

Anxiety and Panic Attacks

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GENERAL ANXIETY FAST!** [CLICK HERE](#)

Characterization of Panic Attack and Panic Disorder

Mandy, a mother who had recently experienced a difficult childbirth, was doing routine grocery shopping when she suddenly felt an inexplicable sense of impending dread. She could not breathe and her heart raced so much she thought it would explode. Her legs could barely support her, and she had the intense desire to run out of the store and scream for help. She had no idea of what was happening to her, except that she felt like she was going to die. After managing to toss some cash at the counter, she fled from the store and got into her car where she gradually settled down. She drove back home slowly, and by the time she parked the car in the garage, she felt normal again. After a few days, she forgot about her ordeal.

However, a week later, she suddenly felt the same feelings of overwhelming dread inside her car while waiting for the traffic to move. She was so distraught she had to pull over to the side of the road, and call a friend through her cell phone to come and get her.¹

Mandy's experience is a classic example of a panic attack. Panic attacks are characterized by extremely intense symptoms of anxiety such as accelerated heart rate, palpitations or pounding heart, trembling or shaking, sweating, shortness of breath, and fear of dying. It may also include feelings of choking, chest pain or discomfort, nausea or abdominal distress, feelings of light-headedness or dizziness, feelings of unreality or detachment, fear of losing control or going crazy, numbness or tingling sensations, and chills or hot flushes.² A person is diagnosed to be experiencing a panic attack when he or she exhibits four or more of the above mentioned symptoms.³ An attack usually peaks in 10 minutes, but

¹ <http://mental-health.families.com/blog/panic-disorder-case-studies-2>

² <http://panicdisorder.about.com/od/understandingpanic/a/anxvspanic.htm>

³ http://en.wikipedia.org/wiki/Panic_attack#Symptoms

some symptoms may last much longer. However, if the symptoms persist for an hour, it is possible that the person is experiencing something other than a panic attack and should seek immediate medical care.⁴

Not everyone who experiences panic attacks develops panic disorder. If a person experiences repeated panic attacks, and becomes so disabled by fear that they are unable to continue with their normal everyday activities, then, the person is diagnosed to have panic disorder.⁵ Panic disorder affects roughly 6 million American adults, and is twice as common in women than in men. It is one of the many major illnesses that fall under the umbrella of anxiety disorders.⁶

Fortunately, panic disorder is treatable. This report takes a close look at this illness, its causes, and the different modalities that have been used for its treatment.



⁴ <http://www.webmd.com/anxiety-panic/tc/panic-attacks-and-panic-disorder-symptoms>

⁵ http://www.helpguide.org/mental/panic_disorder_anxiety_attack_symptom_treatment.htm#causes

⁶ <http://www.nimh.nih.gov/health/publications/anxiety-disorders/complete-index.shtml>

Anxiety vs. Panic Attacks

Although often used interchangeably, panic attacks are not the same as anxiety attacks. Under the DSM-IV (Diagnostic and Statistical Manual of Mental Disorders), panic attack is used to describe the features of panic disorder. Anxiety attack, however, is a term that is not used in the DSM. The term that is used is anxiety, and is one of the symptoms used to describe illnesses that fall under the category of anxiety disorders.⁷ Anxiety is a psychological and physiological state that can create feelings of fear, worry, uneasiness or dread. It is an emotional response to a perceived threat in the future, as distinguished from fear, which is a reaction to a danger perceived in the present.⁸

The main differences between panic and anxiety are the intensity of the symptoms and the length of time the predominant symptoms occur. With panic attacks, the symptoms are sudden and extremely intense, but usually last for only a few minutes. Anxiety, on the other hand, gradually intensifies over a period of time and is highly correlated to excessive worry. While the symptoms of anxiety are less intense, they may persist for days, weeks, or even longer.⁹

Physiological View of Anxiety and Panic Attack Symptoms

Anxiety is an emotion universally experienced, not only by humans, but all animals as well. It is brought about by our fight-or-flight response to perceived danger or threat. The purpose of this involuntary response is actually to protect the organism by getting it ready to fight or flee the source of danger.

