



Hello, My Name is Anxiety

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Presenter Disclosures

Daniel Fishman

The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

No relationships to disclose
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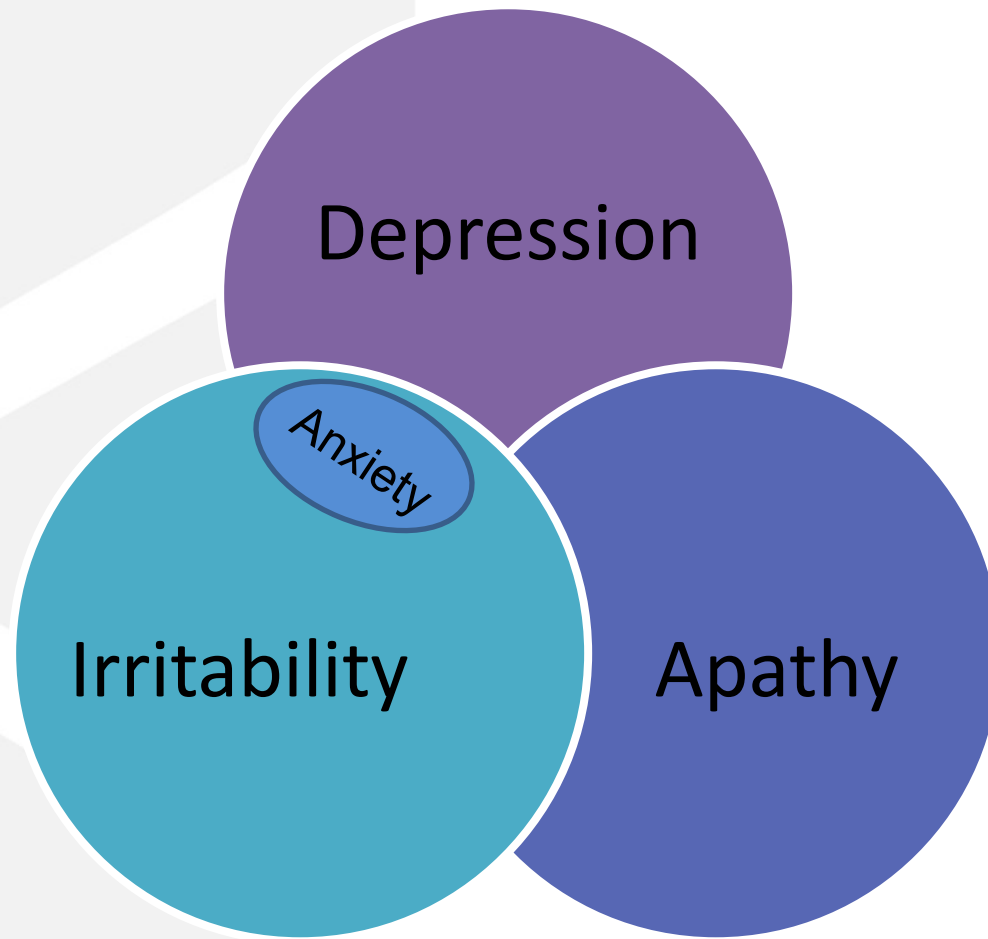
What is anxiety?

- Fight or Flight Response
- Malfunction or Inappropriate timing
- Affects the mind and or body
- Sometimes healthy but not always
- Can present differently in people with Huntington's Disease
- Can be overwhelming but can be treated

Neuropsychiatric Symptoms

- Anxiety
- Depression
- Irritability
- Obsessive-compulsive behavior
- Psychosis
- Apathy
- Can develop years before motor symptoms
- Variable course

Factor Analysis



Anxiety Prevalence

- Both reactive anxiety and neurobiological effects
- Under-researched
- Anxiety develops before depression
- Anxiety states found in 13-71%

BEHAVIORAL ASSESSMENT

Use the following keys to rate both severity and frequency

<i>Severity</i>	<i>Frequency</i>
0 = absent	0 = almost never
1 = slight, questionable	1 = seldom
2 = mild	2 = sometimes
3 = moderate	3 = frequently
4 = severe	4 = almost always

Sad/Mood: feeling sad, sad voice/expression, tearfulness, inability to enjoy anything.

Low Self-Esteem/Guilt: self blame, self deprecation including feelings of being a bad or unworthy person, feelings of failure.

Anxiety: worries, anticipation of the worst, fearful anticipation.

Suicidal Thoughts: feels life not worth living, has suicidal thoughts, active suicidal intent, preparation for the act.

Disruptive or Aggressive Behavior: threatening behavior, physical violence, verbal outbursts, threatening, foul, or abusive language.

Irritable Behavior: impatient, demanding, inflexible, driven and impulsive, uncooperative.

Obsessions: recurrent and persistent ideas, thoughts or images

Compulsions: repetitive, purposeful, and intentional behaviors.

Delusions: Fixed false beliefs, not culturally shared

Hallucinations: a perception without physical stimulus:
Auditory, Visual, Tactile, Gustatory and Olfactory

Could subject do his/her own housework without help?

Could subject do his/her own laundry (wash/dry) without help?

Could subject prepare his/her own meals without help?

Could subject use the telephone without help?

Could subject take his/her own medications without help?

Could subject feed himself/herself without help?

Could subject dress himself/herself without help?

Could subject bathe himself/herself without help?

Could subject use public transportation to get places without help?

Could subject walk to places in his/her neighborhood without help?

Could subject walk without falling?

Could subject walk without help?

Could subject comb hair without help?

Could subject transfer between chairs without help?

Anxiety Prevalence

- Under-researched
- Anxiety develops before depression
- Anxiety states found in 13-71%
- Anxiety disorders 12-month prevalence of 12.5-16.5%
- More common in people with HD
- Commonly presents with features rather than meeting all criteria of disorders

