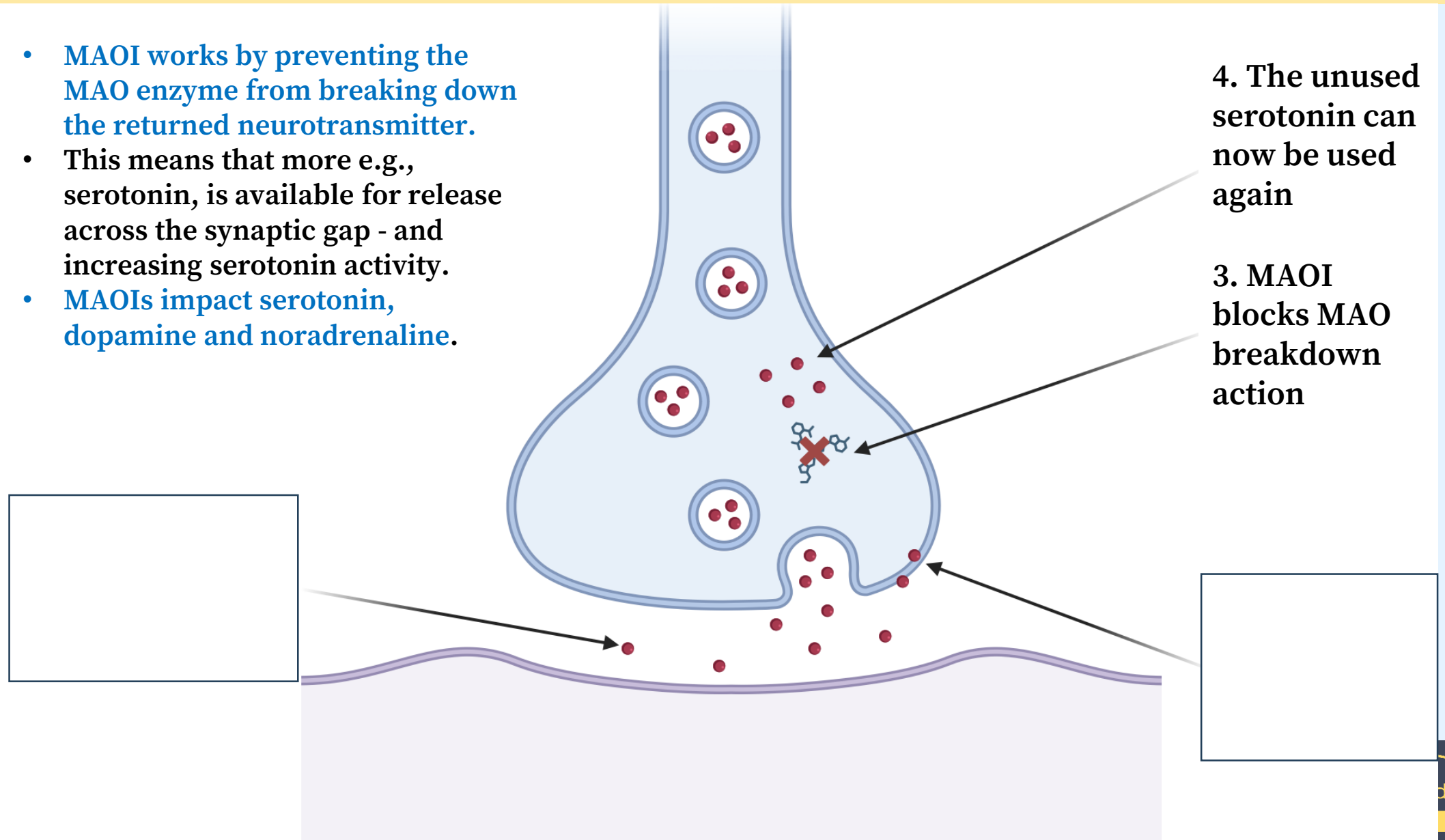


3. MAO breaks down the returned serotonin into its chemical parts

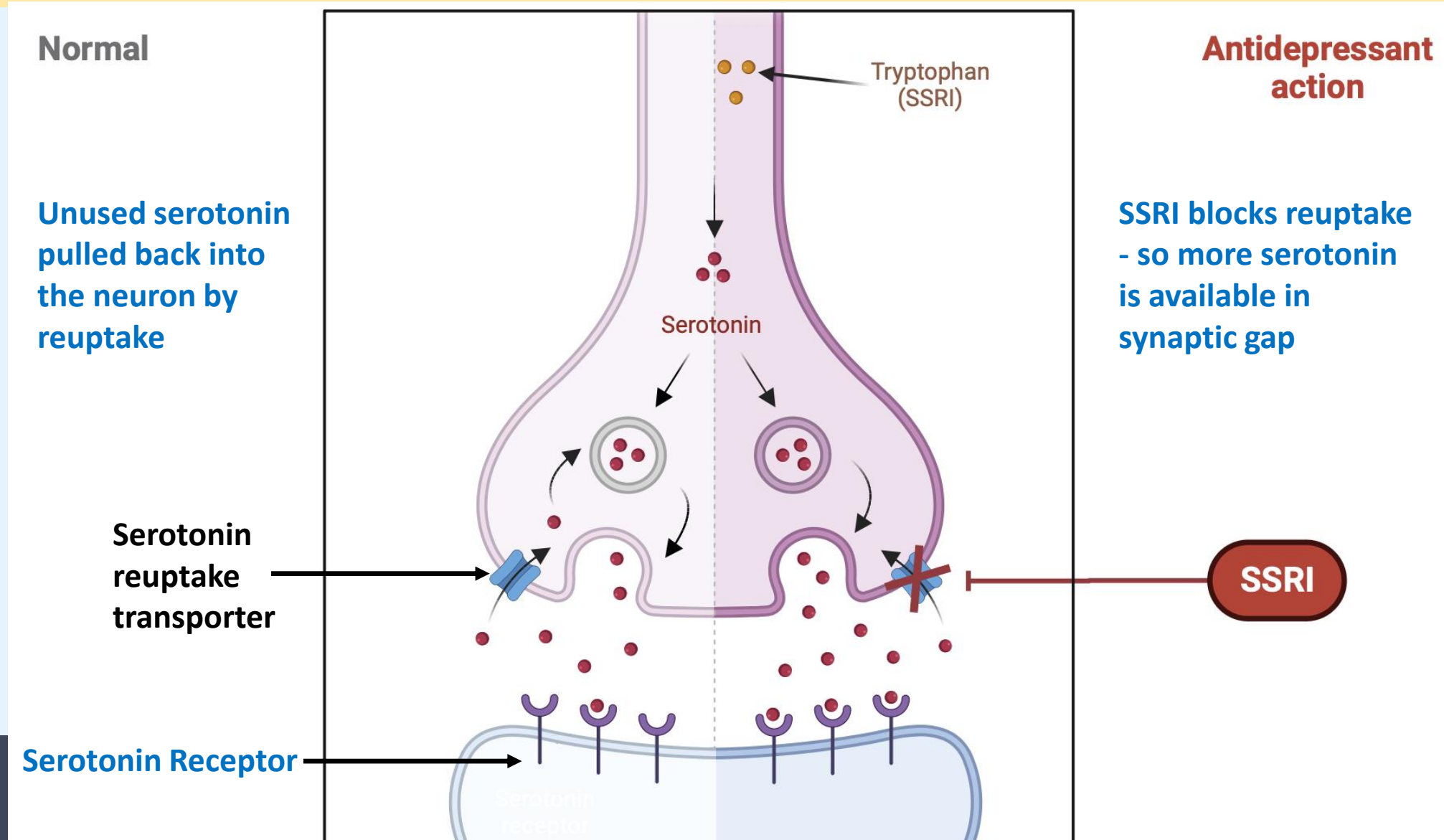
2. Reuptake pulls back **unused** serotonin to sending neuron

# MAOI (Monoamine Oxidase Inhibitor) Drug Action

- MAOI works by preventing the MAO enzyme from breaking down the returned neurotransmitter.
- This means that more e.g., serotonin, is available for release across the synaptic gap - and increasing serotonin activity.
- MAOIs impact serotonin, dopamine and noradrenaline.



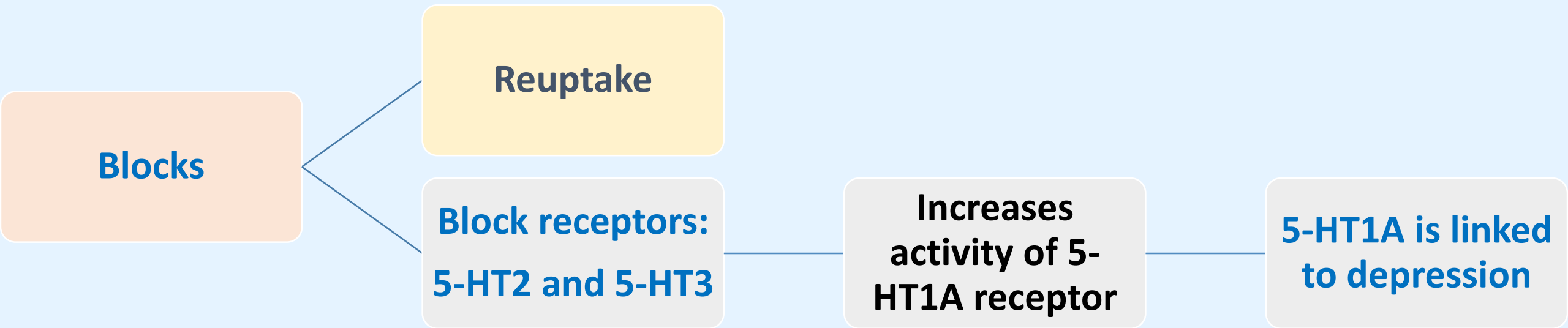
# SSRI (Selective Serotonin Reuptake Inhibitor)



# Noradrenergic and specific serotonergic antidepressants (NaSSAs)

- Have a **double** action
- Block serotonin and noradrenaline
  - reuptake (like SNRIs)
  - receptors
- Why does blocking a serotonin receptor increase serotonin transmission???
- 14 serotonin receptors
- NaSSAs block 5-HT2 and 5-HT3 receptors
- This **increases** the activity of 5-HT1A – a receptor specifically linked to depression

# NaSSA action on serotonin and noradrenaline





# Evaluation

## Strengths

- Research support for effectiveness (Cipriani et al.)
- Ethical: shows depression as a medical illness and not 'laziness'
- Shows how psychological knowledge can be used to decrease the impact of depression in society/individuals

## Weaknesses

- Evidence shows wide range of effectiveness
- Treat symptoms and not causes  
psychological therapy needed to improve LT outcomes
- Side effect issues: most mild, but some are much more severe

# A note on B+ to A\*

- **Getting high grades in Psychology means getting in the depth and detail of your explanations and evaluation points**
- For explanations (A01) use 'stretch and challenge', 'think link', and the 'extra' boxes
- **For evaluation (A03) focus on the justification of your strengths and weaknesses (especially evidence)**