⁷ <http://panicdisorder.about.com/od/understandingpanic/a/anxvspanic.htm>

⁸ <http://en.wikipedia.org/wiki/Anxiety>

⁹ <http://panicdisorder.about.com/od/understandingpanic/a/anxvspanic.htm>

Physiologically, this is what happens. When some sort of danger is expected or perceived, our brains send messengers to our autonomic nervous system. This part of our nervous system is further divided into the sympathetic nervous system and the parasympathetic nervous system. These two branches are the ones directly responsible for our fight-or-flight response. The sympathetic nervous system releases energy and gets the body primed for action, while the parasympathetic nervous system takes care of restoring the body to its normal level.

One key information about the sympathetic nervous system is that it is an all-or-none system. This means that when it is activated, all of its component parts respond. Either all of the symptoms would be felt or none at all. This is probably the reason why in extreme cases of anxiety, such as in panic attacks, multiple symptoms are involved at once.¹⁰



¹⁰ <http://www.algy.com/anxiety/files/barlow.html>

The Role of Adrenaline

The sympathetic nervous system releases two chemicals: adrenalin and noradrenaline. These chemicals are used by the sympathetic nervous system as messengers to continue and increase its anxiety response activities for an extended period.

There are two ways by which the body stops the activity of the sympathetic nervous system.

First, the other chemicals in the body eventually destroy the adrenalin and noradrenalin released by the sympathetic nervous system.

Second, the parasympathetic nervous system, which has opposing effects to the sympathetic nervous system, becomes activated and restores a relaxed feeling. Thus, the feelings of anxiety cannot continue forever, nor spiral to ever increasing and damaging levels.

How The Body Reacts in Panic Mode

We have a built-in protector from excessive anxiety, our parasympathetic nervous system. It pays to remember though that it takes some time for the body to destroy the adrenalin and noradrenalin chemicals, and until such time, we would likely continue to feel keyed up or apprehensive even though the source of danger has passed. This is actually an adaptation to the possible return of danger, and keeps the body prepared to reactivate the fight-or-flight response.

The bodily functions that are most significantly affected by the sympathetic nervous system are the heart and blood vessels, the respiratory system, and the sweat glands. The heart experiences

increased heart rate and stronger beats to speed up blood flow to large muscles such as the thighs and biceps. The increased blood flow to these tissues is made possible by redirecting blood flow from tissues such as the skin, fingers and toes, through constriction of blood vessels. This is the reason why the skin, fingers, and toes, usually look pale and feel cold when we are anxious. It is an adaptation to prevent excessive blood loss, in case the body gets cut or injured in some way.¹¹

On the other hand, the common symptom of rapid, heavy breathing, or hyperventilation, has the biological function of absorbing and providing oxygen quickly to crucial parts of the body for emergency purposes, as well as removing the carbon dioxide by-product from the cells. During hyperventilation, the lungs might exhale more carbon dioxide than what is produced by the cells. This causes the level of carbon dioxide in the brain and the blood to fall, which in turn causes temporary dizziness and heart palpitations. Some people get more alarmed with these symptoms and try to breathe even harder, further depleting carbon dioxide levels and intensifying their feelings of anxiety.



