



MASSACHUSETTS  
GENERAL HOSPITAL

PSYCHIATRY ACADEMY

# Effective Use of Exposure: Novel Use of an Old Tool

Aude Henin, Ph.D.

Child CBT Program, MGH



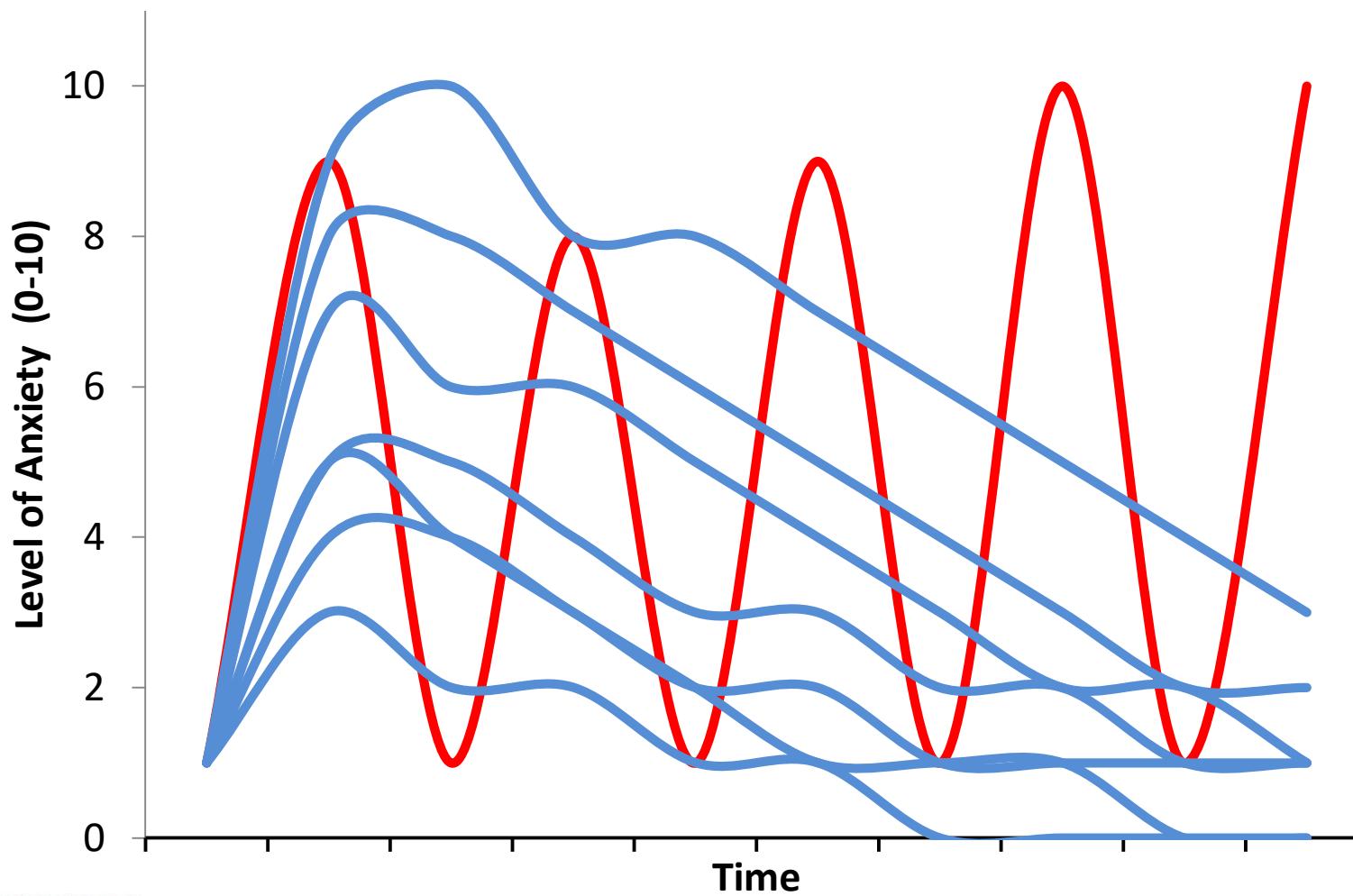
# Disclosures

---

My spouse/partner and I have the following relevant financial relationship with a commercial interest to disclose:

I receive royalties from Oxford University Press for co-authoring a book.

