NPTC- AUGUST 2023

PRIMARY CARE BEHAVIORAL HEALTH FOCUS ON THE TREATMENT OF PAIN AND SUBSTANCE USE BEHAVIORS

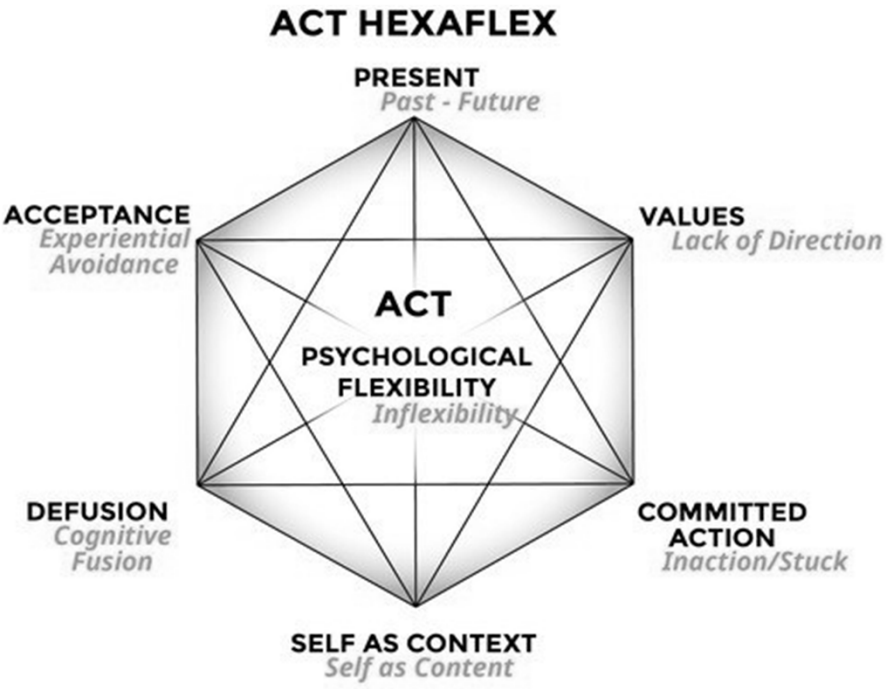
Dr. Phillip Hawley

Intro

- Thesis/Dissertation: Focus on migraines and behavioral treatments for headaches in Primary Care.
- Internship 2013-14
  - York, PA (Wheatlyn Family Medicine, York Hospital, Meadowlands)
- Post-Doc/Job: Yakima Valley Farm Workers
  - Toppenish Medical-Dental Clinic
  - Washington State Lead
  - PCBH Program Director 2020-present
  - > 10,000 Primary Care visits over 9 years as a BHC
  - Facilitated Quality of Life group for patients with chronic pain in Toppenish, WA for 5 years.

Context

- Understanding human behavior is crucial to working with patients and helping individuals work towards value congruent futures.
- Contextual interview
- ACT/ F-ACT based approaches and ….
- **Game theory**
- Today I am going to outline some approaches to how we best understand people through what they do and what they seemingly won't do.

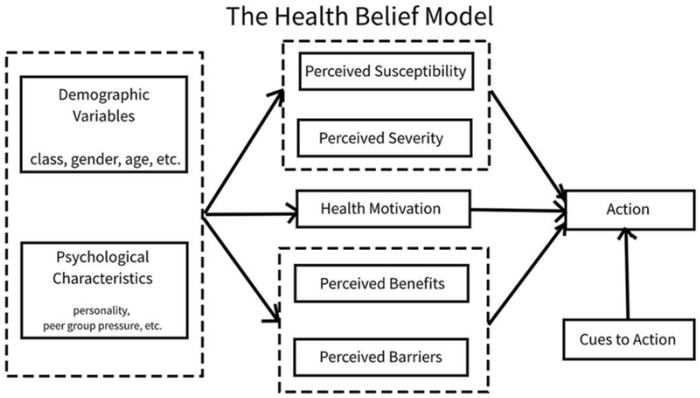


VALUES

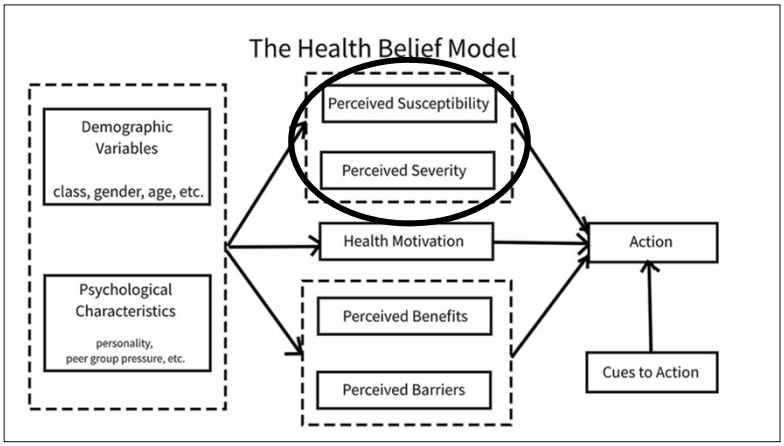
Understanding what is important to each individual can guide us in our work with them

Without these understandings we make A LOT of assumption about what someone wants and why they want it

Models to understand behaviors



Models to understand behaviors



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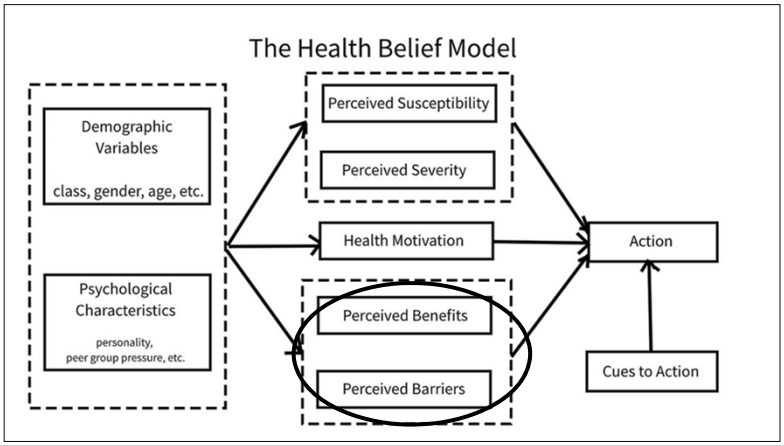
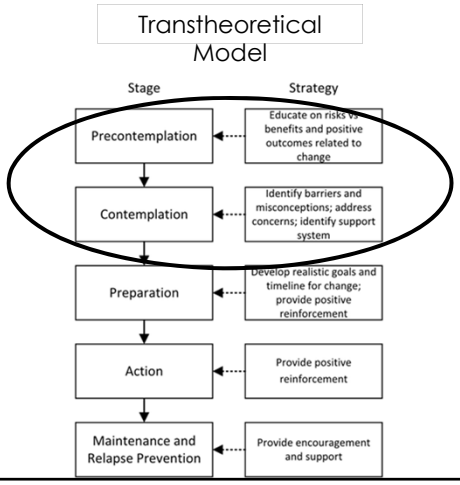