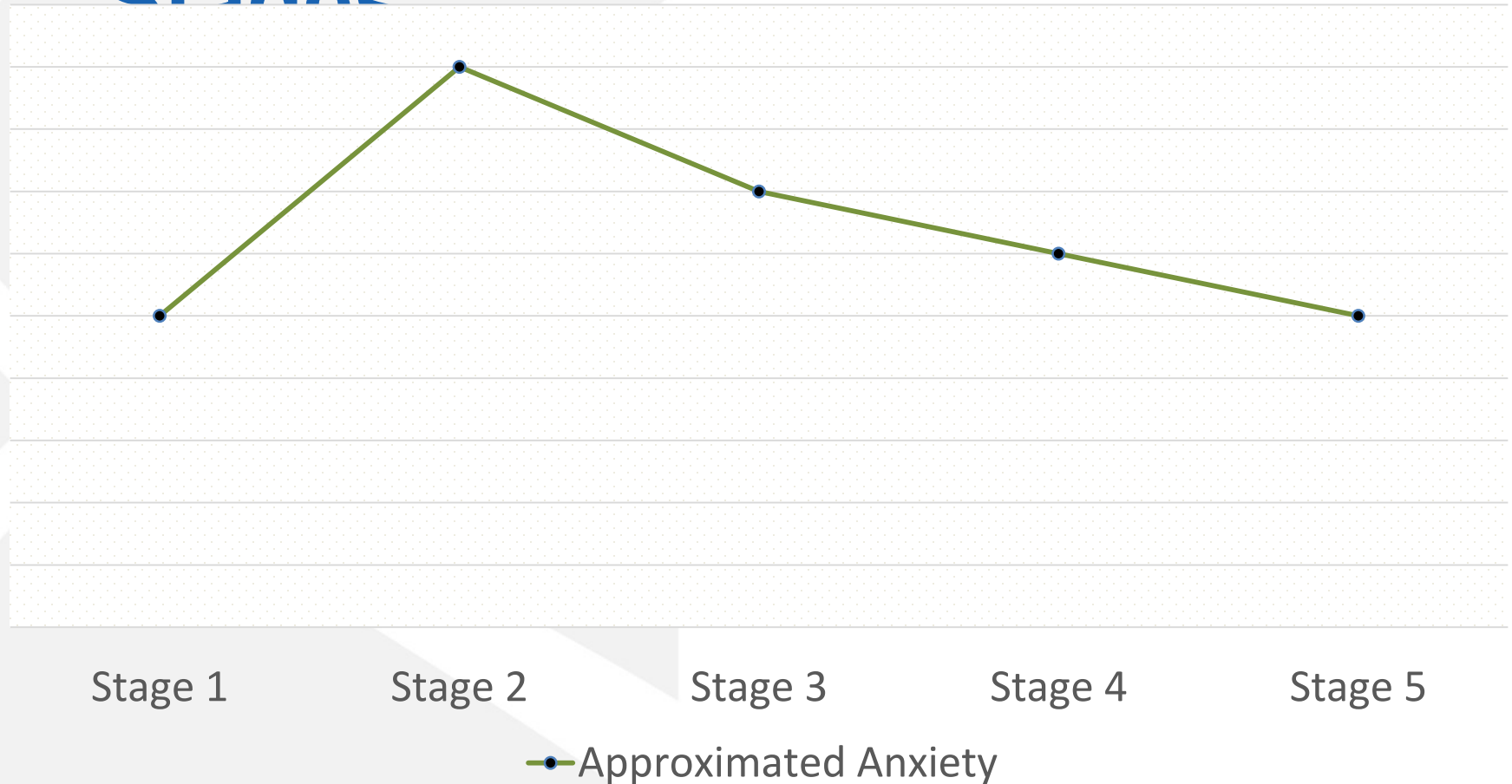
Neuroscience

- Compulsions associated with processes that affect the caudate and globus pallidus
- Mouse models implicate that neurogenesis in the hippocampus (“Memory center”) is involved in HD anxiety
- Amygdala (“Fear center”) and hippocampus are closely connected

Scenario

- Elsa is a woman in her thirties with Huntington's Disease who despite only minimal motor symptoms, worries that she is not able to keep up at work. She has discussed her status with her supervisor and has explored options for modified duties. However, even with changes made to her responsibilities, she spends most of her days thinking about her performance.

Anxiety across HD Disease Stages



So Why Stage 2?

1.Disease Course

2.Difficulty functioning at work and at home

3.Changes in role and independence

Positive Associations

- Depression and Irritability
- Decreased quality of life
- Loss of functionality
- Pain
- Greater illness identity
- Weaker belief in treatment
- Denial of illness
- Coping behaviors: Venting, Self-blame, Disengagement

Negative Associations

- Anxiety is **NOT** associated with:
 - Age
 - Gender
 - Apathy
 - Cognitive ability
 - Motor symptoms
 - CAG repeat length
 - Disease progression

DSM V

Anxiety Disorders

- **Generalized Anxiety Disorder**
- **Panic Disorder**
- **Social Anxiety Disorder (Social Phobia)**
- Separation Anxiety Disorder
- Selective Mutism
- Agoraphobia
- Substance/Medication-Induced Anxiety Disorder
- Anxiety Disorder Due to Another Medical Condition
- Other Specified Anxiety Disorder
- Unspecified Anxiety Disorders

DSM V

Obsessive Compulsive and Related Disorders

- **Obsessive-Compulsive Disorder**
- Body Dysmorphic Disorder
- Hoarding Disorder
- Trichotillomania (Hair-Pulling Disorder)
- Excoriation (Skin-Picking) Disorder
- Substance/Medication-Induced OC & Related
- OC & Related d/o Due to Another Medical Condition
- Other Specified OC & Related d/o
- Unspecified OC & Related d/o

DSM V

Anxiety Disorders

- Generalized Anxiety Disorder
- Panic Disorder
- Specific Phobia (Social Anxiety Disorder)

Obsessive Compulsive and Related Disorders

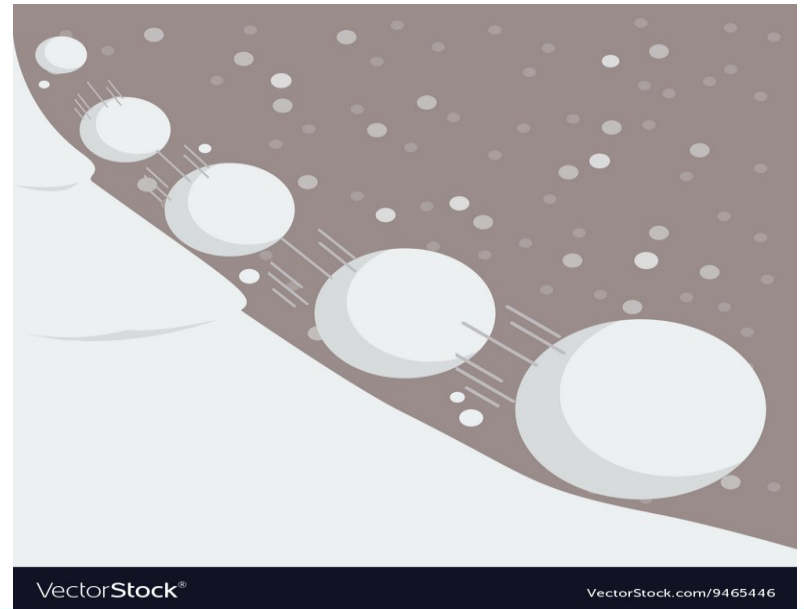
- Obsessive-Compulsive Disorder

Scenario

- David is a 48 year old man, diagnosed with Huntington's Disease years ago. He reports concerns about EVERYTHING. Today he worries about his motor symptoms worsening to the point that he won't be able to drive. He has many family and friends, but fears that they will feel he isn't useful if he can't drive, and that he will end up living alone and unloved. His thoughts race for hours in bed each night, resulting in limited sleep. His neck is consistently sore from being so tense and he has started pacing during the day to try and distract himself from his thoughts.

