#28 Psychological Disorders

[Adapted from Crash Course Psychology with Hank Green, written by Kathleen Yale, edited by Blake de Pastino, with psychology consultant Dr. Ranjit Bhagwat]

In 1975, American psychologist David Rosenhan published a paper called "On Being Sane in Insane Places" detailing the experiment that he conducted on psychiatric institutions themselves. The first part of his experiment involved sending pseudopatients (a group of eight totally mentally sound associates, including David himself) to knock on institution doors and falsely report that they'd been hearing voices. Once admitted, the fake patients abandoned their fake symptoms and behaved as they normally did, waiting for administrators to recognize them as mentally healthy.

Like Cochran, Rosenhan and his team learned that it's easy to get into a mental institution, but it is much, much harder to get out. The participants were kept in the institution for an average of 19 days, one of them for 52 days. They were forced to take psychotropic medication (which they sneakily spit out) and were eventually discharged with a diagnosis of paranoid schizophrenia in remission. Of course, being dubbed in remission isn't exactly the same thing as being labeled sane, and that was just one of Rosenhan's criticisms of the system. It viewed mental illness as an irreversible condition, almost like a personality trait, rather than a curable illness.

Part two of his experiment came later when Rosenhan shared his results with a teaching hospital and then told the staff that he'd be sending more pseudopatients their way in the next few months, and challenged them to detect the imposters. With that in mind, out of 193 new patients, 41 were ferreted out as likely or suspected pseudopatients. The thing is, Rosenhan never actually sent in any pseudopatients. *In the end Rosenhan concluded that the way people were being diagnosed with psychiatric issues often revealed less about the patients themselves and more about their situation*. Like, saying you've heard voices one time might catch a doctors' attention more than weeks of normal behavior.



Naturally people criticized his methods and his findings, but his experiment raised a lot of important questions like: How do we define, diagnose, and classify mental disorders? *At what point does sad become depressed? Or quirky become obsessive compulsive? Or energetic become hyperactive? What are the risks and benefits of diagnostic labeling, and how does the field keep evolving?*

When people think of psychology they probably most often think about the conditions that it's been designed to understand, diagnose, and treat--namely psychological disorders. From common problems that most of us will experience at some point in our lives to the more serious dysfunctions that require intensive care. They're a big part of what psychology is here for and over the next several lessons we're going to be looking at mental illness, as well as wellness. How symptoms are diagnosed and what biological and environmental causes may be at work. But, to grasp those ideas, we first have to find out how we came to understand the idea of mental health itself and build a science around studying, discussing, and caring for it.

In 2010, the World Health Organization reported that about 450 million people worldwide suffer from some kind of mental or behavioral disorders. No society is immune from them, but when I say psychological disorder I'm guessing some of you will conjure up all sorts of dramatic images like diabolical criminals from Arkham Asylum or Hollywood stereotypes of various eccentric, scary, or tragic figures. This roll call of one-sided stock images is part of the problem our culture faces--the misconceptions and often destructive stigma associated with psychological disorders.

So, what does that term actually mean?

Mental health clinicians think of psychological disorders as deviant, distressful, and dysfunctional patterns of thoughts, feelings, or behaviors. And yeah, there are a lot of sensitive and loaded words in there, so let's talk about what we mean starting with deviant.

To be classified as a disorder, that deviant behavior needs to cause that person or others around them distress, which just means a subjective feeling that something is really wrong. *In turn, distress can lead to truly harmful dysfunction--when a person's ability to work and live is clearly, often measurably impaired.*

So that's today's definition but it took a long time for the Western world to come up with a way of thinking about psychological disorders that was rooted in science and investigative inquiry. It wasn't until around the 18th and 19th centuries that we really started to put forth the notion that mental health issues might be about a sickness in the mind. For example, by the 1800s doctors finally caught on to the fact that advanced syphilis could manifest in serious neurological problems like dementia, irritability, and various mental disorders. So eventually a lot of so-called mental patients were removed from asylums to full medical hospitals where all of their symptoms could be treated.



