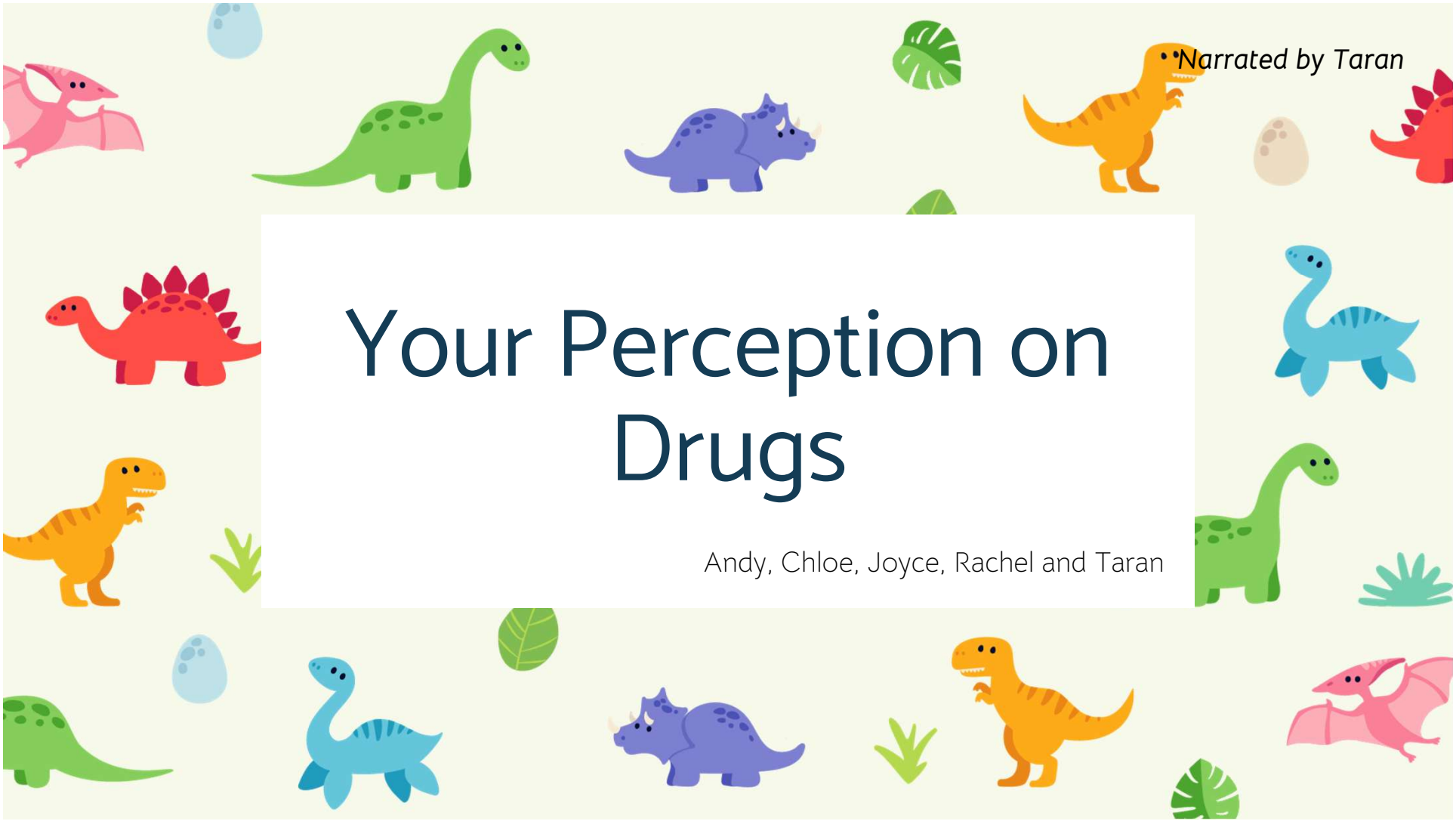


Narrated by Taran

Your Perception on Drugs

Andy, Chloe, Joyce, Rachel and Taran

Psychoactive Drugs

Narrated by Taran

Depressants - depress our CNS.
Examples: Benzodiazepines, Alcohol, Barbiturates (tranquilizers)