Generalized Anxiety Disorder (GAD)

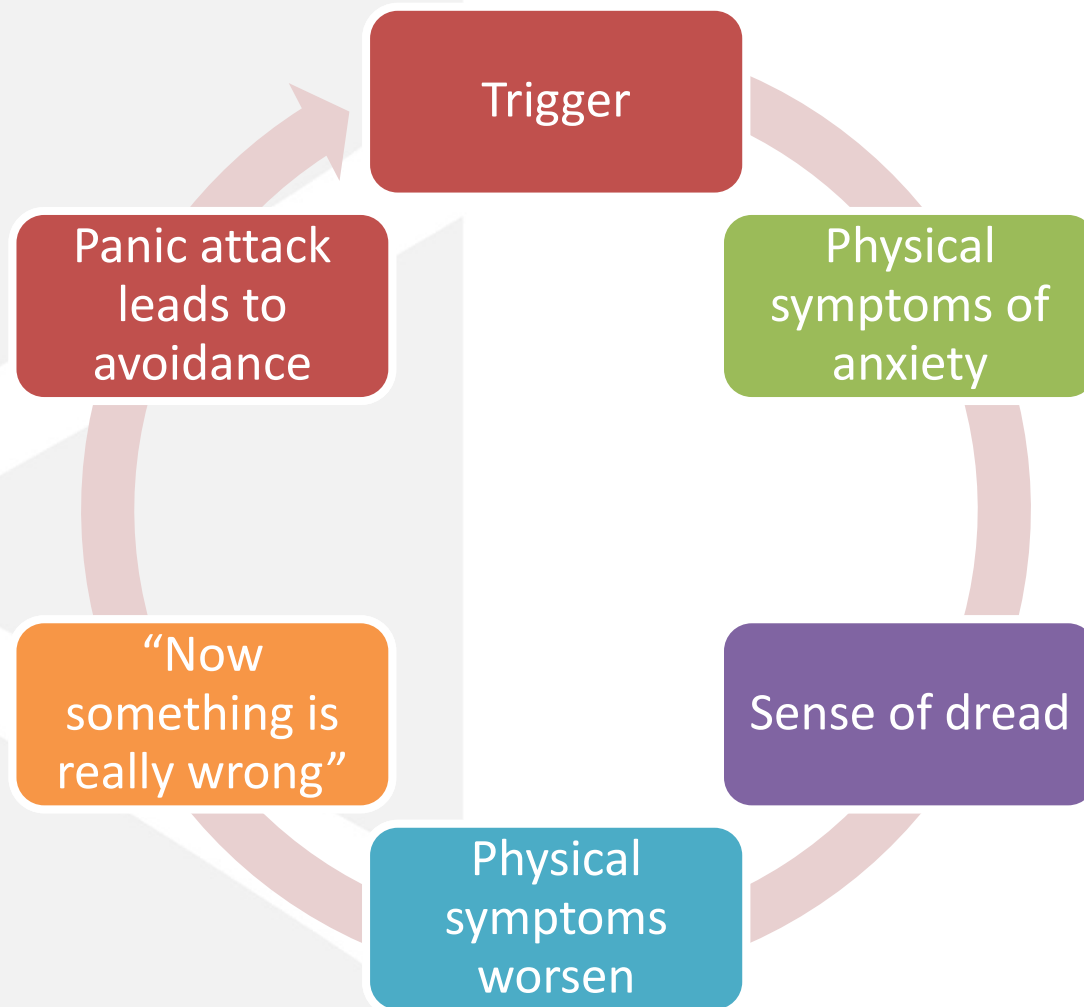
- Excessive, uncontrollable, often **irrational worry about everyday things**; disproportionate to actual source of worry....The Snowball Effect
- Restlessness or feeling on edge
- Being easily fatigued
- Difficulty concentrating or mind going blank
- Irritability
- Muscle tension
- Sleep disturbances (difficulty falling or staying asleep)



WHAT IS A PANIC ATTACK?

- An exaggeration of our body's natural fight or flight response → sense of dread and physical symptoms
- Typically last about 15 minutes but residual anxiety can remain
- May frequently be interpreted by the patient as a serious medical problem (e.g. heart attack)
- Full Panic disorder rare in HD

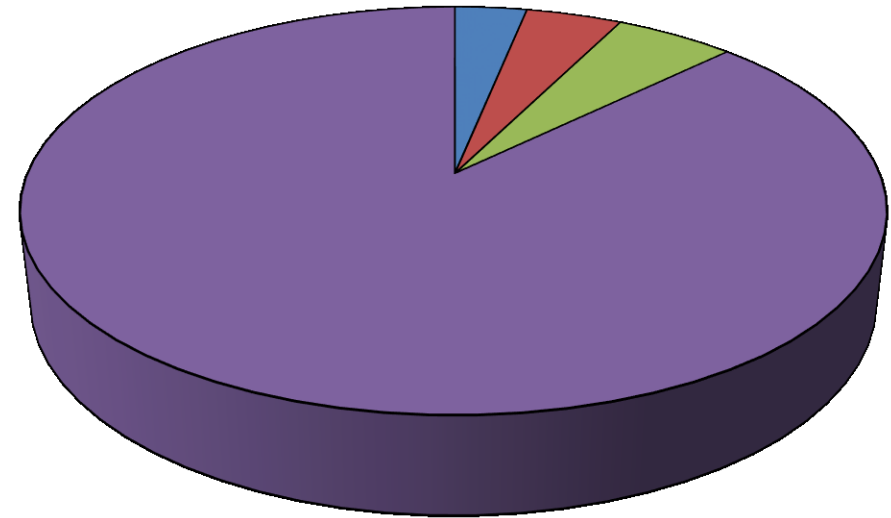
The Panic Attack Cycle



Social Phobia (social anxiety disorder)

- Worry about how one will be perceived in a social setting.
- Specifically relevant to HD
 - Choreiform movements
 - Revealing HD diagnosis to others
- Often leads to isolation and lower quality of life

My thoughts after talking to someone new



- Wow that went really well!
- How did I already forget their name?!
- Is it lunchtime yet?
- Sigh...They must think I'm the dumbest person on this entire planet

Scenario

- A person with HD living in a care facility had a serious episode where he choked on a morsel of food.
- Afterwards, with a speech therapist's help he could manage solid foods. Although he became worried that any meal would lead to choking.
- He insisted on cutting each bite exactly 10 times, refusing to eat if he could not and becoming increasingly anxious at mealtime.