¹¹ <http://www.algy.com/anxiety/files/barlow.html>

Breathing Deep May Not Help

Both excess and shortage of carbon dioxide are associated with panic, so remedying the former situation by trying to breathe in more carbon dioxide might not necessarily help. A susceptible person that develops sufficient imbalance in the gases in the blood will likely experience the intense physical sensations descriptive of panic attacks.¹²

Excessive sweating is also a common symptom of panic attacks. It is mainly due to the increased level of circulating adrenalin in the body.¹³ Sweat is the body's way of releasing excess heat. As the sweat evaporates, it cools the body. The body's attempt to cool itself during a fight-or-flight reaction helps prepare the body for anticipated exertions.¹⁴

The other physical manifestations of panic attacks are all produced by the sympathetic nervous system, none of which cause actual harm to the body. These include the widening of the pupils to admit more light, dry mouth due to decrease in salivation, decreased activity in the digestive system leading to a heavy feeling in the stomach and nausea, and the tensing of muscle groups, which sometimes extend to trembling and shaking.

Overall, there is a general activation of the whole bodily metabolism. Because this process takes up a lot of energy, the person usually feels tired, drained, and washed out after the episode.¹⁵



¹² http://www.severe-social-anxiety.com/Physiology_of_Panic_Attacks.html

¹³ <http://www.anxiety-disorder-test.org/articles/panic-attack-symptoms-explained/>

¹⁴ <http://www.npadnews.com/anxiety-symptoms.asp#sweating>

¹⁵ <http://www.algy.com/anxiety/files/barlow.html>

What Causes Panic Disorder?

The exact cause of panic disorder cannot be generalized for all cases. Studies have shown that a mixture of factors, including biological and environmental factors, can be involved.¹⁶

Heredity is a significant factor. Panic disorders seem to have increased prevalence among members of the same family. There are cases, however, where the person who develops the disorder does not have any family history of panic attacks at all.¹⁷

Although largely seen as a psychological or psychiatric problem, panic disorders may in fact be caused by medical conditions. For example, a lot of medical literature point out a possible relationship between panic attacks and mitral valve prolapse (MVP), a fairly common medical problem characterized by an improper closure of the mitral valve when the heart is pumping blood during systole.¹⁸

Both conditions share many non-specific symptoms such as chest pain or discomfort, palpitations, dyspnea or shortness of breath, effort intolerance, and a feeling that one is about to faint, scientifically called, presyncope. Though no convincing evidence has been found to show a cause-and-effect relationship between MVP and panic attacks, the high rate of co-occurrence between the two conditions definitely holds clinical significance.¹⁹

Some theorize that the body's catastrophic interpretation of MVP symptoms lead to the occurrence of panic attack. Or they may

¹⁶ <http://www.webmd.com/anxiety-panic/guide/mental-health-panic-disorder>

¹⁷ http://en.wikipedia.org/wiki/Panic_attack#Triggers_and_causes

¹⁸ http://psychologytoday.psychtests.com/articles/mentalhealth/card_mvp.html

¹⁹ <http://www.ncbi.nlm.nih.gov/pubmed/1895809>

simply share neurochemical and physiological elements attributable to the increased activity of the catecholaminergic systems.²⁰

Hyperthyroidism and hypoglycemia

Two other medical conditions that share the same symptoms as panic disorder are hyperthyroidism and hypoglycemia. In hyperthyroidism, the body produces too much thyroid hormone that can speed up the heart rate dramatically, increase blood pressure and trigger the body's fight-or-flight response. Fluctuations in the production of the thyroid hormone leads to erratic release of excess hormones, causing episodes of extreme hyperthyroidism that mimic the signs of panic attacks.²¹

In the case of hypoglycemia, the patient has unstable blood sugar levels, and usually suffers from insulin resistance. Insulin is the hormone that controls blood sugar levels. Not being able to accurately detect insulin levels, the body keeps on pumping more insulin until the blood sugar level crashes. The brain interprets this as a brain starvation which alerts the adrenal gland to pour adrenalin into the system to raise blood sugar quickly. The excess adrenalin, in turn, triggers a sudden panic attack. Thus, a panic attack develops despite the absence of any external object of fear.