Syphilitic brain



Insane asylum - 1900

This "a-ha" moment is just one instance of how perspectives on mental health began to shift towards what is called the medical model of psychological disorder. *The medical model champions the notion that psychological disorders have physiological causes that can be diagnosed on the basis of symptoms, can be treated, and sometimes cured.* That way of thinking about mental health was an important step forward, at least at first. It took us past the old days of simply locking people up when they didn't seem quite right to others.

But even if it was an improvement, the medical model was seen by some in the field as kind of narrow and outdated. *Most contemporary psychologists prefer to view mental health more comprehensively through what is called the bio-psychological approach.* You've heard us say over and over again that everything psychological is simultaneously biological and that truism is particularly useful here. The bio psychological view takes that holistic perspective, accounting for a whole number of things clearly physiological and not in order to understand what's happening to us, what might be going wrong, and how it can be treated.

It takes into account psychological influences for sure like stress and trauma and memories, but also biological factors like genetics and brain chemistry, and social-cultural influences like all the expectations wrapped up in how a culture defines normal behavior. So by considering the whole host of nature and nurture influences, we can take a broader view of mental health, realizing that some disorders can be cured while others can be coped with, and still others may not be disorders at all once our culture accepts them.

But another important part of handling disorders with scientific rigor is attempting to standardize and measure them. How we talk about them, how we diagnose them, and how we treat them. So the field has literally come up with a manual that shows you how to do that. But it is not without it's flaws. *It's called the American Psychiatric Association's Diagnostic and*

Statistical Manual of Mental Disorders; or, DSM-V because it's currently in it's fifth edition. And it is used by practically everybody: clinicians obviously, but also by insurance and drug companies, policy makers, and the whole legal system.



The first edition came out in 1952, and this newest edition was released in 2013. What's particularly interesting about it is that it's designed to be a work in progress... forever. Each new edition incorporates changes based on the latest research but also how our understanding of mental health and behavior evolves over time. *For example, believe it or not the first two editions actually classified homosexuality as a pathology, basically a disease.* The 1973 third edition eliminated that designation, reflecting changing attitudes and a developing understanding of sexual orientation. And just by looking at the changes between the edition used today and the previous edition released in the year 2000, you can get a picture of not only how quickly things change but also how classification can affect diagnosis--for better or worse--and also what the risks are of classifying psychological disorders in the first place.

For instance, the new edition reflects our growing understanding of the symptoms of Post Traumatic Stress Disorder, and it changed the name of Childhood Bipolar Disorder to Disruptive Mood Dysregulation Disorder because kids were being over-diagnosed and over-treated for bipolar disorder when the condition that they had didn't actually fit that description. And totally new diagnoses are being explored as well, like Gambling Addiction and what's called Internet Gaming Disorder, showing that new disorders continue to arise with changing times.

But the DSM is not perfect even though we've come a long way since the Rosenhan experiment, critics still worry about how the DSM might inadvertently promote the over- or mis-diagnosis and treatment of certain behaviors. It's important to keep in mind that definitions are powerful and things can get tricky pretty fast in the world of mental health.

Today you learned about how we define psychological disorders, and looked at medical and bio psychological perspectives on mental illness. We talked about how professionals use the DSM to diagnose disorders and how it's constantly evolving to incorporate new thinking.



So, what does that term actually mean?

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##29 OCD and Anxiety Disorders

[Adapted from Crash Course Psychology with Hank Green, written by Kathleen Yale, edited by Blake de Pastino, with psychology consultant Dr. Ranjit Bhagwat]

We commonly equate anxiety with fear, but anxiety disorders are not just a matter of fear itself. A key component is also what we do to get rid of that fear. Say someone almost drowned as a kid and is now afraid of water. A family picnic at the river may cause that anxiety to bubble up, and to cope, they may stay sequestered in the car, less anxious but probably still unhappy while the rest of the family is having fun.

So, in clinical terms, anxiety disorders are characterized not only by distressing, persistent anxiety but also often by the dysfunctional behaviors that seem to reduce that anxiety. Some people fear germs, so they wash their hands every hour. At least a fifth of all people will experience a diagnosable anxiety disorder of some kind at some point in their lives. That is a lot of us.