# Rationale Behind Exposure



# Theoretical Model of Anxiety Disorders

- Classical & operant conditioning both play a role in anxiety disorders
  - Well-validated models for learning across species
- Initial Learning
  - Classical conditioning
  - Operant Conditioning
- The more repeated the pairing and/or the more intense the anxiety response, the stronger the association
- Gradual processes

# Classical Conditioning Model

BEFORE CONDITIONING:

CS (Tone)  No Fear

UCS (Shock)  UCR (Fear)

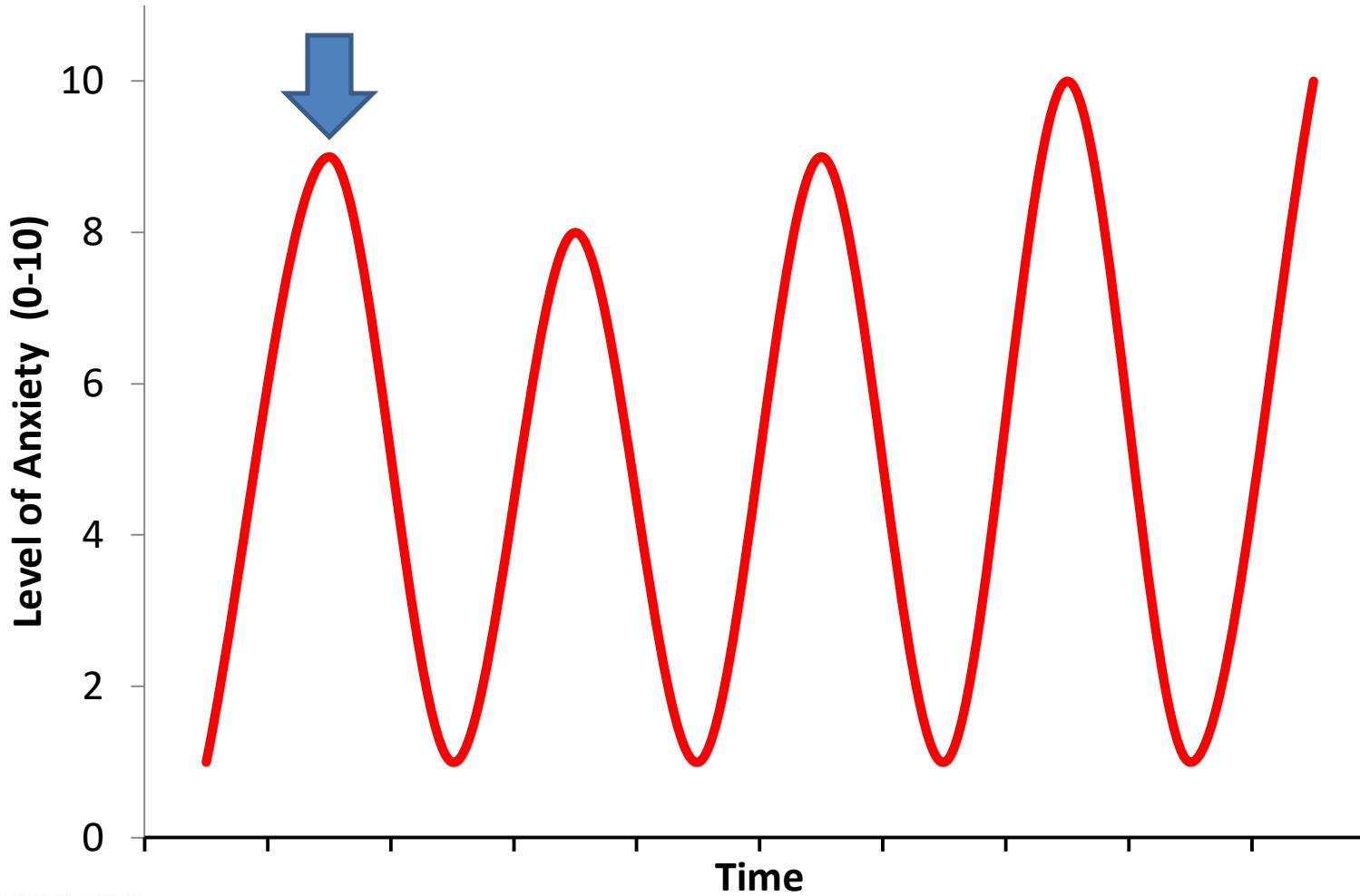
DURING CONDITIONING:

UCS (Shock)+ CS (Tone)  CR (Fear)

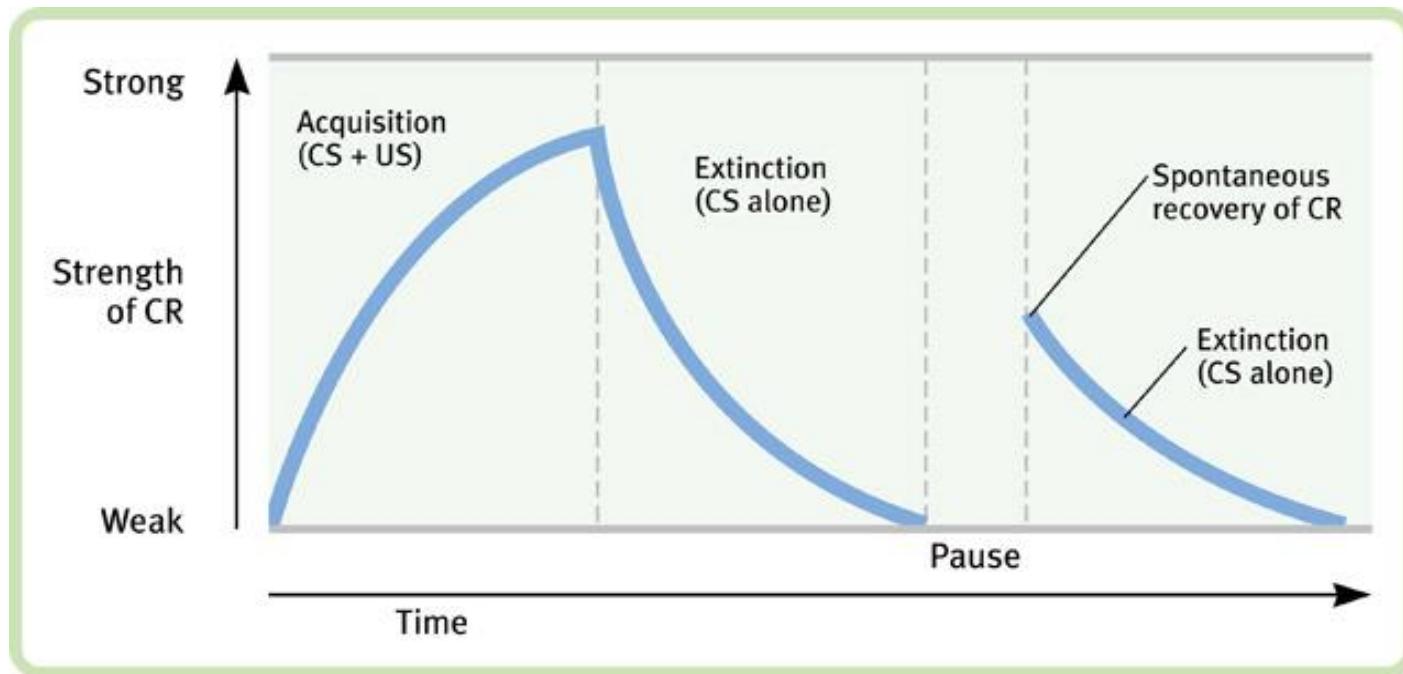
AFTER CONDITIONING:

CS (Tone)  CR (Fear)

# Operant Conditioning Model of Anxiety



# Fear Extinction as a Model for E/RP



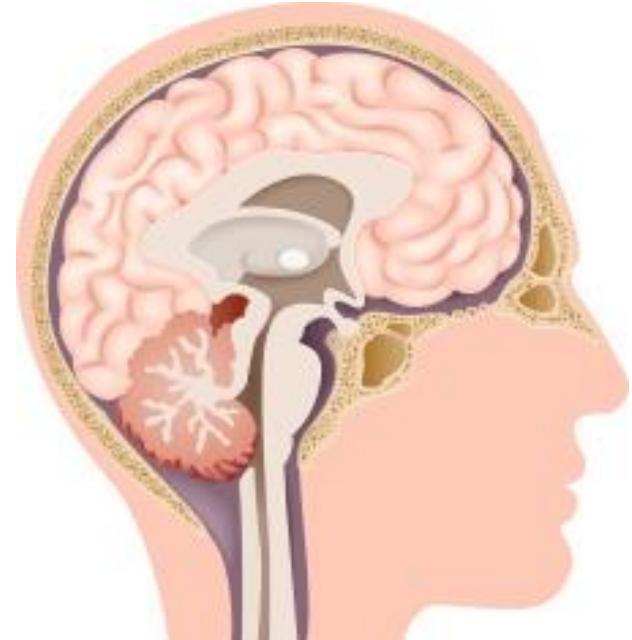
- Fear extinction occurs when the CS is repeatedly presented in the absence of the UCS
- Extinction recall is assessed by representing the CS and examining whether the CR is expressed (or not)
- Inhibitory learning is key to extinction

# Implications for Treatment

- Learning processes
  - Are context-dependent
  - Must be done consistently
- The initial fear acquisition is not unlearned and does not disappear; instead fear extinction represents new, inhibitory learning.
  - Therefore, relapse & fear resurgence can occur
- Habituation may not be as important as promoting new learning opportunities

# Neuroanatomy & Neurochemistry

- Neuroanatomy:
  - Amygdala central to fear conditioning and extinction.
  - Orbitofrontal cortex and anterior cingulate cortex (ACC) implicated in extinction learning via inhibition of amygdala
  - Hippocampus implicated in context specificity of extinction



# Possible mechanisms of E/RP

- Extinction learning: learning to stop associating stimulus with anxiety response
- Habituation
- Experientially learning that catastrophic predictions are incorrect
- Building skills for coping with the stimulus

# How to conduct exposure

- Focus is on behavioral exposure and behavioral experiments
- Develop a fear hierarchy
- Conduct progressive imaginal and in vivo exposures
- Inhibit avoidance behaviors and rituals
- Exposure assigned between sessions
- Attempts are rewarded
- Parents may be involved as “coaches” if appropriate