²⁰ http://psychologytoday.psychtests.com/articles/mentalhealth/card_mvp.html

²¹ <http://www.thyroid-info.com/articles/palpitations.htm>

Sometimes, in the mind's efforts to make sense of the sudden panic attack, it will attribute the source of fear to any random object in the environment at the time of the attack. For example, if the panic attack happened in a public place, that stimulus becomes the trigger for a fear response and the person can develop agoraphobia, or the fear of open places.²²

From the foregoing examples, we can see how important it is for a physician to rule out medical conditions in diagnosing panic disorder. If the underlying cause is biological or medical in nature, then these have to be remedied accordingly to alleviate the problem.²³ Therapy or psychiatric medication will not help in these types of conditions.

Medications May Increase Panic Attacks

Some medications have side effects that include panic attacks. Examples of such medications are the stimulant, Ritalin (methylphenidate), or fluoroquinolone-type antibiotics. The side effects are usually temporary, usually appearing while weaning on or off the medication among anxiety-prone patients. If the panic attack side effect persists even after the patient has gotten accustomed to the drug, then it should be considered reason enough to change the type of medication or the prescribed dosage.²⁴

Some researchers believe that panic attacks are brought about by a chemical imbalance in the brain. The brain releases and absorbs chemicals known as neurotransmitters when we experience emotions such as happiness, stress, fear, depression, or anxiety. In the case of anxiety and depression, some physicians believe that it is caused by an imbalance of the neurotransmitters serotonin, norepinephrine,

²² http://www.hypoglycemia.asn.au/articles/beating_anxiety.html

²³ http://www.helpguide.org/mental/panic_disorder_anxiety_attack_symptom_treatment.htm#causes

²⁴ http://en.wikipedia.org/wiki/Panic_attack#Triggers_and_causes

GABA (Gamma-aminobutyric acid) and dopamine. Psychiatrists prescribe medications to restore the balance in the release, reuptake, and absorption of these neurotransmitters.²⁵

What Causes Chemical Imbalances?

A chemical imbalance, however, does not occur out of nowhere. Severely stressful situations may serve as triggers of an imbalance among key neurotransmitters.²⁶ Major life transitions such as graduating from college and entering the workplace, getting married, having a baby, the loss of a loved one, divorce, or job loss²⁷ can be overwhelming to some people, and serve as a catalyst for a chemical imbalance that may cause panic disorder.²⁸

There are also certain types of personalities that seem predisposed to succumb to stress and anxiety. Such people usually lack assertiveness, repress their feelings, habitually indulge in negative 'what-if' thoughts, and hold on to mistaken beliefs on things that are harmful or dangerous. Sometimes, parents unwittingly sow fearfulness in their children through their overly cautious views of the world, which lead to cumulative stress over time, and to anxiety disorders.



²⁵ <http://anxiety-attack-treatment.com/causes-of-panic.html>

²⁶ <http://anxiety-attack-treatment.com/causes-of-panic.html>

²⁷ http://www.helpguide.org/mental/panic_disorder_anxiety_attack_symptom_treatment.htm#causes

²⁸ <http://anxiety-attack-treatment.com/causes-of-panic.html>

Phobias that Cause Panic Attacks

Lastly, panic attacks may be triggered by phobias. People will often experience panic attacks when exposed to a phobic object or situation.²⁹ On the other hand, a person may develop a phobia of the particular situation wherein he experienced a panic attack. This has been observed in agoraphobia, a type of phobia that involves fear of crowds or being outside alone, that is prevalent among panic attack sufferers. In a process called reverse conditioning, the mind associates a specific situation or object with the panic attack, and becomes the stimulus for the fear response.³⁰

Treatment of Panic Attacks

Treatment for panic attacks and panic disorder will depend on the specific cause. Medication is used for the prevention and immediate alleviation of symptoms and is usually the main line of treatment. Other treatment modalities are psychotherapy, specifically cognitive-behavioral therapy³¹, cognitive behavior modification, rational emotive behavior therapy, and panic-focused psychodynamic psychotherapy.