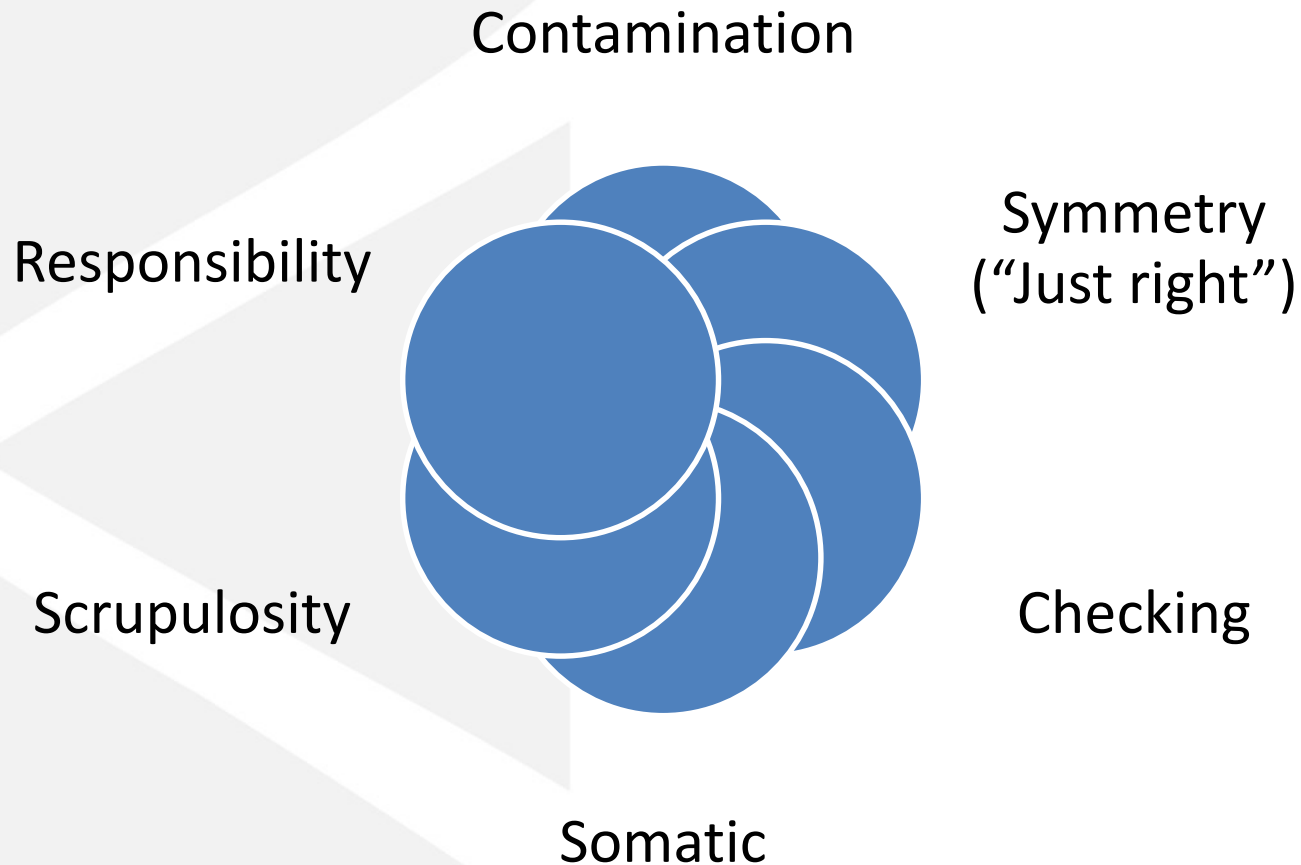
Obsessive Compulsive Traits

- Recurrent intrusive thoughts or impulses (obsessions) provoke anxiety.
- Compulsions are repetitive behaviors that are performed in response to an obsession or as part of a stereotyped routine that must be followed.
- Rituals may become so lengthy that individuals avoid the behavior altogether e.g. Showering

Perseveration

- Repetitive behaviors in persons with HD that occurs from dysregulation of the frontal lobes.
- Rigid thinking and difficulty in switching from one thought or activity to another. Usually cannot be reasoned out of it.
- Common early symptom of HD
- Often surrounding a change in functional level

OCD Subtypes



Just Right OCD?



Interventions for Anxiety in HD

- 3/5 studies showed significant anxiety reduction
- Successful treatments:
 - Olanzapine 5mg daily
 - Participation Education Program for HD
 - Intensive short inpatient therapy
- Significant study limitations: Low numbers, no control groups, and different outcome measures

