

Classical Conditioning

Learning Through Association

Stimuli & Classical Conditioning

- A stimulus is anything that can cause a response or reaction.
- Classical conditioning is the process where an organism is exposed repeatedly to a neutral stimulus and a meaningful stimulus, and over time the organism learns that the two stimuli are connected.
- This results in the neutral stimuli being able to independently trigger the response of the meaningful stimuli. The neutral stimulus then becomes the conditioned stimulus.



Neutral Stimulus



Meaningful Stimulus



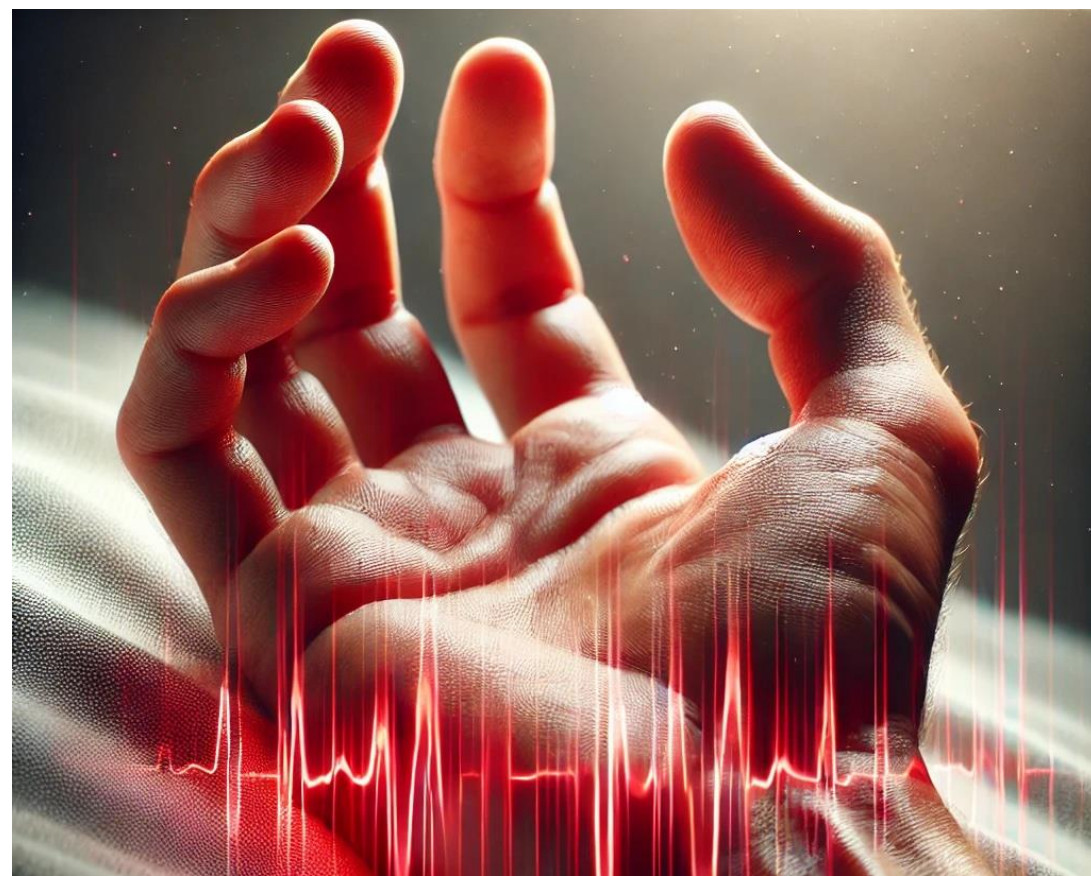


Conditioned Stimulus

Fear & Classical Conditioning



Neutral Stimulus



Meaningful Stimulus





Conditioned Stimulus

Avoidance and the Reinforcement of Anxiety

- Avoidance can be life-saving as it prompts us to remove ourselves from situations that are potentially dangerous.
 - In the short-term, this is rewarding as it removes the cause of danger (if the threat is real) and our anxiety reduces.
 - If the threat is not real, long-term repeated avoidant behavior can make our anxieties much worse, leading to generalization of the fear and a specific phobia disorder.





Exposure Therapy

To overcome our anxiety, we need to learn to approach the object, situation, or activity that we avoid. Approaching our fears and coping with them is called exposure therapy.

Types of Exposure

- Imaginal
 - Journaling
 - Imagining
- Virtual Reality
 - Using a VR headset for an immersive but safe exposure
- In Vivo / Real World
 - Exposing ourselves to real-world exposures
 - Watching Media (YouTube)