Models to understand behaviors

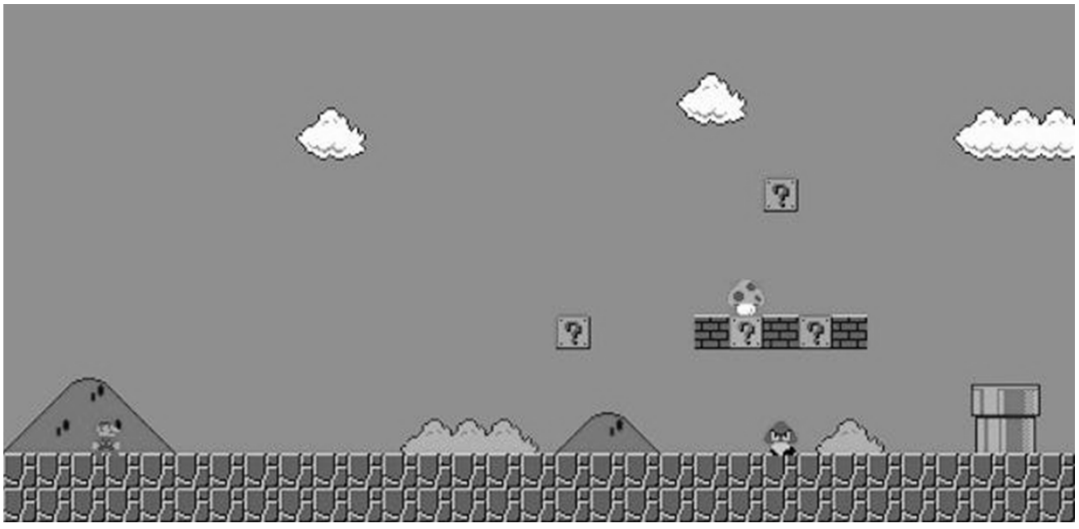


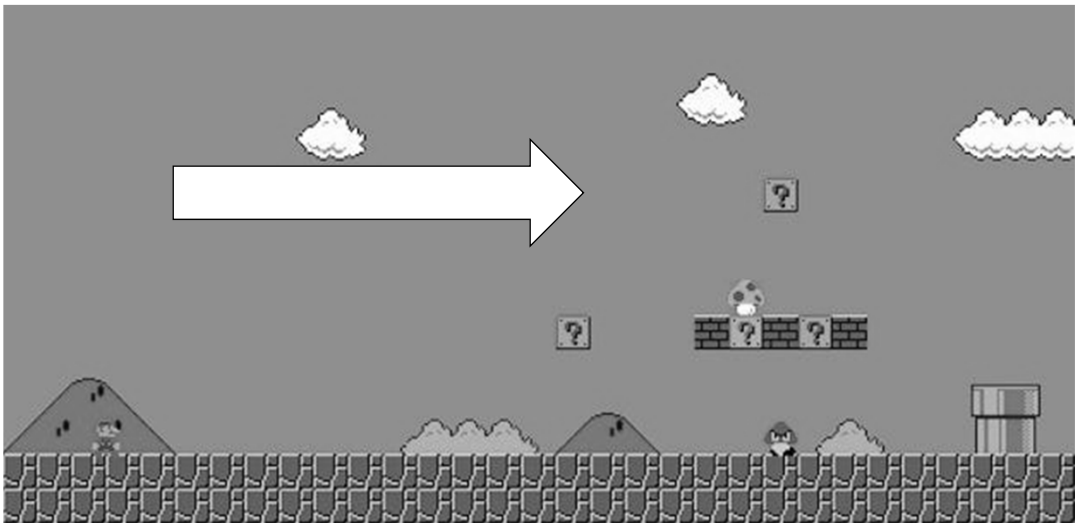
Game theory

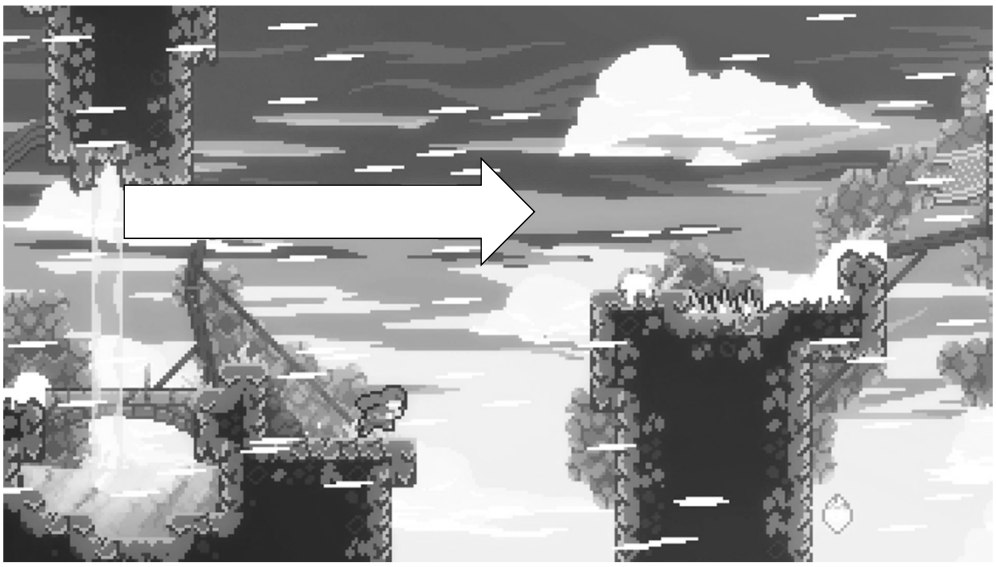
- Game theory is a theoretical framework that is used for the optimal decision-making of players in a strategic setting. A key characteristic of game theory is that a player's payoff is dependent on the strategy of other players.
- Game theory is thought to be applicable to any situation with two or more players where there are known payoffs or quantifiable consequences. This theory helps players to determine the most likely outcomes while considering the actions and choices of others, which will affect the result.
- John von Neumann, a mathematician and physicist, was believed to have developed the idea of game theory. He collaborated with economist Oskar Morgenstern on a book called *A Theory of Games and Economic Behavior*; in 1944.
- In the book, they assert that **any economic situation could be defined as the outcome of a game between two or more players.**

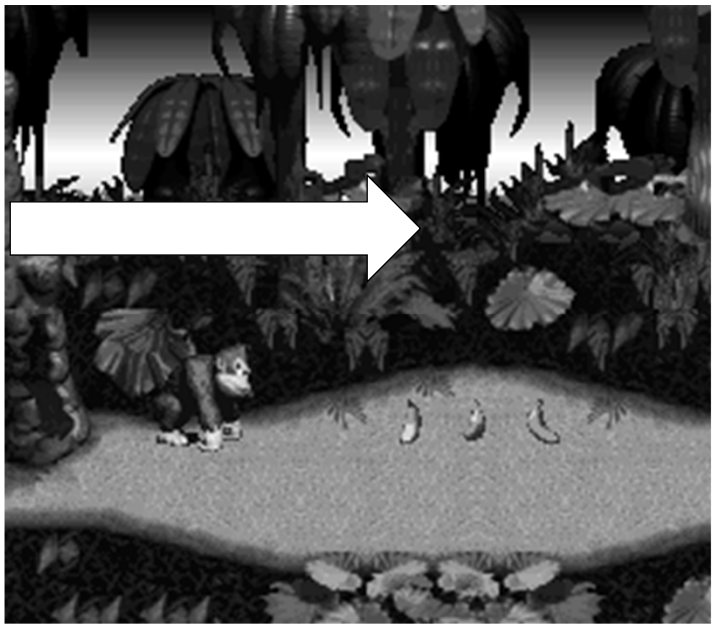
Game theory

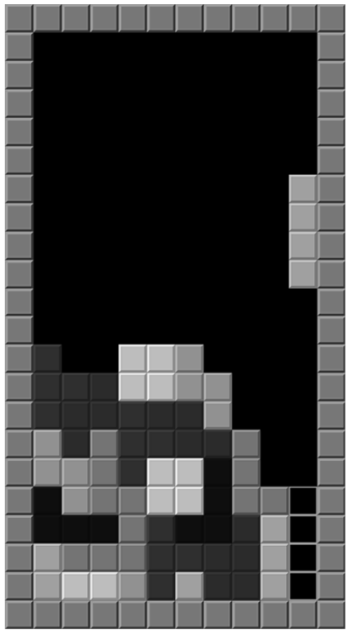
- **I am going to use the word GAME to reference rules/pathways that individuals use to make decisions and to guide their behavior.**
- **This is not intended to minimize/downplay the severity of suffering or anyone's experience. I do not use the word GAME to imply that individuals fully understand or even are aware why they are doing what they are doing, or that the process is fun/enjoyable.**
- **This is just another approach/theory and utilizes the vocabulary from another field of research.**