Stimulants - excite our CNS
Examples: Caffeine, Meth, Cocaine, Nicotine

Opiates and opioids - depress CNS, but different from antidepressants (diff neurochemical mechanisms)
Examples: Morphine, heroin, oxycodone

Hallucinogens - distorted perceptions.
Categorised into psychedelics, dissociatives and deliriants
Examples: LSD (acid), Psilocybin (mushrooms), Ketamine

Narrated by Taran

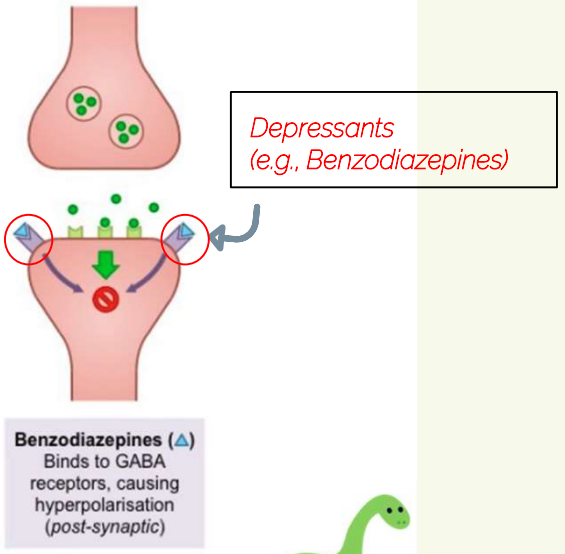
Depressants

- Function
  - Lower **body's basic functions** (Central Nervous System) **and Neural Activity**
  - Lowers:
    - **Heart Rate, Reaction Time, Processing Speed**
- Types of Depressants
  - Alcohol, Benzodiazepines, Barbiturates (tranquilizers)

Narrated by Taran

The Mechanism - GABA Inhibitory Receptors

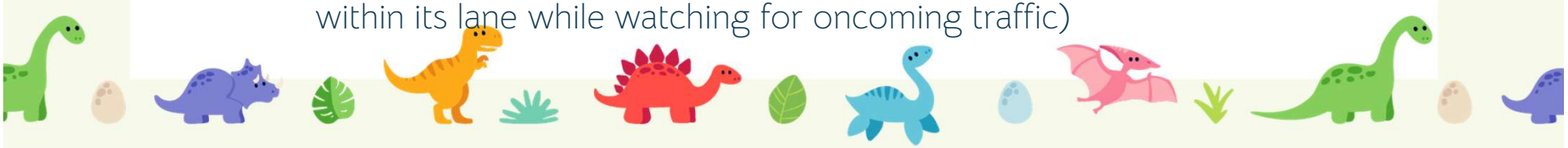
- **GABA**
  - Released into the synapse
  - Binds to postsynaptic receptor
- Negatively charged Cl- anions pass through channel
  - Decreases voltage in post-synaptic neuron
  - Less likely to fire an A.P → inhibitory neurotransmitter
- **Effects**
  - Decreases excitation and voltage over time
  - Reduce probability of firing another A.P.