So I want to start out with a condition that used to be categorized as an anxiety disorder but is now considered complex enough to be in a class by itself, *Obsessive-Compulsive Disorder or OCD. You probably know that condition is characterized by unwanted repetitive thoughts, which become obsessions, which are sometimes accompanied by actions, which become compulsions.* And it is a great example of a psychological disorder that could use some mental-health myth busting. Being neat, and orderly, and fastidious does not make you OCD.

OCD is a debilitating condition whose sufferers take normal

behaviors like, locking your door, or double checking that you turned off the stove and perform them compulsively. And they often use these compulsive, often ritualistic behaviors to relieve intense and unbearable anxiety. So, soon they're checking the door every five minutes, or constantly checking the stove, or counting the exact number of steps they take everywhere they go. If you're still unclear about what it means for disorders to be deviant, distressful and dysfunctional, OCD might help you understand. Because it is hard to keep a job, run a household, sit still, or do much of anything if you feel intensely compelled to lock your door or run to the kitchen twenty times an hour. And both the thoughts and behaviors of OCD are often driven by a fear that is itself obsessive, like if you don't go to the kitchen right now your house will burn down and your child will die which makes the condition that much more distressing and selfreinforcing.



There are treatments that help OCD including certain kinds of psychotherapy and some psychotropic drugs. But the key here is that it is not a description for your roommate who cleans her bathroom twice a week, or the guy in the cubicle next to you, who only likes to use green felted pens. And even though OCD is considered its own unique set of psychological issues, the pervasive senses of fear, worry, and loss of control that often accompany it, have a lot in common with other anxiety disorders.

The broadest of these is *Generalized Anxiety Disorder or GAD*. People with this condition tend to feel continually tense and apprehensive, experiencing unfocused, negative, and out-ofcontrol feelings. Of course feeling this way occasionally is common enough, but feeling it consistently for over six months, the length required for a formal diagnosis, is not. *Folks with GAD worry all the time and are frequently agitated and on edge, but unlike some other kinds of anxiety, patients can't identify what's causing the anxiousness, so they don't even know what to avoid.*

Then there's Panic Disorder, which affects about 1 in 75 people, most often teens and young adults. It's calling card is Panic Attacks or sudden episodes of intense dread or sudden fear that come without warning. Unlike the symptoms of GAD which can be hard to pin down, *Panic Attacks are brief, well-defined, and sometimes severe bouts of elevated anxiety. And if you've ever had one, or been with someone who has, you know that they call these attacks for good reason.* They can cause chest pains and racing heartbeat, difficulty breathing and a general sense that you're going crazy or even dying. It's as awful as it sounds.

We've talked a lot about the body's physiological fight or flight response and that's definitely part of what's going on here, even though there often isn't an obvious trigger. There may be a genetic pre-disposition to panic disorder, but persistent stress or having experienced psychological trauma in the past can also set you up for these attacks. And because the attacks themselves can be downright terrifying, a common trigger for panic disorder is simply the fear of having another panic attack. How's that for a kick in the head? Say you have a panic attack on a bus, or you find yourself hyperventilating in front of dozens of strangers with nowhere to go to calm yourself down, that whole ordeal might make you never want to be in that situation again, so your anxiety could lead you to start avoiding crowded or confined places. At this point the initial anxiety has spun off into a fear of anxiety which means, welcome you've migrated into another realm of anxiety disorder, Phobias.

PHOBIAS: And again this is a term that's been misused for a long time to describe people who, say, they don't like cats, or are uncomfortable on long plane trips. Simply experiencing fear or discomfort doesn't make you phobic. In clinical terms, phobias are persistent, irrational fears of specific objects, activities, or situations, that also lead to avoidance behaviors. You hear a lot about fears of heights, or spiders, or clowns, and those are real things. They're specific phobias that focus on particular objects or situations. For example, the Chesapeake Bay Bridge in Maryland is a seven-thousand meter span that crosses the Chesapeake Bay, if you want to get to or from Eastern Maryland that's pretty much the only way to do it, at least in a car, but there are thousands of people who are so afraid of crossing that bridge that they simply can't do it. So, to accommodate this avoidance behavior, driver services are available. For \$25 people with gephyrophobia, a fear of bridges, can hire someone to drive themselves, and their kids, and dogs, and groceries

across the bridge in their own car, while trying not to freak out. But other phobias lack such specific triggers, what we might think of as social phobia, currently known as social anxiety disorder, is characterized by anxiety related to interacting or being seen by others, which could be triggered by a phone call, or being called on in class, or just thinking about meeting new people.