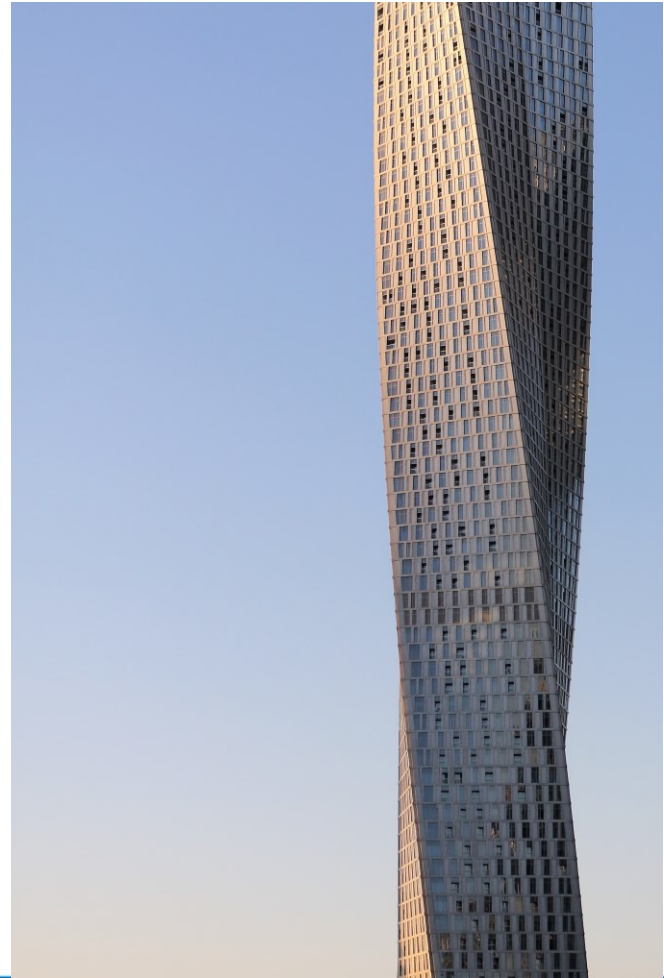
Anxiety and Distress Tolerance

Temperature

Exercise

Muscle relaxation

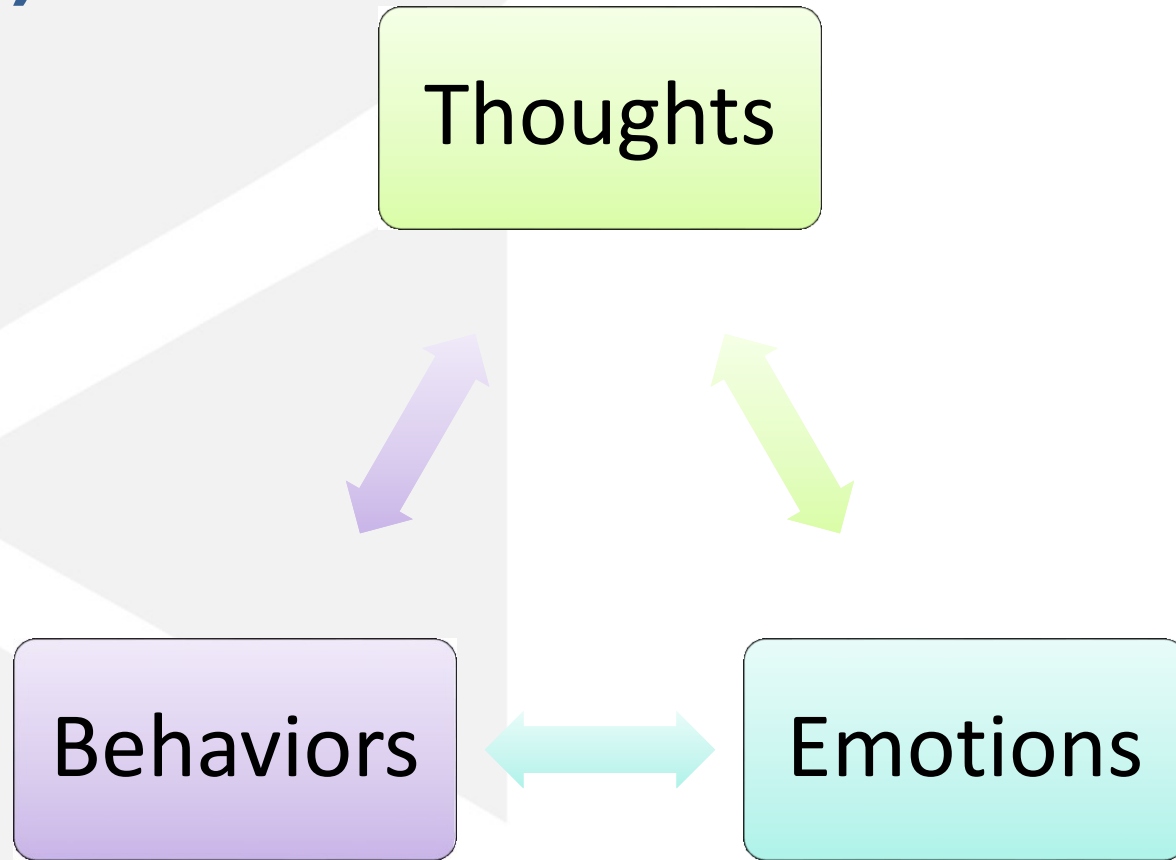
Paced breathing



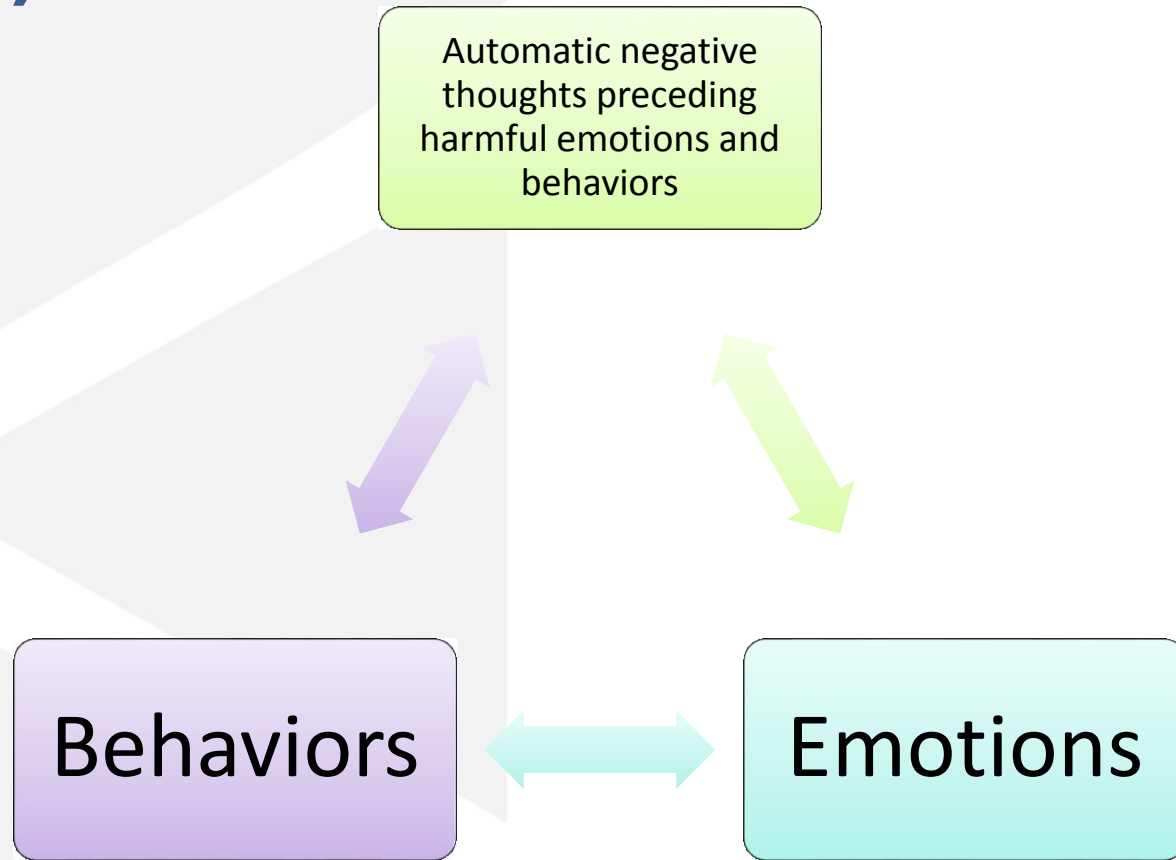
Behavioral and Environmental Management

- Minimize clutter at home
- Establish regular routines...and stick to them!
- Keep requests and questions straightforward
- Avoid discussing upcoming events until the day before if perseverating on the future
- OR do the exact opposite and bring up events with plenty of warning and add details slowly
- Plan ahead for changes in routines
- Cognitive Behavioral Therapy