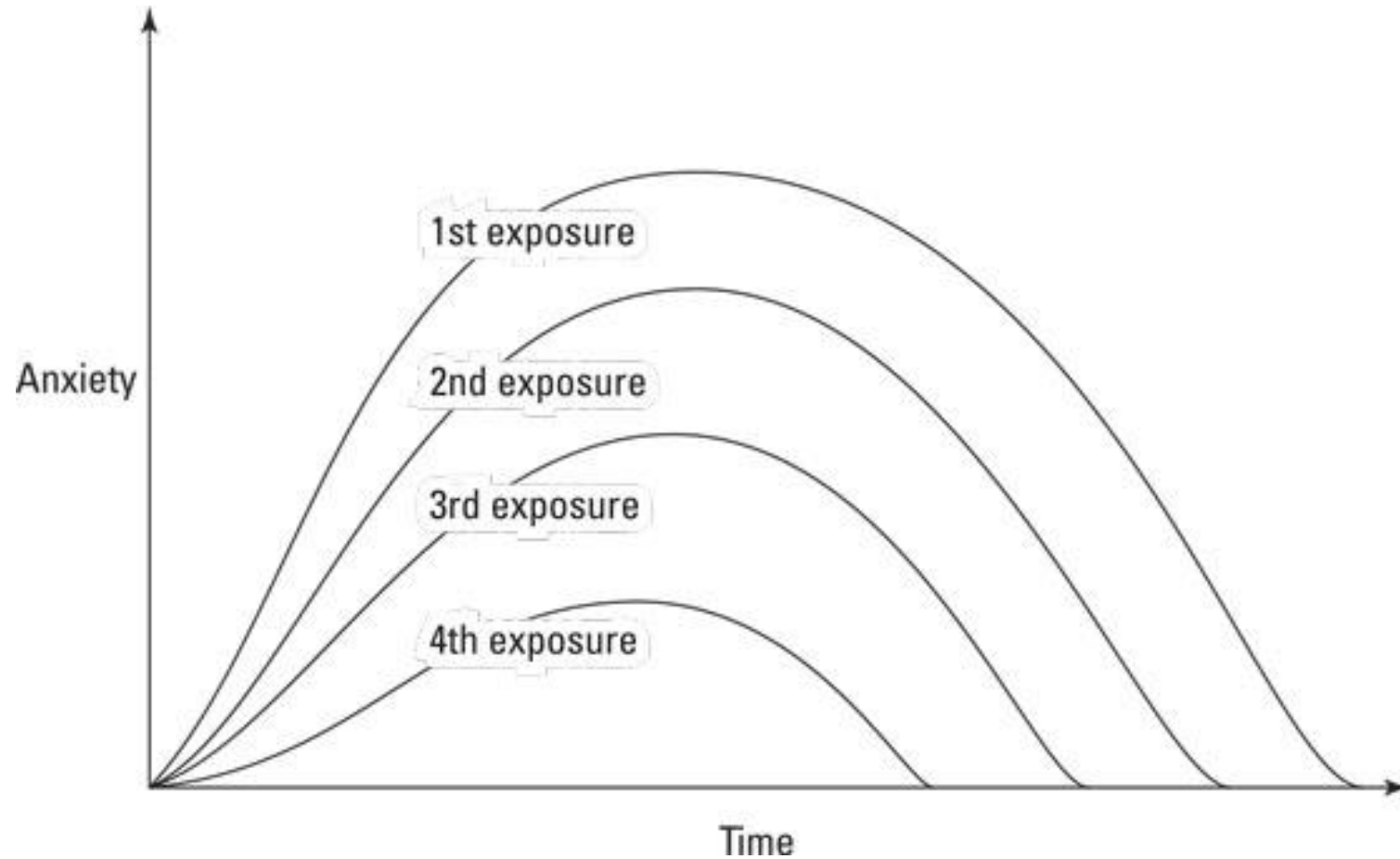




Processes of Exposure

- Graded Exposure
 - Start exposure with mild to moderate difficulty situations.
- Flooding
 - Start exposure with very difficult situations.
- Systematic Desensitization
 - Combine Exposure with Relaxation & Mindfulness Skills

Habituation (Reduced Fear Response) Develops with Repeat Exposures



Flooding Example



A group of approximately 12 dogs of various breeds, including Golden Retrievers, German Shepherds, Bernese Mountain Dogs, and others, are posed on a lush green lawn. The scene is set in a park-like environment with trees and a bench in the background, bathed in warm, golden light from a low sun. The text "Repeat exposures with an overwhelming but safe stimuli." is overlaid in the center of the image.

Repeat exposures with an
overwhelming but safe stimuli.

Habituation Achieved



Flooding Exposure

- The flooding stimuli MUST be safe even if it is overwhelming.
- Important to stay with the exposure until your fear level reduces by at least 50% or the anxiety can be reinforced with withdrawal of the stimuli.
- Multiple exposures are required to develop habituation and a persistent reduction of anxiety.
- While flooding can be very effective if the person can tolerate it, it can also be very overwhelming for people. A more gradual approach can also be very helpful, but it does take more time to get results.

Graded Exposure

- Identify what fear you want to overcome
- Create a Hierarchy of Fearful Situations involving your fear
 - Most fearful to least fearful
 - Situations must be safe
- Exposure
 - Start at the least fearful situation
 - Trial the exposure, trying to stay with the exposure until your max level of fear reduces by at least 50%
 - Multiple trials likely needed to develop habituation at each level of the hierarchy
 - Gradually move up the hierarchy until you gain mastery over your fear

Graded Exposure Example



A small, fluffy puppy with brown and white fur is sitting on a light-colored surface. The puppy has large, dark eyes and floppy ears. The background is a plain, light-colored wall.

Exposure 1 – Repeat Multiple Times

A small, fluffy dog with brown and white fur is sitting upright on a grey floor. The dog has a white patch on its chest and face, with brown fur around its eyes and ears. It is looking directly at the camera. The background is a plain, light grey wall.

Exposure 2 – Repeat Multiple Times

A Siberian Husky is sitting upright, facing forward but looking slightly to its right. It has a thick coat with black, grey, and white fur. Its eyes are light blue, and its ears are pointed upwards. The background is a plain, light grey.

Exposure 3 – Repeat Multiple Times

Habituation Achieved