So you can probably see at this point how anxiety disorders are related and how they can be difficult to tease apart. The same thing can be said about what we think causes them. Because much in the same way anxiety can show up as both a feeling like panic, and a thought, like is my kitchen on fire there are two main perspectives on how we currently view anxiety. As a function of both learning, and biology. The learning perspective suggests that things like, conditioning, and observational learning and cognition, all of which we've talked about before best explain the source of our anxiety. Remember our behaviorist friend, John B. Watson and his conditioning experiments with poor little Albert, by making a loud scary noise every time you showed the kid a white rat, he ended up conditioning the boy to fear any furry object, from bunnies, to dogs, to fur coats. That conditioning used two specific learning processes to cement itself in Little Albert's young mind. Stimulus Generalization, expanded or generalized his fear of the rat to other furry objects, the same principle holds true if you

were, like, attacked by your neighbors mean parrot and subsequently fear all birds. But then the anxiety is solidified through reinforcement, every time you avoid or escape a feared situations, a pair of fuzzy slippers or a robin on the street, you ease your anxiety, which might make you feel better temporarily, but it actually reinforces your phobic behavior, making it stronger.

Cognition also influences our anxiety, whether we interpret a strange noise outside as a hungry bear, or a robber, or merely the wind, determines if we roll-over and keep snoring, or freak out and run for a kitchen knife. And we might also acquire anxiety from other people through observational learning. A parent who's terrified of water may end up instilling that fear in their child by violently snatching them away from kiddie pools or generally acting anxious around park fountains and duck ponds. But there're also equally important biological perspectives. Natural selection, for instance, might explain why we seem to fear more potentially dangerous animals, like snakes, or why fears of heights or closed in spaces are relatively common. It's probably true that our more wary ancestors who had the sense to stay away from cliff edges and hissing serpents were more likely to live another day and pass along their genes, so this might explain why those fears can persist, and why even people who live in places without poisonous snakes would still fear snakes anyway.

And then you got the genetics and the brain chemistry to consider. Researchers have shown for example that identical twins, those eternal test subjects, are more likely to develop phobias even if they're raised apart. *Some researchers have*



detected seventeen different genes that seem to be expressed with various anxiety disorders. So it may be that some folks are just naturally more anxious than others and they might pass on that quality to their kids. And of course individual brains have a lot to say about how they process anxiety.

Physiologically, people who experience panic attacks, generalized anxiety, or obsessive compulsions show overarousal in the areas of the brain that deal in impulse control and habitual behaviors. Now we don't know whether these irregularities cause the disorder or are caused by it, but again, it reinforces the truism that everything that's psychological is simultaneously biological. And that holds true for many other psychological disorders we'll talk about in the coming weeks, many of which have names that you've also heard being misused in the past.

Today you learned what defines an anxiety disorder, as well as the symptoms of obsessive compulsive disorder, generalized anxiety disorder, panic disorder and phobias. You also learned about the two main perspectives on the origins of anxiety disorders, the learning perspective and the biological perspective and hopefully you learned not to use "OCD" as a punch line from now on.

#30 Depressive and Bi-Polar Disorders

[Adapted from Crash Course Psychology with Hank Green, written by Kathleen Yale, edited by Blake de Pastino, with psychology consultant Dr. Ranjit Bhagwat]

American psychologist, and professor of psychiatry, *Kay Redfield Jamison*, spent her career researching, lecturing, and writing seminal books on the condition. *A condition that she also happens to have had her entire adult life. In her memoir, "An Unquiet Mind," Jamison details what it really means to be bipolar.* She writes of not sleeping for days on end, of feeling long periods of euphoria, and filling whole notebooks with her racing thoughts and grandiose ideas.

While in these manic states, she experienced a tremendously inflated sense of self-esteem and did impulsive things that felt good at the time but had painful consequences, like going on lavish shopping sprees, engaging in promiscuous behavior, racking up credit card debt, and emptying her bank accounts.