Narrated by Taran

Implications on Perception

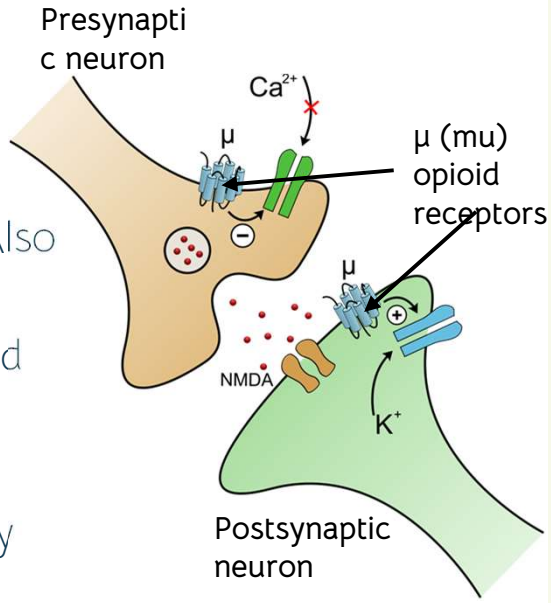
- GABA
  - Message carrier between cells
  - Reduced GABA = Reduced brain activity = relaxation
- Drugs on Driving
  - Concentration
  - Difficulty processing information
  - Difficulty doing more than one thing at a time (e.g. keeping your car within its lane while watching for oncoming traffic)



Narrated by Chloe

Opioids

- **Examples**: morphine, heroin, fentanyl, opium, codeine
- **Effects**: euphoria , pain relief, CNS depression. Also highly addictive.
- **Mechanism:** binds to opioid receptors in brain and spinal cord
  - Inhibits neurons
  - Normally, the opioid receptors are bound by endogenous opioids (eg. endorphins)

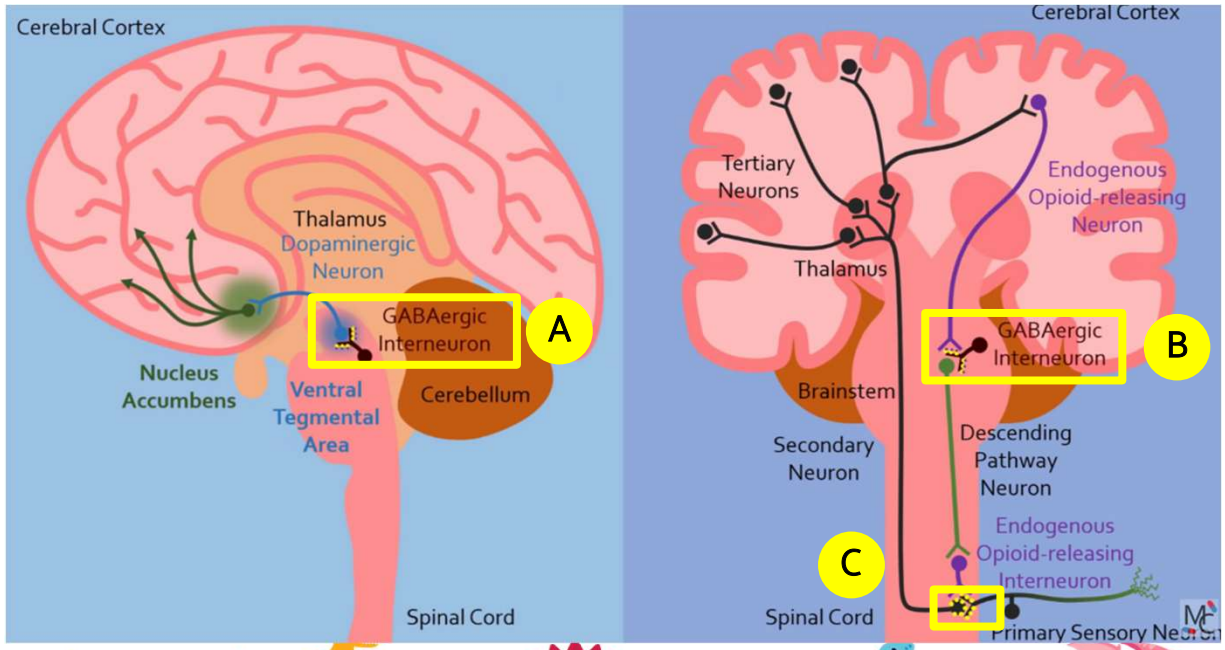


How opioids cause...