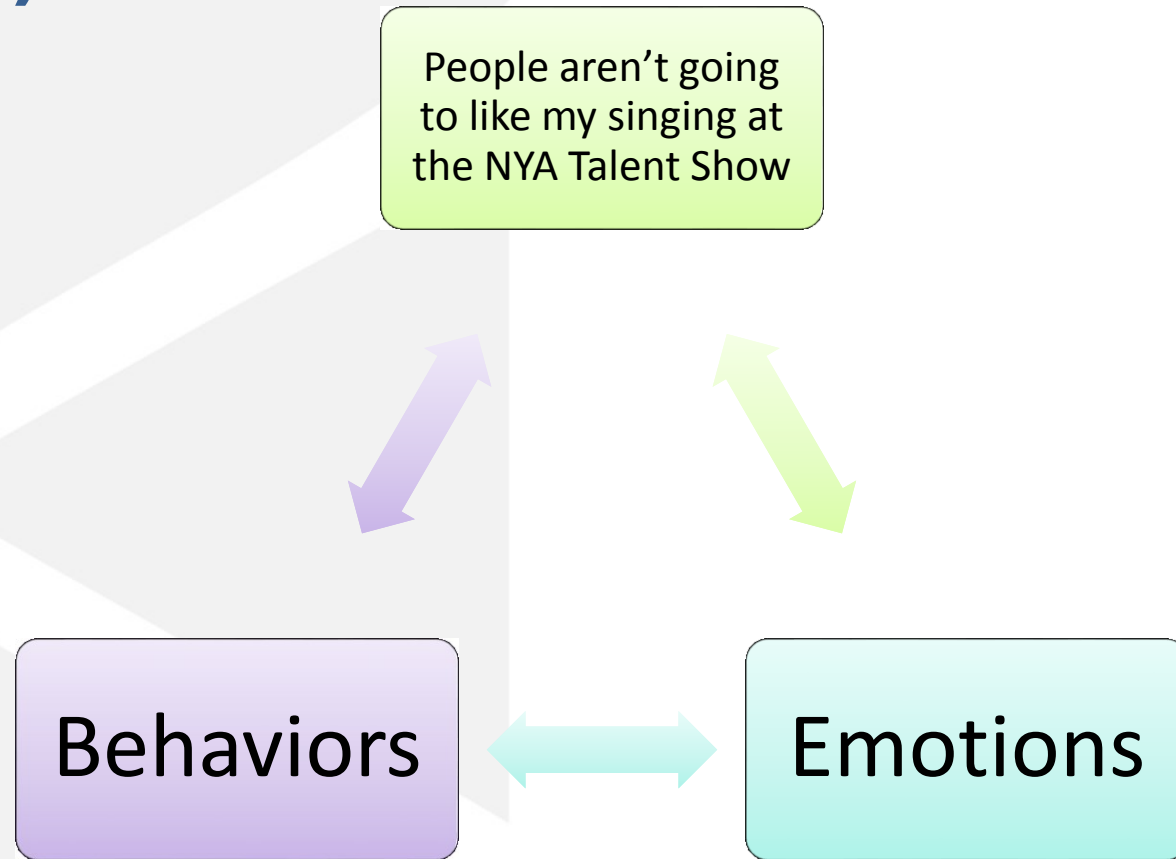
Cognitive Behavioral Therapy (CBT)



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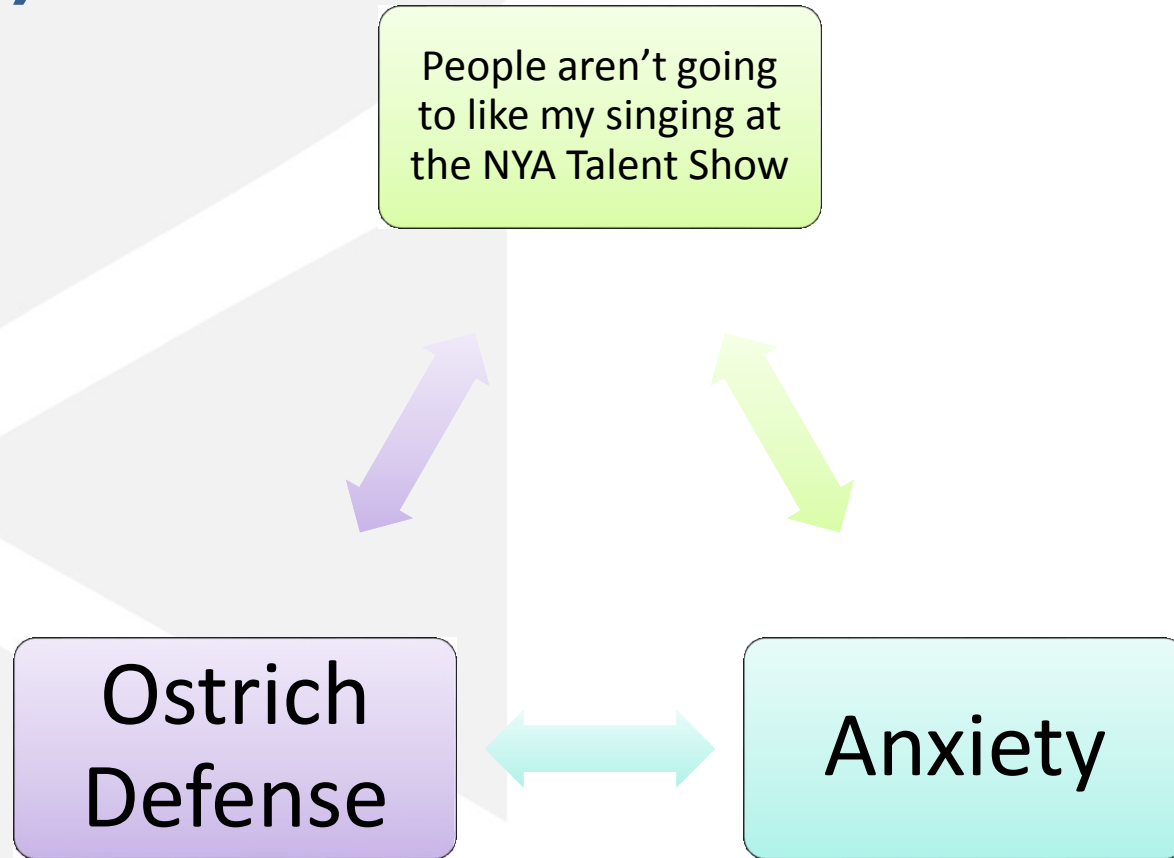
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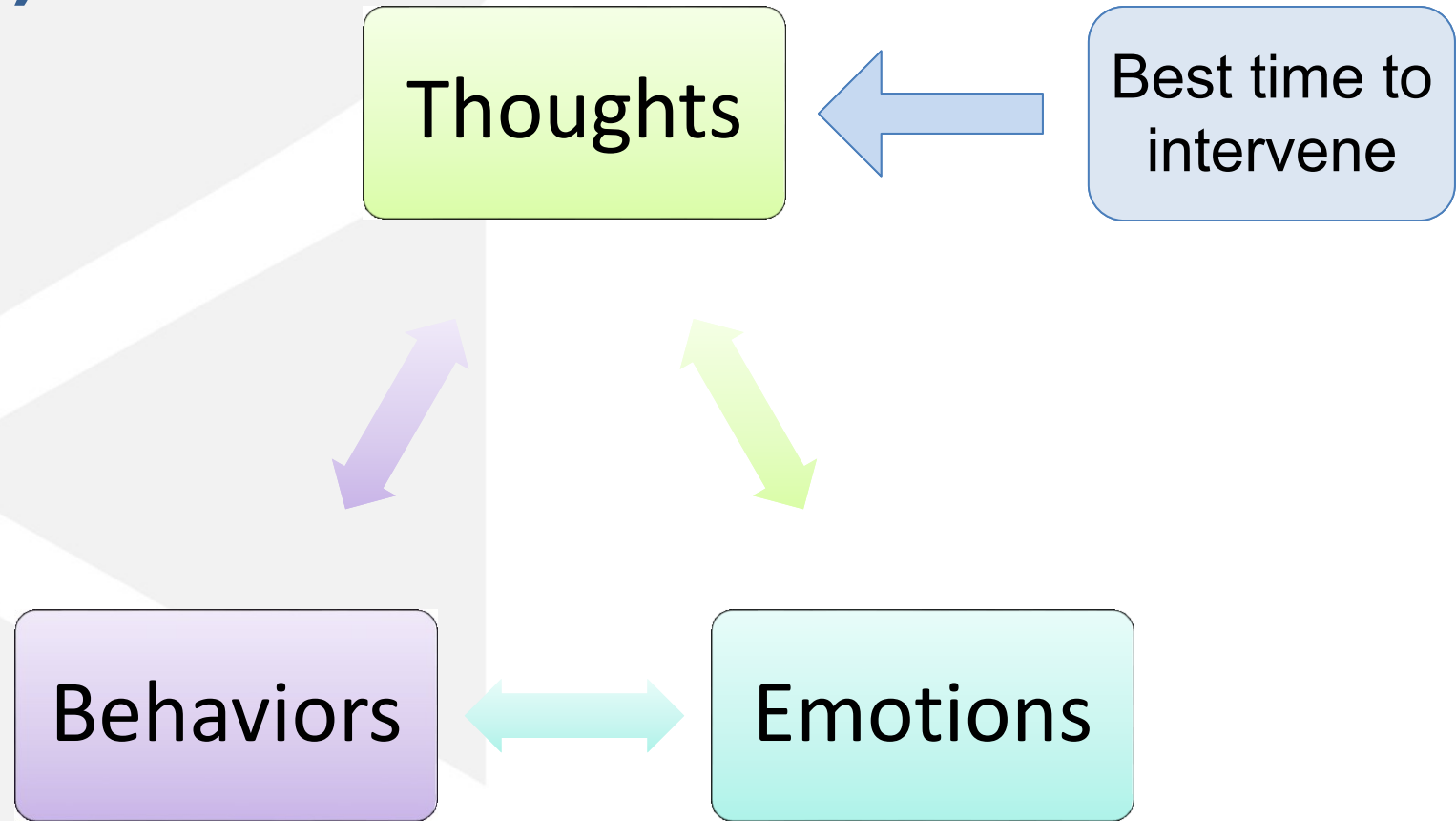
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Cognitive Behavioral Therapy (CBT)