But these episodes were followed by emotional crashes: Crippling bouts of depression that sent her into a suicidal spiral. At the age of 28, Jamison tried to kill herself by taking an overdose of Lithium, lapsed into a coma, but thankfully emerged from it determined to find help through medication and therapy.

Symptoms of Depressive & Bipolar Disorders

We've been talking a lot about terms and concepts that mean something different than what you think they mean, but this time, the term "*Mood*" is not one of those. In the psychological context, moods are pretty much exactly what you think they are: Emotional states that are even more subjective and harder to define than emotions themselves. *And while psychologists have* defined about 10 basic human emotions, moods tend to fall into two broadly and infinitely variable categories. You got the good moods and the bad moods.

Probably the most important distinction between emotion and mood is that moods are long-term emotional states rather than discreet, fleeting feelings. And "**mood-disorders**," which are characterized by emotional extremes and challenges in regulating mood (tend to be longer-term disturbances). These include **depressive disorders**, typified by prolonged hopelessness and lethargy, and **bipolar disorders**, the most prominent in which involve alternating between **depression** and **mania**.



Depressive Disorders

Depression has been called the common cold of psychological disorders. Which is not to say that it isn't serious, but it's common and it's pervasive and it's the top reason people seek out mental health help. We've all felt down before, obviously, often in response to a specific loss: a breakup or a lost job or the death of a loved one. And the fact is, you probably should feel bad at times like those. It can actually be good for a mind and body to slow down, to help digest losses that you experience, but in general, sadness is temporary. *It's when sadness and grief extend beyond the generally accepted social norms, or plunge into a depth that causes serious dysfunction that you find yourself in the territory of depressive disorders.*

The DSM-V, our handy (if super flawed) user's guide to psychological disorders officially diagnoses a major depressive disorder when a patient has experienced at least five signs of depression for more than two weeks. These symptoms include not just depressed mood, but also significant weight or appetite loss or gain, too much or too little sleep, decreased interest in activities, feeling worthless, fatigued, or lethargic, difficulty concentration or making decisions, and recurrent thoughts of death or suicide.

So while everyone experiences sadness, depression is a physiological as well as psychological illness. It messes with your sleep, and appetite, and energy, and neurotransmitter levels, all interfering with the way your body runs itself. Plus in keeping with our definition of psychological disorders, to be considered a true disorder this behavior needs to cause the person or others around them prolonged distress--the feeling that





something is really wrong. Just as a person with a severe, generalized anxiety disorder may never want to leave the house, a clinically depressed person often feels so hopeless and overwhelmed that they have trouble living a normal life. And unlike the bipolar disorders, the depressive disorders tend to be all lows.

Bipolar Disorders

You've probably heard of **manic depression**. It's the outdated term for bipolar disorders. These include those classic dark lows of depression, but also bouts of the opposite (of extreme mania in more severe cases). Someone suffering from a bipolar disorder may flip back and forth between normal and depressive and manic phases within a single day or week or month. And a true manic episode doesn't just mean being energetic or happy, it's a period of intense, restless, but often optimistic hyperactivity in which your estimation of yourself and your abilities and your ideas can often get skewed. Like, really, REALLY skewed.

Some patients experience mania only rarely, but when they do, it can be destructive. Kay Jamison has testified to that. Once during a manic episode, she bought up a drug store's entire supply of snake-bite kits, convinced of an imminent attack of rattlesnakes that only she knew was coming. In another, she purchased 20 books by the Penguin Publishing House because she said, "It could be nice if the penguins could form a colony." In other words, bad judgment is common. And it can get worse. *Full blown manic episodes often end up in psychiatric* hospitalization, since the risk to self or others can become severe. When the highs eventually end, they're often followed by dark periods of depression. When left untreated, suicide or suicide attempts are common, another element of the disorder that Jamison herself can attest to.



Causes of Mood Disorders

Like so many things in psychology, the cause of mood disorders is often a combination of biological, genetic, psychological, and environmental factors. *We know, for example, that mood disorders run in families--genes matter. And you're more likely to experience a bipolar or depressive disorder if you have parents or siblings that suffer from them.* Studies have of identical twins show that if one twin has a bipolar disorder, that the other has a seven in ten chance of also being diagnosed, regardless of whether they were raised together or apart.