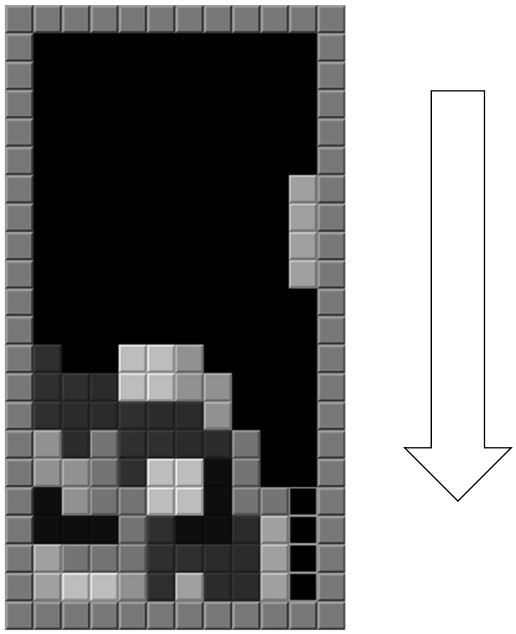




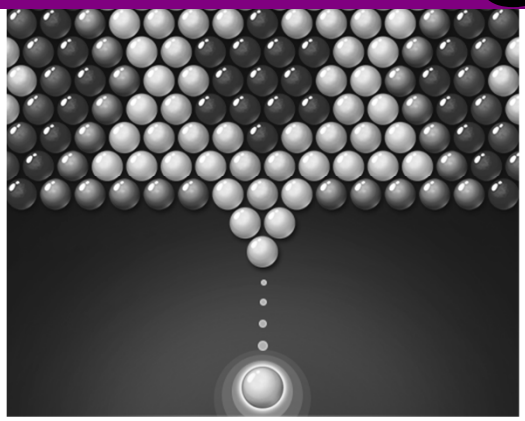


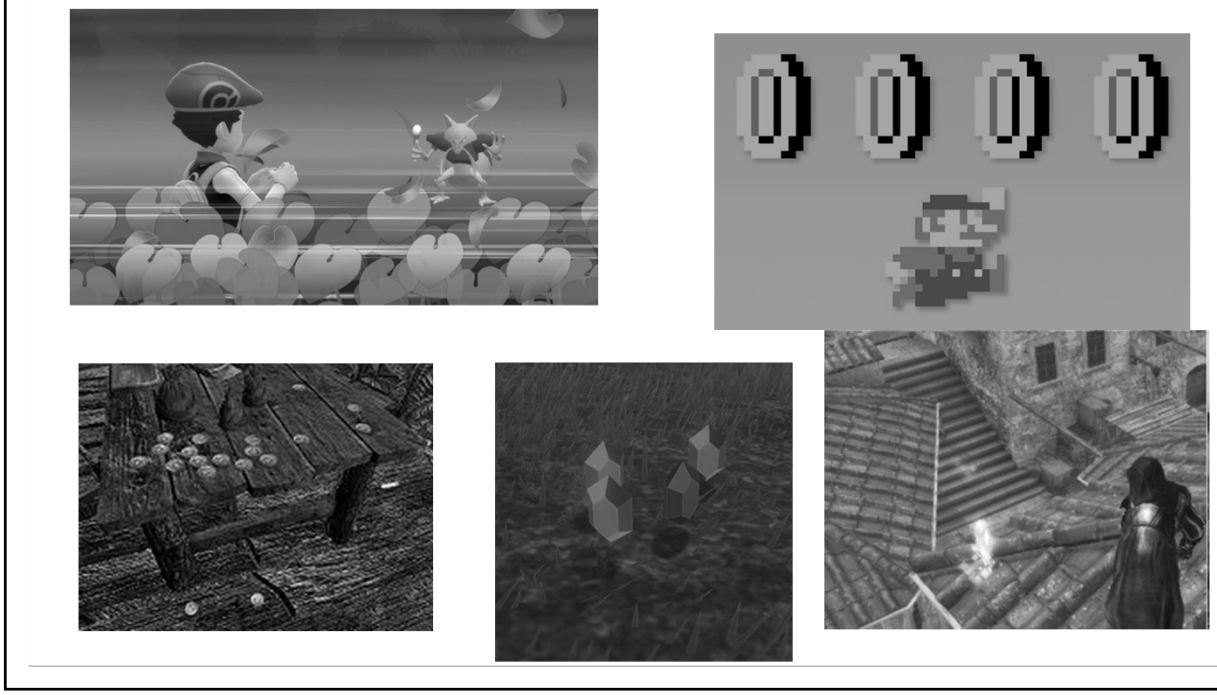






Like colors together

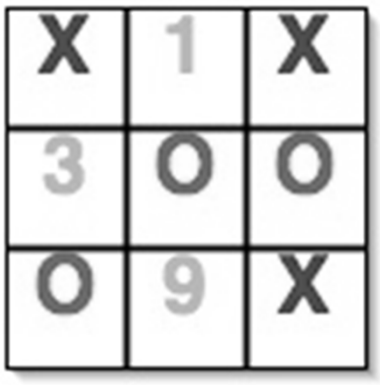





Collect
them ALL

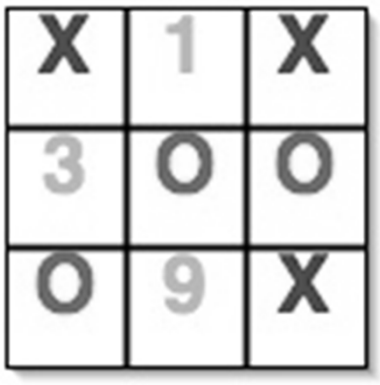
Game Theory

- Where will "X" go next
- 1?
- 3?
- 9?



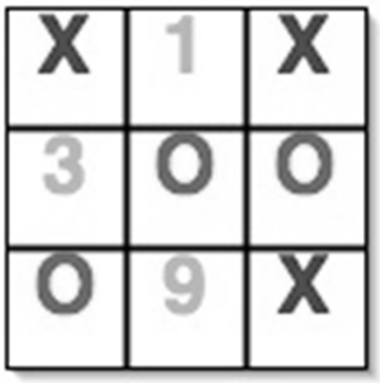
Game Theory

- Why?



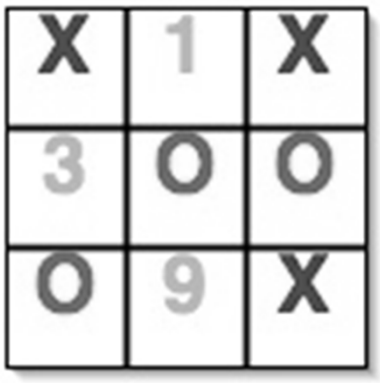
Game Theory

- Game theory assumes that people are trying to win the game
- Only when you know what is most important can you guess what will happen



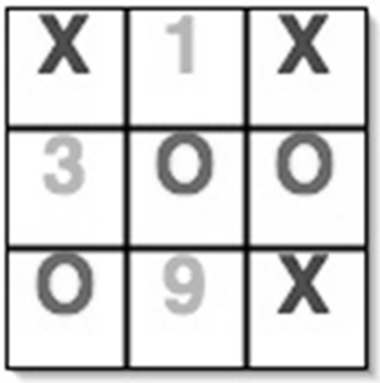
Game Theory

- What happens when we assume winning (or any set of rules) is what is most important to an individual?



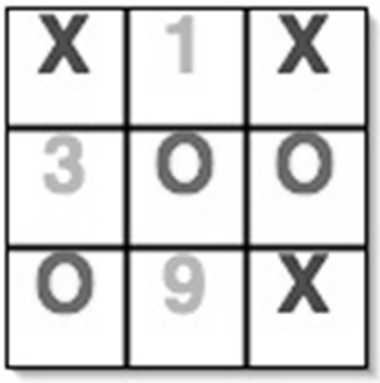
Game Theory

- What is a situation where someone might play "X" in space 3?
- Space 9?



Game Theory

- What is a situation where someone might play in space 3?
- Trying to tie the game
- Space 9?
- Trying to lose the game



Behavioral Economics

- Loses and Gains are valued differently
- *Which of the following would you prefer:*

1.A) A certain win of $250, versus
B) A 25% chance to win $1000 and a 75% chance to win nothing?

2.How about:
C) A certain loss of $750, versus
D) A 75% chance to lose $1000 and a 25% chance to lose nothing?

- Tversky and Kahneman's work shows that responses are different if choices are framed as a gain (1) or a loss (2). When faced with the first type of decision, a greater proportion of people will opt for the riskless alternative A), while for the second problem people are more likely to choose the riskier D). This happens because we dislike loses more than we like an equivalent gain: **Giving something up is more painful than the pleasure we derive from receiving it.**

Behavioral Economics

- Significant overlap with health belief
- Severity and Susceptibility are considered in what we might "gain" or what we could "lose"
- A healthy person making decisions to avoid (lose) health is different than a sick person making decisions to (gain) health
- How likely and how bad it is PRECIEVED to be also allows people to place value on their decisions

Bringing it all together

- A person's behavior almost always MAKES SENSE when you understand what is important to them, their perception, and their evaluation of the choices they believe they have
- We need to understand why it makes sense to them and address ambivalence when that is present if we want to work together and do so in a collaborative way

- Hoarding
- Could be viewed as illogical, irrational, "dumb", etc.
- But when we think about these behaviors through the lens of that person; getting rid of items (loss) may be viewed as wasteful, painful, irresponsible, etc.

- Disordered Eating Behaviors
- Could be viewed as damaging, shallow/vain, unhealthy, etc.
- But when we think about these behaviors through the lens of that person; getting rid of a perceived body image (loss) might be viewed as losing relationships, love, attachment, power/control, etc.

- Vaccine Hesitancy
- Could be viewed as selfish or irresponsible
- But when we think about these behaviors through the lens of that person; getting rid of freedoms/choice or perceived health (loss) may be the more difficult decision

ACT, Values, Context

When we work with someone we need to understand what is "valuable" to them and what matters to them.

YOU ARE NOT CONVINCING PEOPLE THAT A PARTICULAR VIEW IS **CORRECT**

Understanding Values

Love, Work, Play and Health

Love	Where do you live? With whom? How long have you been there? Are things okay at your home? Do you have loving relationships with your family or friends?
Work	Do you work? Study? If yes, what is your work? Do you enjoy it? If not working, are you looking for work? If not working and not looking for a job, how do your support yourself?
Play	What do you do for fun? For relaxation? For connecting with people in your neighborhood or community?
Health	Do you use tobacco products, alcohol, illegal drugs? Do you exercise on a regular basis for your health? Do you eat well? Sleep well? (If patient has chronic disease) Do you find it difficult to manage your health problems? Do you have a doctor you like?

Treatment planning

- Once we understand someone's values we need to set this as the goals
- ACT would say we are working to increase VALUE CONGRUENT BEHAVIORS

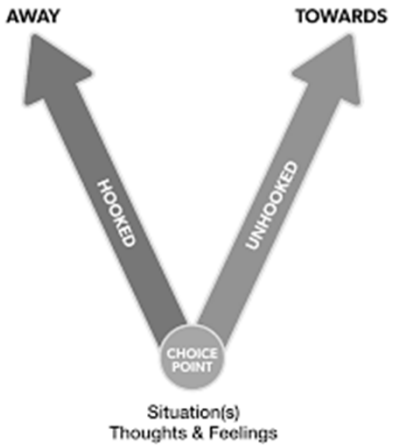
Treatment planning

- Practice
- Rewrite these GOALs in an ACT perspective
- **(Think: What value congruent behavior are we increasing?)**
- QUIT SMOKING
- EXERCISE MORE
- GET ALL HOMEWORK DONE
- CLEAN YOUR ROOM

Thoughts, Emotions, Associations, Memories

- Sushi Train
- https://www.youtube.com/watch?v=tzUoXJVl0wo&ab_channel=Dr.RussHarris-AcceptanceCommitmentTherapy

Thoughts, Emotions, Associations, Memories



Treatment success

- While symptom reduction is not the main purpose of ACT we often see people report lowered symptoms as they are living more value congruent lives and engaging in meaningful activities.
- Even when symptoms do not reduce (or not significantly reduce) patients are still living a life that they can feel proud about and is more meaningful to them. They become less stuck on the idea that they need to feel/think a certain way BEFORE they make changes

WHAT ABOUT ME???