Narrated by Chloe

Euphoria (& addiction)

Pain relief



Credits: https://www.youtube.com/watch?v=vLFf6dlKrqU

Opioids shut down A, B and C

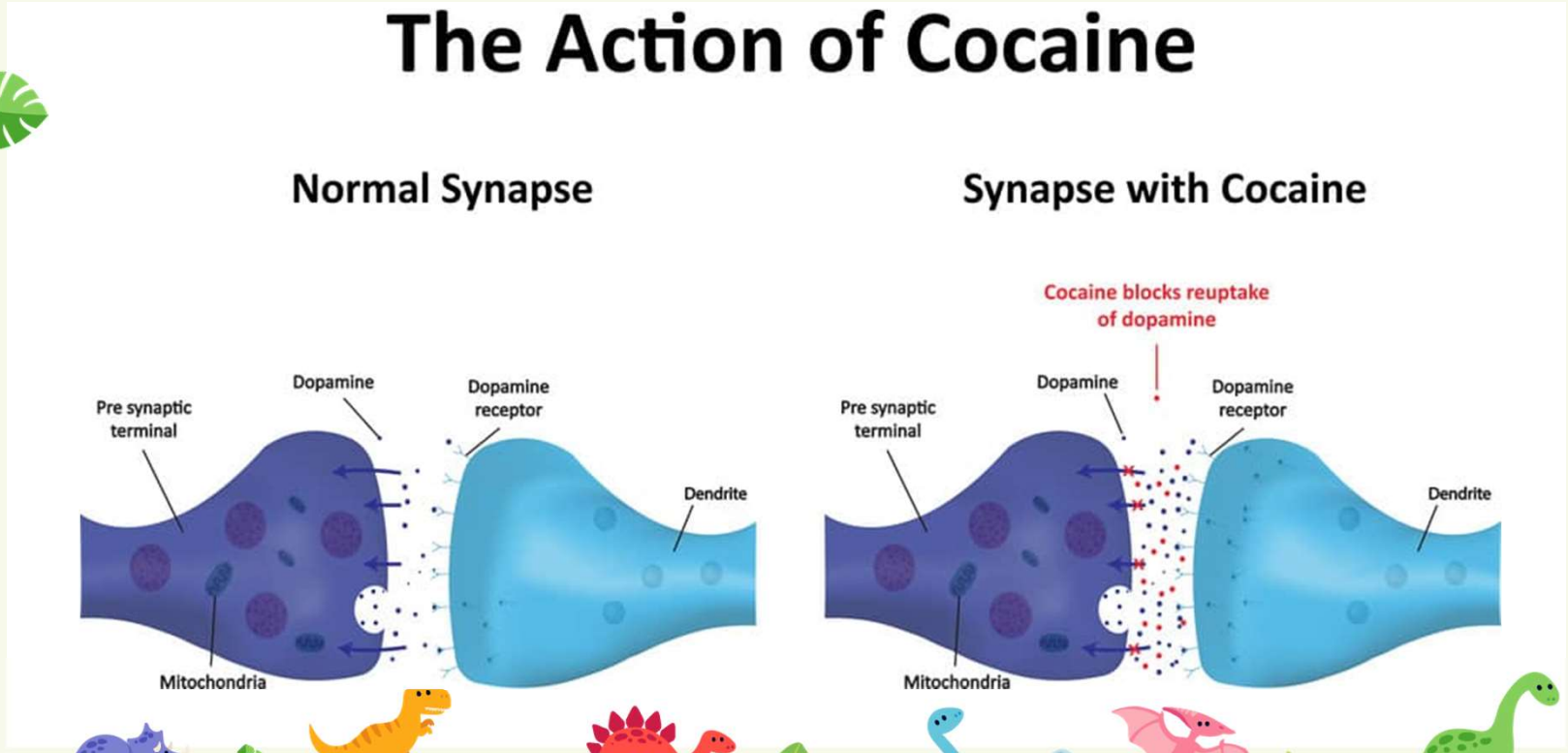
Narrated by Chloe

(Strong) Opioids: effects on perception

- Euphoria and pain relief, regardless of physical or emotional state
- Can lead to **lasting** changes to perception of pain and pleasure
  - Hypersensitivity to pain (opioid induced hyperalgesia)
  - No normal activity can compare to the pleasure caused by taking opioids
  - Is there a change in what a person considers an icon?