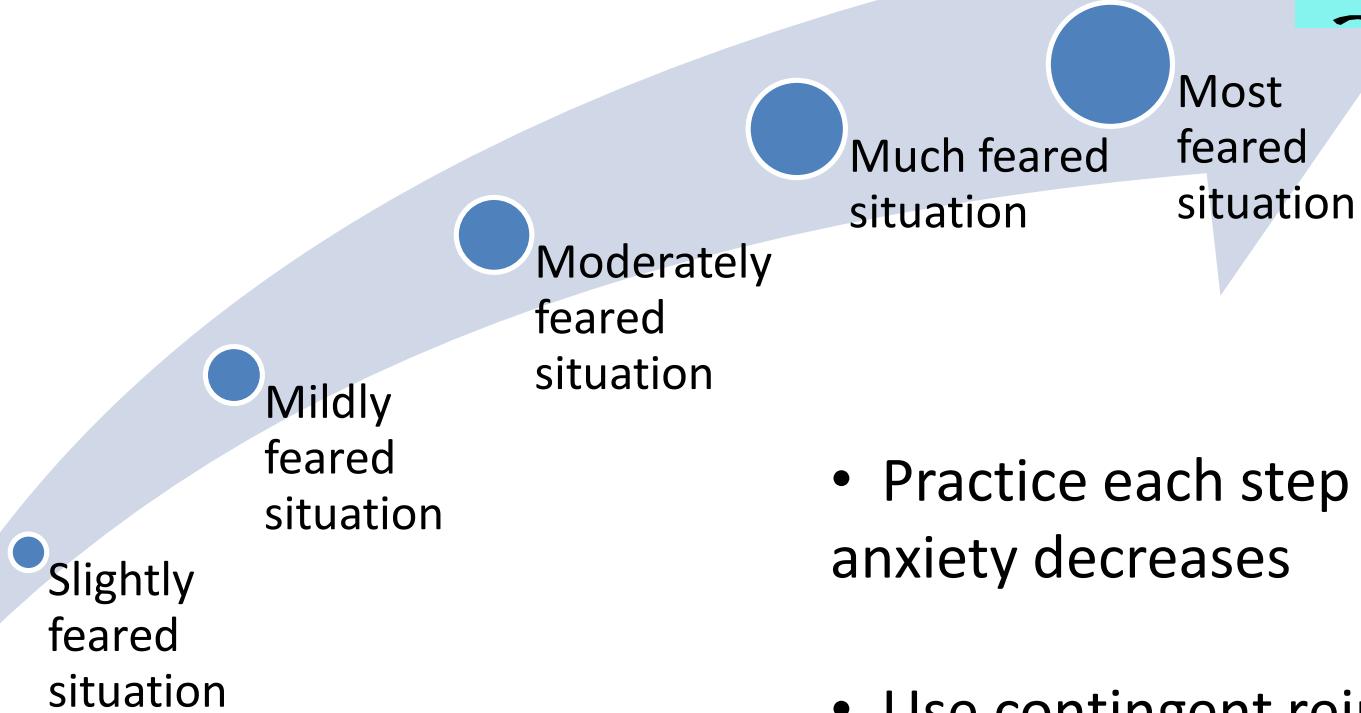
# Details of exposure

---

- Generally includes “arranged” practices
- Can include more naturalistic exposure practice
- These are introduced in the session, usually in or near the office.
- The idea is to refrain from avoidance behaviors during exposure rituals altogether, but early steps in the hierarchy can include some avoidance behaviors if complete elimination is not possible.
- The exposure done or rehearsed in the session are then practiced between sessions.

# Graded exposure

- Teach kids to face their fears



# Example Fear Hierarchy: Contamination

Touch light switch; no washing	4
Touch doorknob; no washing	5
Touch bathroom doorknob; no washing	6
Eat food off of the table	7
Eat from same bag as someone else	8
Eat food that fell on floor	9

# Structure of Exposure Sessions

- Review of the past week and homework practice (5-10 mins)
- Setting up exposure (5 mins)
- Exposure practice (30-45 mins)
- Assignment of homework and troubleshooting potential difficulties (5 mins)



# Role of the Therapist During Exposure

- Plan for and prepare ahead for exposure session
- Structure the exposure
- Review skills the individual will (and won't) use to manage anxiety during exposure
- Assess anxiety levels prior to and during exposure exercise
  - SUDS Ratings
- Encourage and cheerlead the patient
- Identify and address any avoidance behaviors/rituals
- Address any family/parent concerns