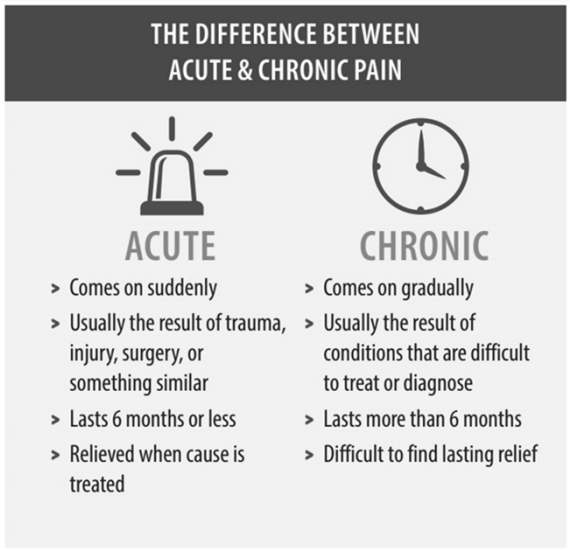
- Coping with other's choices is one of the hardest parts of the job
- Some individuals will not come to realize that their behavior is drastically shortening their life or drastically impacting their quality of life (or those around them)
- Some individuals will choose to value things in a different way than you (or even everyone else) and we need to learn to sit with this discomfort
- Learning that your role is not to "fix" everyone is a huge part of the early-career process and mid-career and probably late-career also (IT IS HARD)
- Self-care, stress management, and supervision are all wonderful places to take the time needed to regroup, discuss, and process when our own expectations do not mesh with patients.
- REMEMBER THAT THERAPY THING WE TALK ABOUT WITH PATIENTS AND WENT TO SCHOOL FOR. IT WORKS FOR US TOO!!! (and medications when appropriate)

Function of Pain

- Why do we have this sensation????
- What would it be like to not feel pain???
- Why does our body sometimes send pain signals when I am not actively being hurt?

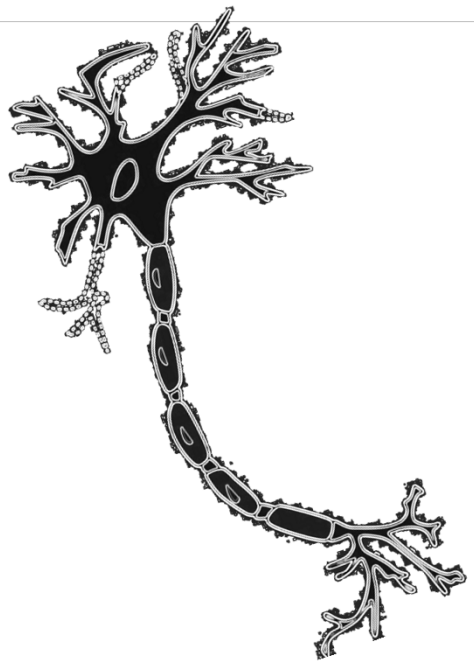
What is Chronic?

- Acute versus Chronic



What is Chronic?

- Acute versus Chronic



Rating pain

0: Hi. I am not experiencing any pain at all. I don't know why I'm even here.

1: I am completely unsure whether I am experiencing pain or itching or maybe I just have a bad taste in my mouth.

2: I probably just need a Band Aid.

3: This is distressing. I don't want this to be happening to me at all.

4: My pain is not fucking around.

5: *Why is this happening to me*??

6: *Ow*. Okay, my pain is *super* legit now.

7: I see Jesus coming for me and I'm scared.

8: I am experiencing a disturbing amount of pain. I might actually be dying. Please help.

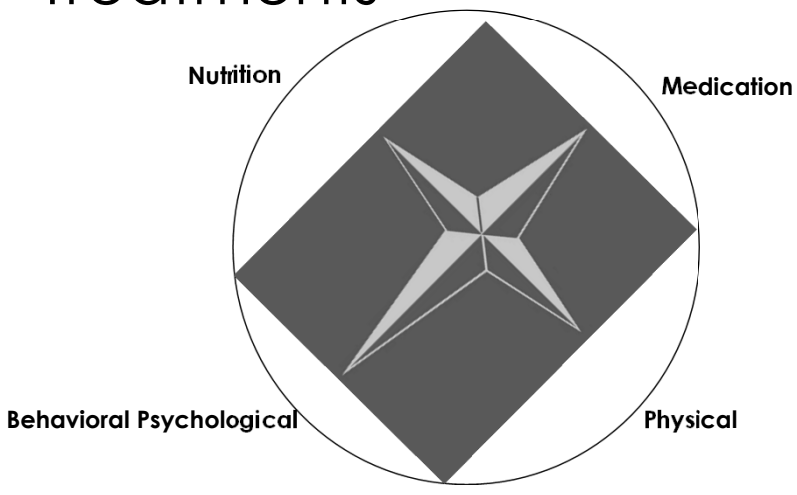
9: I am almost definitely dying.

10: I am actively being mauled by a bear.

11: Blood is going to explode out of my face at any moment.

Too Serious For Numbers: You probably have Ebola. It appears that you may also be suffering from Stigmata and/or pinkeye.

Treatments



Medication

- Balancing risk and benefits
- Healthy communication about Opioids
- OTC education
- Creams, lotions, etc.

Activity

- 3 groups.
- 3-4 min to answer this this question

Activity

- 3 groups.
- 3-4 min to answer this this question

- What is in these OTC medications

Know your labels

Physical

- A variety of physical therapy and exercises can also build/restore physical strength and improve pain
- Muscle loss/ Muscle tone
- Balance
- Gait training/ Posture
- Stressing the importance of movement over "Exercise" to reduce barriers and expectations to obtainable levels

Great

Excessive

Nutrition

- To inflame, or not to inflame, that is the question

Anti- Inflammatory foods

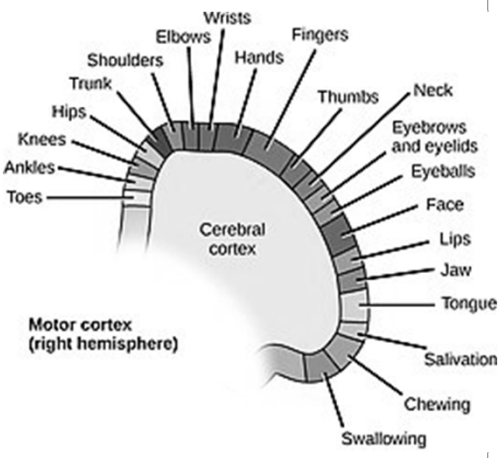
Anti- Inflammatory foods

Behavioral/ Psychological

- Skills to teach
- PMR
- Breathing
- Visualization- importance of pain free movement
- CBT
- ACT skills

Practice

- Visualization
  - Importance of creating immersive visualization
  - Visualization of PAIN FREE movement
  - Connecting to values



Context and Headaches

What makes a Headache

- Headaches are different for each person, but there are some things that we find in every headache.

How Often???

- This answers the question:

I have a headache every _____ days.

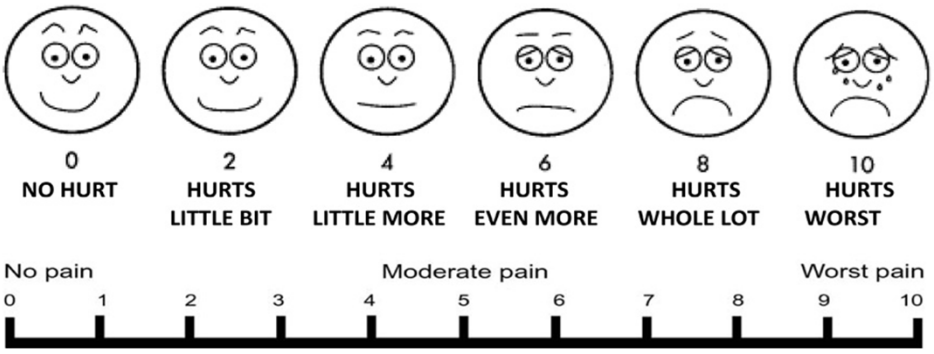
How Long???

- How long does each headache last?

Where Does it Hurt???

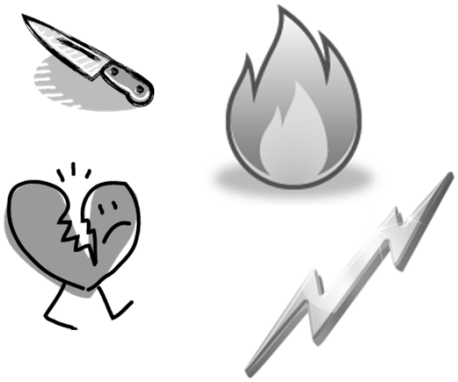
- Where on your body do you feel your headache?