Cognitive Behavioral Therapy (CBT)

**All or Nothing
Thinking**

Overgeneralization

Mental Filter

**Disqualifying the
Positive**

**Jumping to
Conclusions**

- Mind Reading
- The FortuneTeller Error

Catastrophizing

**Emotional
Reasoning**

**“Should”
Statements**

**Labeling and
Mislabeling**

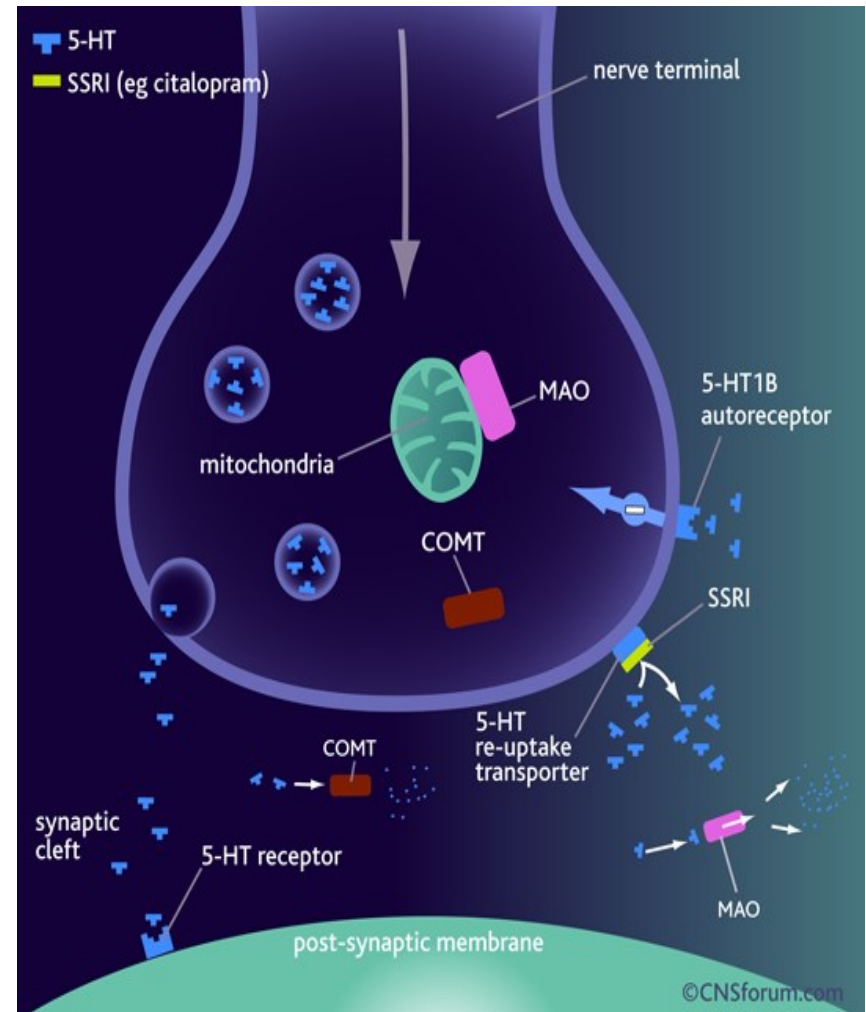
Personalization

Pharmacotherapy (Medications)