And while a stressful life [event] can't give you bipolar disorder, it could trigger a manic or depressive episode in someone with a pre-existing condition. Or start a descent into a major depressive episode in someone who never before had experienced depression. *In other words, a person who loses a loved one could go from sad to depressed or slide into a bipolar episode,* *but it couldn't cause them to have the disorder to begin with.* In the case of depressive disorders, for most people, after weeks, months, or even years, their depression can end, hopefully with the return to baseline healthy functioning.

World-wide, women tend to be diagnosed with major depression more often than men, but many psychologists think this is simply because women tend to seek treatment more. It's also possible that depression in men tends to manifest itself more in terms of anger and aggression, than as sadness and hopelessness. This is just an example of how depression is much more than just being sad and that the characteristic lack of purpose and helplessness can manifest itself in a lot of different ways.



Looking at mood disorders from a neurological perspective, we see that depressed, manic, and average brains show very different brain activity in neural imaging scans. As you might expect, a brain in a depressed state slows down. *While a brain in a manic state shows a lot of increased activity, making it hard for that person to calm down or focus or sleep*. And of course there's yet another way to look at things. The **social-cognitive** **perspective** examines how our thinking and behavior influence depression. People with depression often view bad events through an **internal lens** or mind-set that influences how they're interpreted. And how you explain events to yourself, in a negative or positive way, can really effect how you recover from them--or don't.

Say you were humiliated in the lunch room when someone tripped you and chicken soup flew all over the place, and you sat down on a brownie, and it was just a bad day. A depressive mind might immediately start thinking that the humiliation will last forever, that no one will let you live it down, that it's somehow your own fault, and you can't ever do anything right. That negative thinking, learned helplessness, self-blame, and *over-thinking can feed off itself and basically smother the joy out of the brain, eventually creating a vicious self-fulfilling cycles of negative thinking. The good news is that the cycle can be broken by getting help from a professional, or by turning your attention outward.* Positive thinking is important, but it's often inadequate on its own when up against genetic or neurological factors.

Conclusion

Today we talked about what mood disorders are, as well as what they aren't. You learned about the symptoms of depressive and bipolar disorders, and the possible biological, genetic, environmental, and social-cognitive causes of mood disorders.

#31 Trauma and Addiction

[Adapted from Crash Course Psychology with Hank Green, written by Kathleen Yale, edited by Blake de Pastino, with psychology consultant Dr. Ranjit Bhagwat]

All right, so you might have read "The Hobbit" or "The Lord of the Rings," you have probably seen them, you've definitely heard of them. But not everyone knows the story of their author, *J.R.R. Tolkien. Tolkien was an English World War One veteran.*



A reluctant soldier, he joined up with a sense of duty and he lived through the bloody battle of Somme suffering tremendous shock, guilt, and loss during and after the war. It

took Tolkien years to processes his experiences. To help him do it he turned to writing fiction and in time he constructed a world that helped him and all of us better understand war, human nature, loss, and growth.

Most of us will experience some kind of traumatic event in our lives and most of us will exhibit some kind of stress related behavior because of it, these symptoms usually fade but for some those reactions can linger and start of disrupt their lives or the lives of those around them. These reactions can develop into full blown psychological disorders including post-traumatic stress disorder and, in an effort to cope, sometimes addiction, but it doesn't always have to be that way.

As it does with many other things, psychology approaches

trauma related disorders with different perspectives but they all tend to ask the same questions. How do you identify and diagnose these disorders? And how do you treat them, so that the patients can recover? -- With the understanding that they might never be the same as they were before the trauma, but they can still be healthy and happy.