How Bad Does it Hurt???



What Does it Feel Like???

- People use many different words to describe their pain.
- Burning
- Stabbing
- Throbbing
- Pulsating
- Tingling



Is There Muscle Tension???

Do you feel tightness in your muscles when you have a headache?

Do You Get Sick???

- Nausea (feeling sick to your stomach)
- Vomiting

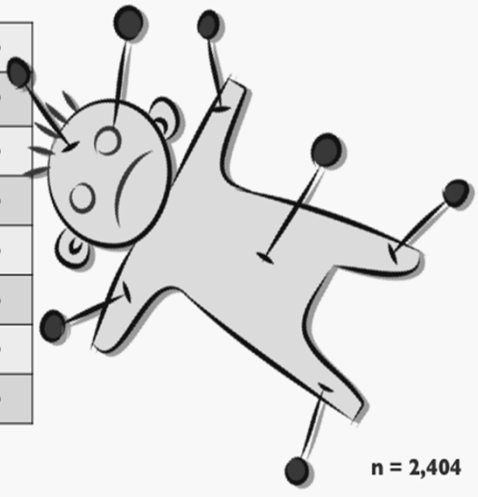
Does Light Make It Worse???

Does Sound Make It Worse???

Does Moving Make It Worse

Migraine In America 2012

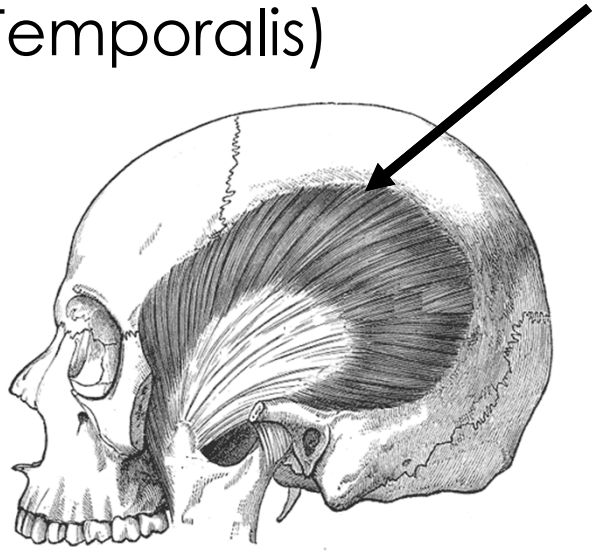
Head Pain	98.0%
Sensitivity to Light	91.1%
Sensitivity to Sound	83.4%
Difficulty Concentrating	80.2%
Nausea & Vomiting	78.6%
Fatigue	74.5%
Neck Pain	72.1%
Sensitivity to Smells	63.3%



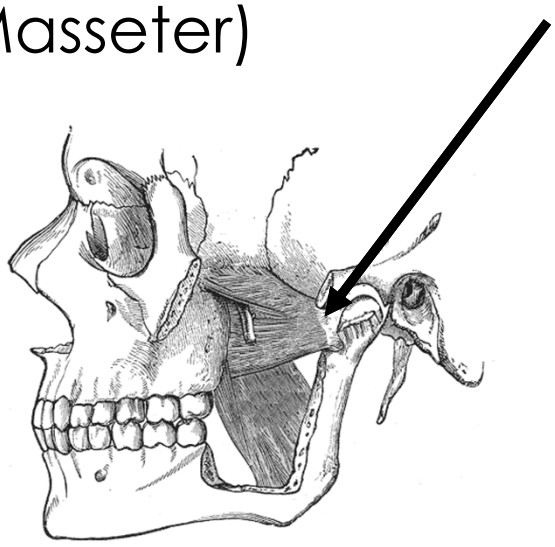
Muscles

- All movement in the body requires muscles
- We control the movement of the muscles of our Arms, Legs, etc.
- Muscles contract to move our bodies
- This is true for the muscles of our head and face too!

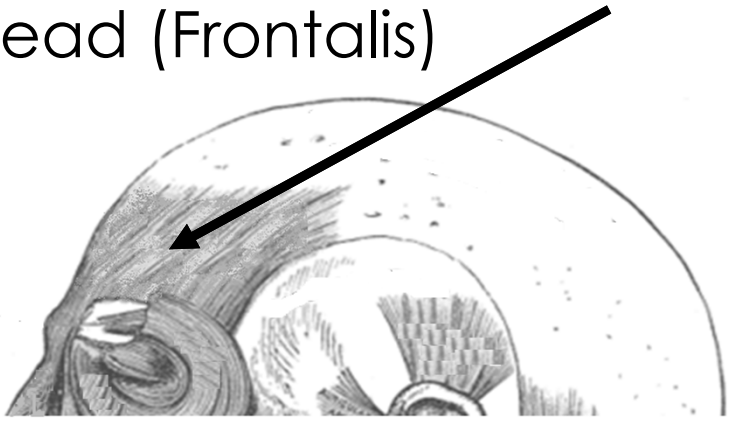
Side (Temporalis)



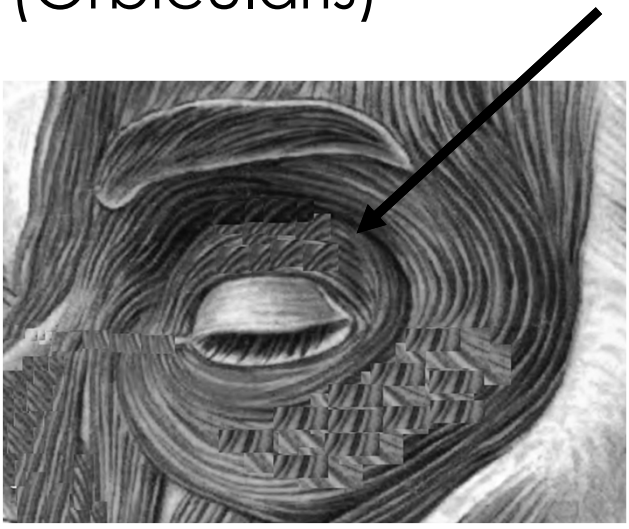
Jaw (Masseter)



Forehead (Frontalis)

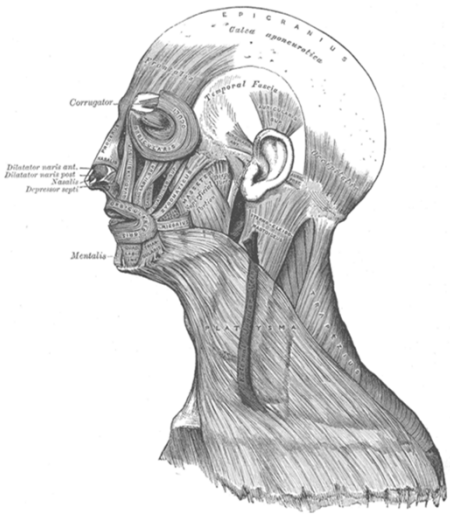


Eyes (Orbicularis)



Summary

- We use the muscles of our head and face everyday.
- This leads to pain and tightness in our muscles
- These muscles can hurt and need rest to feel better



How Do We Relax Our Muscles???

- Progressive Muscle Relaxation
- Learning how to notice how tight our muscles are and how to practice relaxing them

Tense Face

Relaxed Face

- What is a relaxed face?
- How do you know you are relaxed
- What does it look like to others?

Barriers

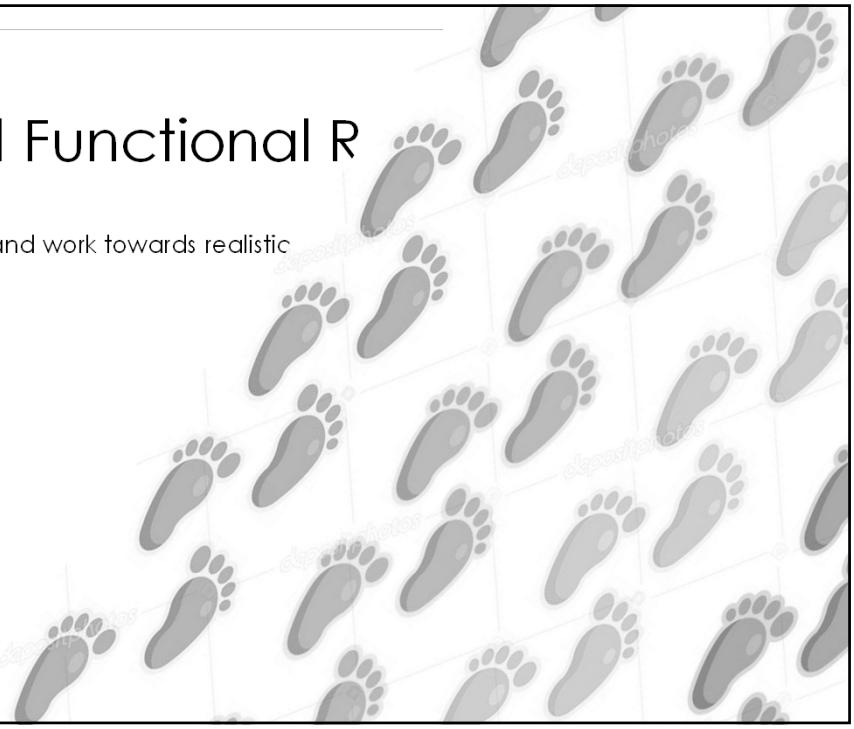
- A barrier is anything that will make changing hard.
- What barriers do you have?
- How do others deal with barriers?
- What does it mean to make mistakes?