# Tolerating Ambiguity and Uncertainty



- Thought to be a central theme in many anxiety disorders
  - Religious concerns/scrupulosity
  - Harm-related symptoms
  - Perfectionism
- Helpful to consider this in planning exposure
  - Goal is to tolerate the uncertain rather than/in addition to facing fears

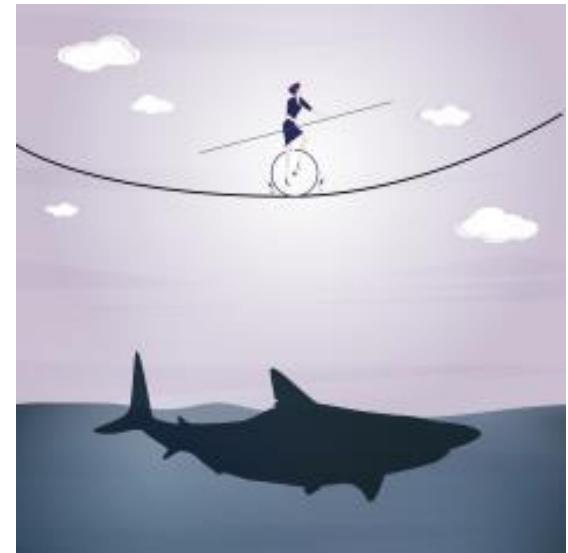
# Methods to Enhance Fear Extinction

(Craske et al., 2014; Behav Res Ther. 58: 10-23

- Create opportunities for violating fear-based expectancies
  - New learning occurs when there is a mismatch between expectancy and outcomes
  - Increase awareness of the CS-noUS relationship
  - Conduct post-exposure questioning to highlight this mismatch
- Vary the contexts in which exposure is conducted
- Vary exposure stimuli and fear levels
- Maximize session time devoted to exposure
- Focus on diverse exposure practice within and between sessions
- Decrease focus on habituation
- Eliminate safety signals and distraction
- Label emotions during exposure

# Importance of Going Beyond the Typical

- “Twisting the knife”
  - Pushing the limits of typical behavior
  - Avoiding any reassurance
- Reduces the chance that the patient will attribute the lack of feared outcomes to having avoided the most feared situation
- Important to prevent relapse of anxiety



# Exposure With Younger Children

---

- Rationale for treatment is usually explained to parents first, before involving the child in treatment
- Parent attends all treatment sessions with the child and learns to conduct exposure with child
- Therapist models coaching for parent
- Child may not be able to rate anxiety accurately, so must rely on therapist and parent judgment.
- Through the exposure the parent learns to tolerate their own anxiety about the child's distress.

# Exposure with Younger Children



- May be more playful or silly
- May incorporate games, e.g. being Oscar the Grouch (child climbing in trash can, playing with food prior to eating it, playing on a dirty floor, getting candy dirty, etc.)
- Not all content can be fun; when not fun, ensure that the child is earning rewards for trying it.
- As with exposure for older kids, avoid pitfalls like distraction and reassurance.

# Addressing Family Accommodation



- Family accommodation is very common
  - Describes changes that families make to their behavior to help the anxiety sufferer feel better *in the short term*
    - Modifying family routines
    - Facilitating avoidance
    - Participating in compulsive rituals
    - Offering reassurance
- Associated with symptom severity, functional impairment, & response to treatment
  - Correlated with parental anxiety
- Assessment Measures: Family Accommodation Scale

# Maximizing Practice Between Sessions

- Critical to success of CBT interventions
- If non-adherence:
  - Examine contributing factors
  - Problem-solve around solutions
  - Involve others if appropriate
  - Institute rewards
  - Examine motivational enhancement strategies
- Make sure to review homework at the beginning of each session; this is one of the best predictors of compliance