Cocaine

Narrated by Rachel



Cocaine

Narrated by Rachel

Effects on perception:

Visual Perception: hallucinations are part of the many side-effects of using cocaine.

More importantly: permanently alter reward pathways! Suppress the pleasure felt from life-sustaining activities like eating and drinking, Perception is now ruled by the singular impulse to consume cocaine and more of it each time!

Links:

1. Teleception
2. Lewis reading

Narrated by Andy

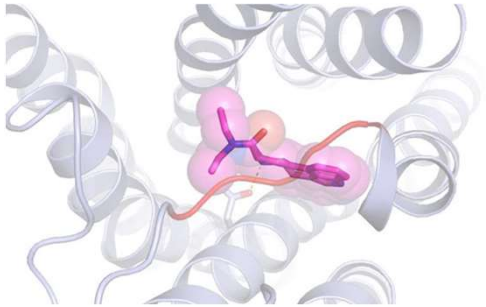
Psychedelics and the Reducing Valve

A hallucinogenic class of psychoactive drug whose primary effect is to trigger non-ordinary states of consciousness - "psychedelic experiences".

- Classic psychedelic drugs include mescaline and LSD.

Narrated by Andy

Psychedelics



Most psychedelics work through serotonin receptor **agonism**. Specifically, they bind primarily at 5HT(2A/2C) receptors.

Because the function of serotonin is so complex, the interaction of psychedelics in the brain is still unclear.

Narrated by Andy

Psychedelics and Perception

1. Reducing valve - expands our Umwelt
2. Interactive Vision

Narrated by Joyce

Hallucinogens - Dissociatives

Derealisation, detachment from the environment and self

- Sensory deprivation, catalepsy (seizure-like)
- Slower brain activity

Examples: PCP, Ketamine

Narrated by Joyce

Ketamine

- Synthetic drug, used for surgical anaesthesia, pain management, reducing suicide ideation
- Negative effects only occur in sustained, long-term use

- **Antagonist** for the NMDA receptor (enables the transfer of electrical signals between the brain and spinal column)

Narrated by Joyce

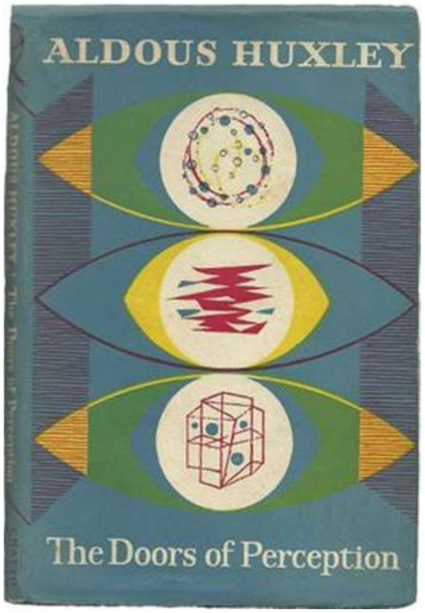
Drugs and Perception

- Like technology, drugs are another door which may fundamentally change perceptual experiences
- Drugs are part of human society's **cultural artefacts**
- However, the question remains if the high risk of addiction and over-reliance permanently altering perception negatively is worth exploring.

Narrated by Andy

Our Perception of Drugs?

- Perception is compelling - it forces itself on us
- Psychoactive drugs alter our perception in a way that makes their hyper-reality indistinguishable from reality
- Door of perception



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Narrated by Andy

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