Conclusion

- Session 1: **A**wareness of tension
  - What is a headache?
  - How our muscles are involved?
  - How to relax (PMR)
- Session 2: **I**dentify a relaxed position
  - Triggers
  - Medications
  - Goals
- Session 3: **R**eplace tight with relaxed
  - Barriers
  - Alternative Treatments

Values and Functional R

- Finding ways to identify and work towards realistic



#2 – Don't get addicted to Opioids

- https://www.cnn.com/2023/07/24/health/habits-live-longer-wellness/index.html

Medication

- Discussions about opioids
  - Importance of understanding dosage and risk (more is not better, but more is riskier)
  - Importance of understanding risk to others (possibility of a child finding pills)
  - Value based conversation to mediate conversations between providers and patients.
    - Help patients understand how to communicate to balance medication and behavioral options.
    - Teach providers why patients may exhibit emotions when oping with pain and handle this poorly
    - Engage the team to set goals and work towards them

Narcan

- https://prescribetoprevent.org/patient-education/materials/

SUD and MAT

- Consider co-occurring dx.
- MAT options
- Gabapentin, Wellbutrin, naloxone, buprenorphine, methadone, naltrexone

SUBSTANCE USE, ABUSE, AND ADDICTION

Understanding Substance Use, Abuse, and Addiction

- Substance Use Disorder (SUD) (DSM-5)
  - Pattern of behavior characterized by impaired control, social impairment, and risky use of a drug
    - Mild
    - Moderate
    - Severe
- Behavioral Addiction
  - New category of behaviors such as gambling that display the characteristics of substance abuse disorders

Substance Use Disorder

- Causes more deaths, illnesses, and disabilities than any other preventable health conditions
  - Alcohol; tobacco
- High school students' consumption of alcohol, tobacco, stimulants, and prescription opioids at lowest levels in 40 years
- Smoking marijuana and vaping more popular than cigarettes
- Use and misuse of designer drugs is national crisis

Your Health Assets
Social Media Addiction

- How can you tell if your social media use may be bordering on a behavioral addiction?
  - Is your social media use deeply integrated into your daily life?
  - Do you depend on social media use for excitement throughout the day?
  - Do you need to spend more time to get a "buzz" from social media?
  - Do you get nervous when you are not on social media?
  - Does your use of social media cause you trouble?
  - Have you tried to cut back on your use of social media but failed?

Some Basic Facts

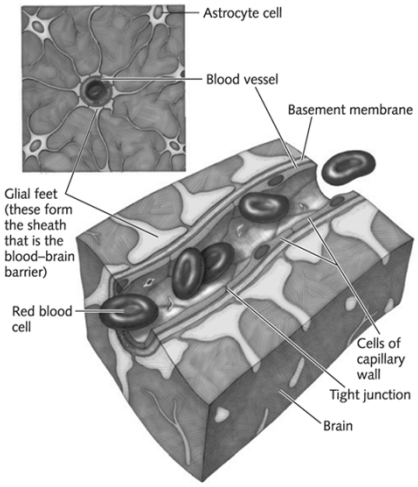
- Drug Abuse
  - Use of a drug to the extent that it impairs the user's biological, psychological, or social well-being
  - Alcohol and tobacco the most widely used drugs worldwide
  - Resurgence of marijuana use and synthetic narcotics abuse
  - Prescription medication and OTC medication abuse on rise

Mechanisms of Drug Action

- Drug Ingestion or Administration
  - Orally, rectally, injection, inhalation, absorption through skin
- Physiological Effects of Administration
  - Injected or inhaled: Stronger and more immediate effects than swallowed
  - Drug lipid solubility affects blood–brain barrier passage and placental barrier permeation
- Teratogens
  - Drugs, chemicals, and environmental agents that can damage the developing person during fetal development

The Blood–Brain Barrier

- Unlike the porous blood capillaries in most other parts of the body, those in the brain are tightly packed, forming a fatty glial sheath that provides a protective environment for the brain
- The glial sheath develops from the nearby astrocyte cells
- To reach the brain, a drug first must be absorbed through the capillary wall and then through the fatty sheath



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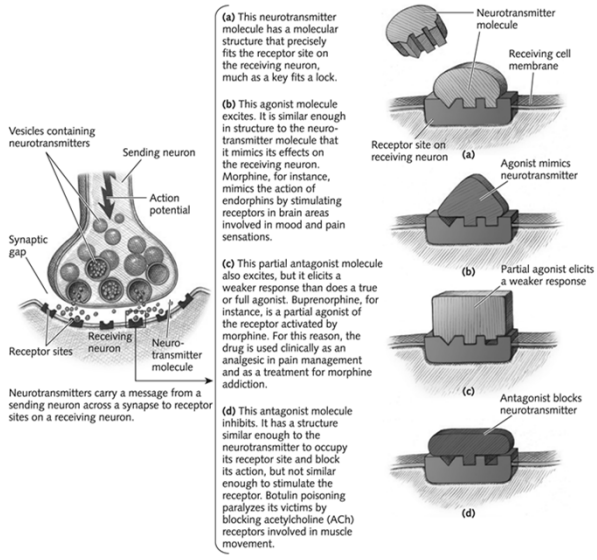
Drugs and Synapses

- Agonist
  - A drug that attaches to a receptor and produces neural actions that mimic or enhance those of a neurotransmitter
  - Partial agonists
- Antagonist
  - A drug that blocks the action of a neurotransmitter

Agonists, Partial Agonists, and Antagonists



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Addiction, Dependence, and Tolerance (part 1)

- Substance Use Disorder
  - Pattern of behavior characterized by impaired control, social impairment, and risky use of a drug (DSM-5)
  - Involves presence of three or more indicators
- Dependence
  - A state in which the use of a drug is required for a person to function normally

Addiction, Dependence, and Tolerance (part 2)

- Withdrawal
  - Unpleasant physical and psychological symptoms that occur when a person abruptly ceases using certain drugs
- Neural Sensitization Theory
  - Addiction is the result of efforts by the body and brain to counteract the effects of a drug to maintain an optimal internal state
- Tolerance
  - State of progressively decreasing responsiveness to a frequently used drug
  - Neuroadaptation

Psychoactive Drugs

- Psychoactive drugs affect mood, behavior, and cognition by altering the function of neurons in the brain
  - Hallucinogens (psychedelic drugs)
  - Stimulants
  - Depressants
  - Barbiturates
  - Opiates
  - Drug potentiation

Biomedical Models: Addiction as Disease (part 1)

- Often assumed that addicts inherit a biological vulnerability to physical dependence
- Concordance Rate
  - Rate of agreement between a pair of twins for a given trait

Biomedical Models: Addiction as Disease (part 2)

- Withdrawal–Relief Hypothesis
  - Drug use serves to restore abnormally low levels of key neurotransmitters
    - Support: Depression, anxiety, low self-esteem are associated with neurotransmitter deficiencies
    - Shortcomings: Does not explain why addicts begin taking a drug in the first place, or why relapses are common even long after withdrawal symptoms have subsided

Reward Models: Addiction as Pleasure Seeking (part 1)

- Genetic Reward Deficiency Syndrome
  - Certain addictions occur when brain's reward circuitry malfunctions and leads to powerful cravings
  - Addiction is motivated by pleasure seeking

Reward Models: Addiction as Pleasure Seeking (part 2)

- Role of Dopamine
  - Plays major role in pleasurable behaviors
  - Is not reabsorbed by sending neuron, remains in synapse, and continues to excite neuron
  - Release may underlie addiction mechanisms
  - Causes overstimulation of nucleus accumbens (NAC)

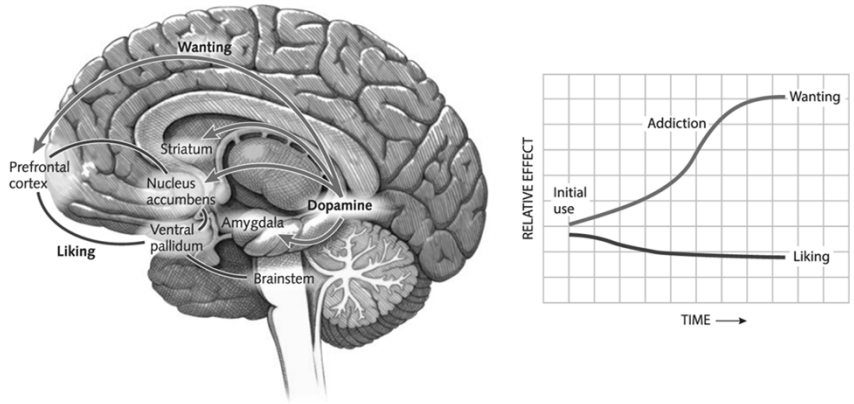
Evidence for Reward Models

- Support
  - People who are dependent on one substance are more likely to be addicted to others
- Shortcomings
  - Gateway hypothesis
  - Common liability to addiction
  - Wanting-and-liking theory (incentive-sensitization theory)