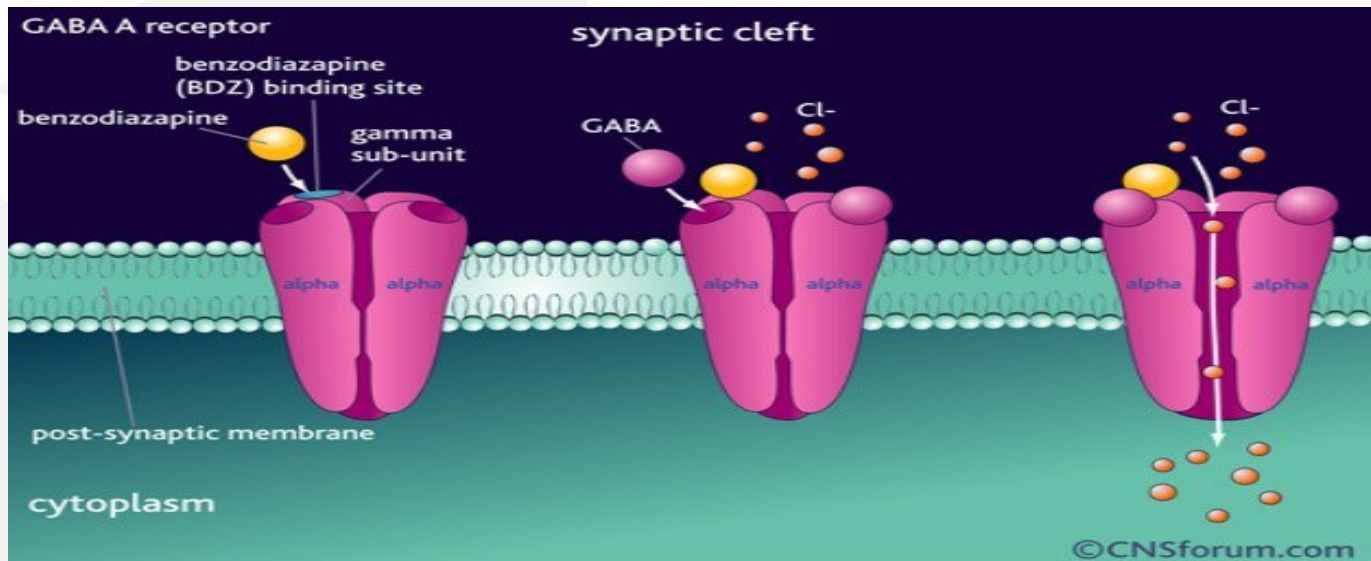
Antidepressants

- Selective serotonin reuptake inhibitors (SSRIs)
 - Citalopram (Celexa)
 - Escitalopram (Lexapro)
 - Sertraline (Zoloft)
 - Fluoxetine (Prozac)
 - Paroxetine (Paxil)
 - Fluvoxamine (Luvox)
- Selective Serotonin and Norepinephrine Reuptake Inhibitors (SNRIs)
 - Duloxetine (Cymbalta)
 - Venlafaxine (Effexor)
 - Desvenlafaxine (Pristiq)
- Serotonin 1A agent
 - Buspirone (Buspar)



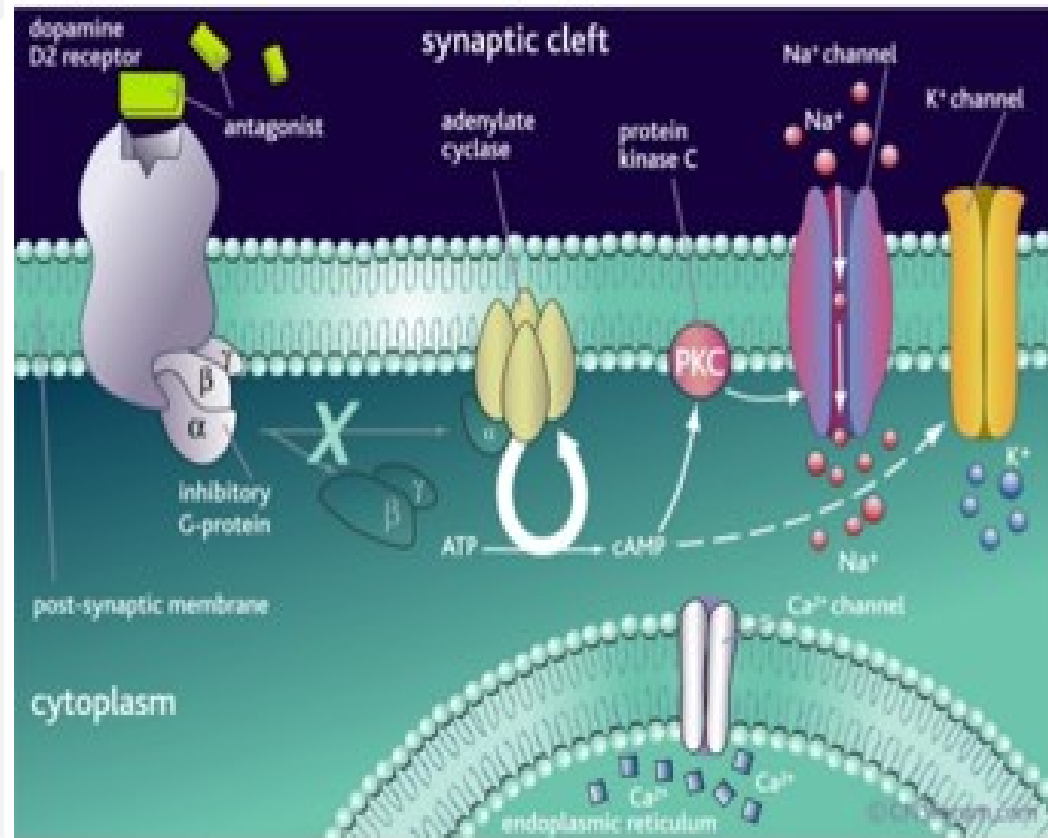
Benzodiazepines

- Short-acting
 - Alprazolam (Xanax)
- Intermediate-acting
 - Lorazepam (Ativan)
- Long-acting
 - Clonazepam (Klonopin)
 - Diazepam (Valium)



Neuroleptics

- Haloperidol (Haldol)
- Risperidone (Risperdal)
- Olanzapine (Zyprexa)
- Quetiapine (Seroquel)
- Aripiprazole (Abilify)



Other Agents

- Antihistamines
 - Hydroxyzine (Vistaril)
 - Diphenhydramine (Benadryl)
- Beta Blockers
 - Propranolol (Inderal)
- Anti-epileptics

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“Anxiety is like a rocking chair. It gives you something to do, but you don’t get very far.”

Thank you!

Any Questions?

(Or please email them to
fishmando@upmc.edu)

Genetic Testing

- Majority of studies found no difference between anxiety levels in noncarriers and premanifest HD carriers
- No differences up to 5 years after genetic test
 - Both groups relieved just to have an answer?
- In HD expansion carriers who tested positive:
 - Anxiety had not decreased after 1 year
 - Anxiety had decreased after 5 years