When trauma affects you with nightmares, flashbacks,



rage, insomnia, etc., and begins to interfere with your ability to function it is known as *post-traumatic stress disorder or PTSD*. *It was once called "shell shock" a term used to describe the condition of veterans*, but PTSD isn't limited to veterans. It's defined as a psychological disorder generated by either witnessing or experiencing a traumatic event. Its symptoms are classified into four major clusters in the DSM V. One of these clusters involves re-living the event through intrusive memories, nightmares, or flashbacks. The second involves avoiding situations you associate with the event, while the third generally describes excessive physiological arousal like heart pounding, muscle tension, anxiety or irritability, and major problems sleeping or concentrating. And finally we have the fourth major symptom cluster: pervasive negative changes in emotions and



belief, like feelings in excessive guilt, fear, or shame -- or no longer getting enjoyment out of what you used to.

When PTSD is left untreated, sufferers

may start to feel desperate to find some way to cope and one way may be substance abuse. Unfortunately, addiction and trauma can go hand in hand and it can be hard to recover from one without also dealing with the other. According to the US department of Veteran's Affairs more than 2 in 10 veterans with PTSD also struggle with substance abuse problems, and one third to a half of women in treatment for substance abuse have experienced rape or sexual assault.

Brandon was a combat drone operator in the air force. He enlisted at 21 years old and spent 6 years sitting in a bunker in an Air Force Base in the United States watching Iraq and Afghanistan from surveillance drones. He watched soldiers die and people get executed. He also watched kids play, people get married, goats grazing -- and when the time came he ordered hellfire missiles to strike military targets or people who had no idea they were even being watched. Although he was half a world away from combat, he ultimately suffered the psychological trauma felt by many ground soldiers. He was diagnosed with PTSD. But why do some victims or trauma suffer from PTSD while others seem able to move on? As far as what's going on in the brain, PTSD shares some similarities with anxiety disorders. *For example the*



brain's limbic system may flood the body with waves of stress hormones like cortisol every time images of the traumatic event bubble up uninvited into consciousness. This might explain how memories associated with trauma could fail to be filed away as long-term memories and instead remain vivid and fresh through flashbacks and nightmares.

If there's any silver lining to all of this, it's that some people may actually experience positive change after a trauma. *Treatment and social support help some sufferers achieve post-traumatic growth. Vietnam War veterans suffer lower levels of alcoholism, drug abuse, divorce, suicide, and incarceration than their nonveteran peers.* Service in the war seems to have made most of them better people. What doesn't kill you might not necessarily make you stronger, but sometimes it does.

Psychologists define addiction or dependence as compulsive, excessive, and difficult-to-control substance use, or other, initially pleasurable behavior that begins to interfere with *ordinary life, work, health, or relationships.* This could mean over-consuming drugs or alcohol, or compulsively gambling, eating, shopping, exercising, or having sex. People with addictions may not even realize that they have lost control of their behavior for some time.



Addiction can refer to having a physical dependence, a physiological need for a drug, that reveals itself through terrible withdrawal symptoms if the use stops or reduces, or a *psychological dependence, the need to*

use that drug, or complete that activity in order to relieve negative emotions.

Few will dispute that much of what makes addiction possible is chemistry, but people are different -- from their life experiences to their biological sensitivities. *So people respond in different ways to different drugs and behaviors*. Many people can drink casually or gamble once in a while without losing control. Others simply can't.

People in recovery from addiction may also have different needs. *Some will need to be completely sober and never again touch that drug or do that thing. While others may in time be able to regain enough control to use again in moderation.* Likewise, some folks can kick the habit on their own while others do better with or need support from professionals or support groups.

Researchers and groups like Alcoholics Anonymous debate whether addiction is a mental illness -- like a "software problem" related to thoughts, behaviors and feelings -- or a physical disease -- a "hard wire problem" related to biology and

genetics -- or both, and even whether addiction and dependence are the same thing. While this controversy continues, *many treatment professionals are*



moving toward treating for mental illness and physical disease at the same time. This is the so- Dual Diagnosis Model of treatment.

The good news is while PTSD and substance dependence may be distressing and complex, people can begin to heal given the chance and the resources. We're amazingly resilient creatures. When nurtured with the proper support and practice, we can overcome a lot.

Today we read about the causes and symptoms of PTSD and how trauma can affect the brain. *We also looked at* addiction, physical and psychological dependence, the relationship between *trauma and addiction, and why they can require dual treatment,* and we touched on post-traumatic growth with the wisdom of Frodo Baggins.