Social Learning Models: Addiction as Behavior

- Addiction viewed as behavior shaped by learning, social, and cognitive factors
  - Person's identification with a particular drug plays a key role in the initiation and maintenance of an addiction
- Social Control Theory
  - The stronger a person's attachment to family, school, and other social institutions, the less likely the person will be to break any social norm
- Peer Cluster Theory
  - Peer groups strong enough to overcome the controlling influence of social institutions

Brain Circuits of "Wanting" and "Liking"



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Drugs and Adolescence

- Vulnerability window in adolescence for risky behavior
  - Drug use prevalence and incidence increase every year from age 10 to 25 and then decreases
  - Substance use before age 18 is strong indicator of later abuse
  - Adolescent drug use varies from place to place (social-cultural factors), by gender (self-image and self-presentation)
  - Teen abuse often occurs with other unhealthy behaviors
  - Adult unawareness can be problematic

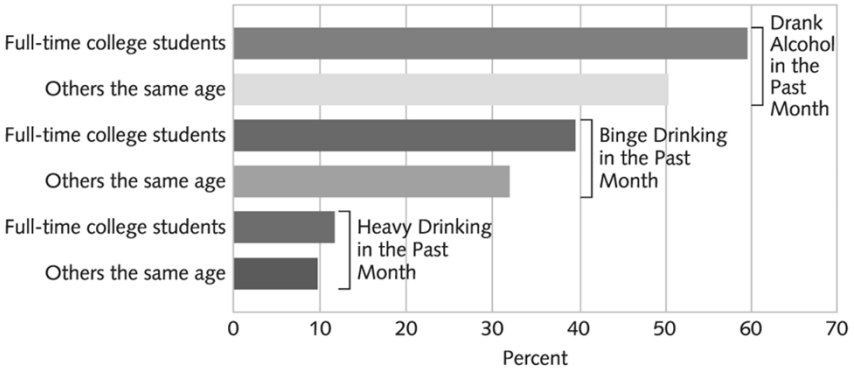
Alcohol Use and Abuse

- Alcohol is a depressant that slows the functioning of the central nervous system
- Blood Alcohol Level (BAL)
  - Amount of alcohol in the blood, measured in grams per 100 milliliters
  - 0.08 grams per 100 milliliters of blood (gpercent) considered legal intoxication in most U.S. states
    - Gender, weight, tolerance levels
    - Short-term effects and dose-dependency
  - Death may occur at a BAL of 0.35 gpercent or more

Prevalence of Alcohol Use

- 2015: About 59.4% of college students (ages 18 to 22) are current drinkers, with 39% reporting binge drinking in past month
  - At-risk drinking: Two or more episodes of binge drinking in the past month, or consuming an average of two or more alcoholic drinks per day in the past month
  - Prevalence of drinking categories varies by age, gender, education level, ethnicity, and culture

Alcohol Use in the United States



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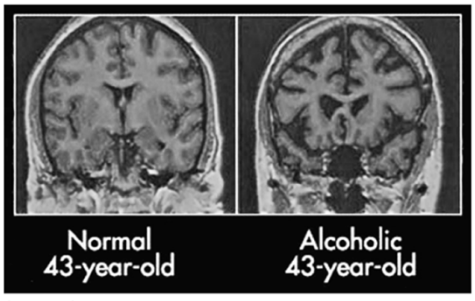
The Physical Effects of Alcohol Consumption

- Alcohol Affects All Parts of the Body
  - Disruption of intracellular communication and gene regulation of cell functions
  - Brain shrinkage and inhibition of neurogenesis in prolonged binge drinking
  - Major effects on hippocampus
  - Interference with thiamin absorption (Korsakoff's syndrome)

Alcohol and the Immune and Endocrine Systems

- Chronic Use
  - Weakens the immune system
  - Damages cellular DNA
  - Interferes with endocrine system functioning
  - Disrupts the secretion of growth hormone
  - Linked to decreased testosterone levels, impotence, and lowered fertility in men
  - Linked to decreased estrogen levels, menstrual disturbances, and miscarriages in women

Alcohol Abuse Damages the Brain

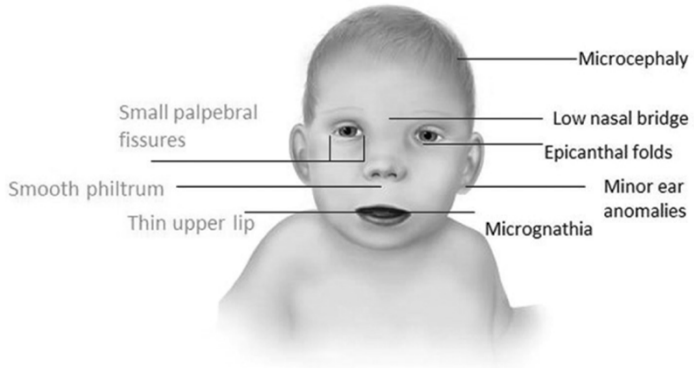


Science Source

Other Damaging Effects of Excessive Use of Alcohol

- Promotes formation of fat deposits on heart muscle, and contributes to cardiovascular disease
- Promotes formation of ulcers and liver disease (hepatitis and cirrhosis)
- Fetal Alcohol Syndrome (FAS)
  - A cluster of birth defects that includes facial abnormalities, low intelligence, and delayed body growth—caused by the mother's use of alcohol during pregnancy

Fetal Alcohol Syndrome



Centers for Disease Control and Prevention, National Center on Birth Defects and Developmental Disabilities

Psychosocial Consequences of Alcohol Use

- Behavioral Disinhibition
  - False sense of confidence and freedom from social restraints that results from alcohol consumption
- Alcohol Myopia
  - Tendency of alcohol to increase concentration on immediate events, reducing awareness of distant events

Psychosocial Consequences: Adolescent Drinkers

- Alcohol-Induced
  - Cognitive impairments
  - Variety of social problems
  - Behavioral disinhibition
  - Heightened pain and frustration sensitivity
  - Lower violence threshold

Alcohol Use Disorder (AUD)

- Maladaptive drinking pattern in which drinking interferes with role obligations
  - Diagnosis: Person who meets 2 or more of 11 problem drinking criteria listed in Table 9.3 (mild, moderate, severe)
  - Various factors have been implicated in explaining alcohol abuse
  - No single factor or influence completely explains the origins of AUD

Genes and Alcoholism

- Some people inherit greater tolerance for alcohol's aversive effects and/or greater sensitivity to alcohol's pleasurable effects
  - First-degree relative is single best alcoholism predictor
  - Twice concordance rate for identical twins
  - Common personality traits

Alcohol, Temperament, and Personality

- Behavioral Undercontrol
  - Personality syndrome characterized by aggressiveness, unconventionality, and impulsiveness
- Negative Emotionality
  - State of alcohol abuse characterized by depression and anxiety
- Alcohol Expectancy Effects
  - Effects of individual's belief's about how alcohol affects behavior

Treatment and Prevention of Alcohol Use Disorder

- Drug Treatment
  - Detoxification agents, opiate antagonists to reduce alcohol' s reinforcing properties
- Aversion Therapy
  - Behavioral therapy that pairs an unpleasant stimulus (emetic drug) with an undesirable behavior (drinking)
- Relapse Prevention Programs/Self-Help Groups
  - Controlled drinking
  - Self-help groups
  - Drink refusal training
  - Coping and social skills training

Preventing Alcohol Problems

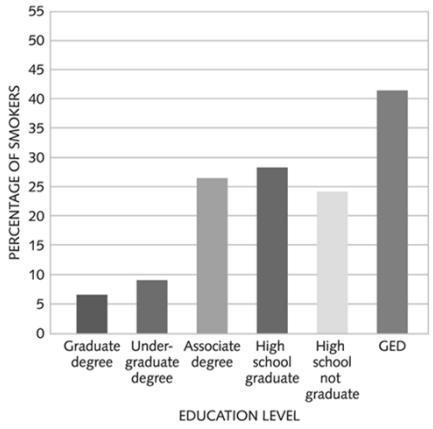
- Preventive treatments propose to change attitudes about drinking, strengthen coping skills, and restructure environments to reduce the risk of alcohol-related problems
  - Most effective when children and adolescents targeted
  - Alcohol Misuse Prevention Study (AMPS)

Tobacco Use and Abuse

- Prevalence
  - Smoking peaked in the United States in the early 1960s and declined steadily until the mid-1990s
- Today 15.5% of U.S. adults smoke
  - Ethnic prevalence and SES differences
- Monitoring the Future study
  - Youth cigarette smoking at lowest level in 40 years; use of electronic cigarettes has risen sharply worldwide
- WHO predictions for 2025
  - 7 out of 10 tobacco deaths occur in developing countries

Who Smokes?

- Smoking is most prevalent among men and people with less than a high school education
- About 15.5% of American adults currently smoke



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Physical Effects of Smoking

- Cigarette smoking is the single most preventable cause of illness, disability, and premature death in much of the world
  - Responsible for 1 in 5 U.S. deaths
  - Reduced life expectancy
  - Increased heart rate and blood pressure leading to cardiovascular disease
  - Increases in bronchial congestion, emphysema, and respiratory infections
  - Significant links to numerous cancers, pregnancy risks, SIDS, and increased learning difficulties in children of smoking mothers
    - Fetal hypoxia

Major Stages of Smoking Behavior

- Initiation
- Maintenance
  - Nicotine-titration model
  - Affect management model
- Cessation
- Relapse

Photodisc/Getty Images

Which Smoking Cessation Programs Are Effective?

- Programs That Are Successful with Adolescents
  - Enhance intrinsic and extrinsic motivation to quit through education and the use of rewards
  - Are tailored to developmental needs (rather than being based on adult programs)
  - Provide social supports
  - Make teens aware of other resources for remaining nicotine-free

Valued Life Activities, Quitting, and Relapse

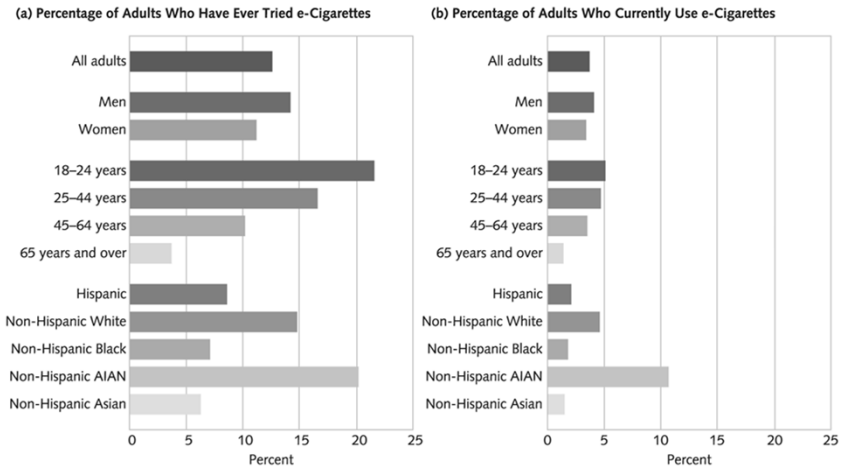
- Restriction of valued activities affects smoking and other health-compromising behaviors
  - Behavioral activation
- Relapse
  - Relapse rate high due to dependence on and tolerance of nicotine; severity of withdrawal symptoms and craving and other side effects; conditioned associations to smoking
  - Stages-of-change approach may be effective

Rise of e-Cigarettes and the Resurgence of Marijuana

- Electronic Cigarettes and Vaping
  - $3.5 billion sales in 2015
  - Used more than any other tobacco by U.S. teens
  - Concerns
    - Contain toxic, addictive nicotine
    - Contain other toxic substances
    - May encourage use of other tobacco products

diego_cervo/Getty Images

E-Cigarette Usage



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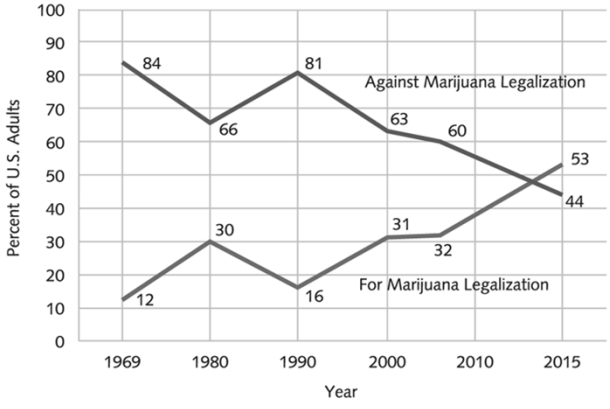
Growing Support for Legalization of Marijuana in the United States



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Marijuana

- THC has many effects on brain and behavior
  - Alterations in mood, time perception, and sensations; impaired thinking, problem-solving, and memory
  - Reduction in number of CB1 brain receptors in daily users
  - May adversely affect memory, language, and motivation

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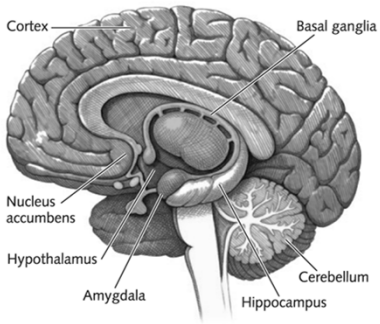
How Marijuana Affects the Brain



Brain Area	Potential Effects of THC
Amygdala	altered emotions; anxiety and panic in some cases
Basal ganglia	impaired motor skills and learning
Cerebellum	impaired coordination and balance
Cortex	altered consciousness, perceptual distortions
Hippocampus	impaired memory storage recall
Hypothalamus	altered metabolic process such as increased appetite
Nucleus accumbens	euphoria; altered motivation and decision making

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MAT

- https://www.fda.gov/drugs/information-drug-class/information-about-medication-assisted-treatment-mat#:~:text=There%20are%20three%20drugs%20approved,with%20counseling%20and%20psychosocial%20support.

BHCs and SUDs

- Context Context Context
- Self-compassion
- Keep it Simple
- Small steps

BHCs and SUDs

- Context Context Context
  - Substance use is there for a reason
  - It can mask negative symptoms
  - It can generate good feelings
  - What else?

BHCs and SUDs

- Self-compassion
- Rarely do people need to hear "Drugs are bad!"
- People are often hard on themselves and don't need to another voice to berate/judge them for using substances

BHCs and SUDs

- Keep it Simple
- Substance use is a process and small obtainable goals are ways to build motivation and work towards bigger goals.

BHCs and SUDs

- Small steps
- Loss/Gain strategies. People feel the loss of falling short of big goals more than recognizing the progress they make even when they make big progress. Focus on WINNING

Case example

- 30 y.o. presents for stomach pain and reveals on SBIRT screening that they are drinking frequently. Conversation with PCP makes known patient has been drinking 1 pint of vodka at night 3-4 nights a week and that this began about 1 month ago. This initially was to help with sleep, but is just habit at this point. PCP has BHC meet with patient and conversation exposes trauma history of sexual abuse as a child and a more recent triggering event. Patient expresses motivation, but has been unsuccessful at quitting in the past.

- What can we do? What are the "rules to her GAME"

Case example

- 67 y.o male with chronic pain and has been on Percocet for years to manage pain. Recent visit with PCP was conducted and patient has asked for increase in medication as he ran out early given he is now taking 5-6 pills daily when prescribed 2-4 daily.

- What can we do? What are the "rules to his GAME"

Case example

- 14 y.o. non-binary patient brought into clinic by a parent who is concerns about smoking. Visits exposes that patient has recently tried and is using a e-cigarette with nicotine and seems ambivalent about her their use. "I don't see what the big deal is"
- What can we do? What are the "rules to thier GAME"

Case example

- 24 y.o recent incarcerated individual who is on probation and trying to find local AA and NA groups after about 8 years of inconsistent meth and alcohol use. He is looking to get things back together in his life and seems motivated to change.
- What can we do? What are the "rules to his GAME"

Citations

- Agee, Mark D., and Zane Gates. "Lessons from Game Theory About Healthcare System Price Inflation: Evidence from a Community-Level Case Study." *Applied Health Economics and Health Policy*, vol. 11, no. 1, 2013, pp. 45–51, https://doi.org/10.1007/s40258-012-0003-z.
- Fancher, J. B. (2012). Master Your Pain: A Comprehensive Science-based Method to Help You Live Well With Chronic Pain. (n.p.): Visceral Books LLC.
- Gopichandran, Srivastsava, A. K., Vanamail, P., Kanniammal, C., Valli, G., Mahendra, J., & Dhandapani, M. (2021). Effectiveness of Progressive Muscle Relaxation and Deep Breathing Exercise on Pain, Disability, and Sleep Among Patients With Chronic Tension-Type Headache: A Randomized Control Trial. Holistic Nursing Practice, Publish Ahead of Print. https://doi.org/10.1097/HNP.0000000000000460
- Itchhaporia, Dipti. "Game Theory, Health Care, and Economics." *Journal of the American College of Cardiology*, vol. 79, no. 15, 2022, pp. 1542–43, https://doi.org/10.1016/j.jacc.2022.03.331.
- Njiru. (2021). Using Relaxation to Manage Chronic Pain in Adults over 65. ProQuest Dissertations Publishing.
- Roslyakova, Falco, M.-A., & Gauchet, A. (2021). An exploratory clinical trial on acceptance and commitment therapy as an adjunct to psychoeducational relaxation therapy for chronic pain. *Psychology & Health*, *36*(12), 1403–1426. https://doi.org/10.1080/08870446.2020.185684
- Straub, R. O. (2019). Health Psychology: A Biopsychosocial Approach. United States: Worth Publishers, Macmillan Learning.
- Vambheim, Kyllo, T. M., Hegland, S., & Bystad, M. (2021). Relaxation techniques as an intervention for chronic pain: A systematic review of randomized controlled trials. Heliyon, 7(8), e07837–e07837. https://doi.org/10.1016/j.heliyon.2021.e07837

Self-compassion

- We are in this together
- We are all learning
- Pick each other up when you fall short
- Be kind to yourself and one another
- Forgive yourself and forgive others when our expectations don't meet reality.
- You are doing better than you think and

Q & A

Thank You

- Keep up the awesome work and keep learning and asking questions
- PCBH work is not always easy, but we are here to support you and guide you along the way
- If you are struggling let someone know