Medication is considered highly effective

for treating panic disorder. At the same time, it makes phobia treatment easier. The medications commonly used include the following:³²

- **Antidepressants:** Selective serotonin reuptake inhibitors (SSRI) and tricyclic antidepressants are equally effective in the treatment of panic disorder.³³ Frequently used SSRIs include Prozac, Paxil, Celexa, Lexapro, and Zoloft. These

²⁹ http://en.wikipedia.org/wiki/Panic_attack#Triggers_and_causes

³⁰ http://www.hypoglycemia.asn.au/articles/beating_anxiety.html

³¹ <http://www.webmd.com/anxiety-panic/understanding-panic-attack-treatment>

³² http://en.wikipedia.org/wiki/Panic_disorder#Medication

³³ <http://www.aafp.org/afp/2005/0215/p733.html>

medications are often used as the first line of treatment for panic disorder.³⁴ They are taken daily and alter neurotransmitter configurations which in turn can help block symptoms. The anti-anxiety effects of these antidepressants are ascribed to their sedative effects.³⁵ Patients, however, may experience varying side effects. The choice of medication would have to take into consideration individual patient's side effect profiles and preferences.³⁶

- **Benzodiazepines:** These are anti-anxiety drugs that act very quickly, usually within 30 minutes to an hour. Taking them during a panic attack provides a rapid relief of symptoms. However, benzodiazepines are highly addictive and have serious withdrawal symptoms.³⁷ These drugs should not be used for longer than 4 weeks in treating panic disorder. Some physicians recommend benzodiazepines only as an option for treatment-resistant cases of panic disorder.³⁸
- **Psychotherapy:** This refers to the treatment of psychological issues through a discussion of the patient's symptoms, thoughts, behaviors, wishes, and emotions.³⁹
 - **Cognitive Behavioral Therapy (CBT):** In the treatment of panic disorder and agoraphobia, the most frequently used psychological intervention is cognitive behavioral therapy. CBT has two components. First is the cognitive component which deals with the identification and alteration of distorted thinking patterns

³⁴ <http://www.webmd.com/anxiety-panic/understanding-panic-attack-treatment>

³⁵ http://en.wikipedia.org/wiki/Panic_disorder#Medication

³⁶ <http://www.aafp.org/afp/2005/0215/p733.html>

³⁷ http://www.helpguide.org/mental/panic_disorder_anxiety_attack_symptom_treatment.htm

³⁸ http://en.wikipedia.org/wiki/Panic_disorder#Medication

³⁹ <http://bpd.about.com/od/glossary/g/psychother.htm>

that sustain the feelings of anxiety. The second is the behavioral component, which focuses on desensitization of anxiety through exposure to feared situations.

Since panic attacks are brought about by a person's catastrophic misinterpretation of bodily sensations of anxiety, CBT encourages patients to objectively identify and separate their body sensations from their thoughts. By thinking of more rational alternative explanations to his bodily sensations, the person's degree of belief in his irrational thoughts would begin to diminish, with a corresponding decrease in his level of anxiety.⁴⁰

The exposure-based component of CBT for panic disorder includes real-life exposure to situations that trigger panic, such as crowded places or driving in traffic. It also includes deliberate simulation and experiencing of physical sensations, such as dizziness, a racing heart and difficulty in breathing. By exposing patients to these sensations, the patients learn that although the physical experiences were aversive, they are not dangerous, nor do they lead to feared consequences such as death, loss of control, or going crazy. The psychoeducation on fear and panic attacks is delivered through several sessions, usually 12-16 sessions, in either individual or group formats.⁴¹



⁴⁰ http://www.paniccure.com/Approaches/CBT/overcome/overcome_panic_attacks.htm

⁴¹ http://www.psychology.sunysb.edu/eklonsky-/division12/treatments/panic_cbt.html

- **Cognitive Behavior Modification (CBM):** This approach focuses on identifying dysfunctional self-talk in order to change unwanted behaviors. The premise is that if a person changes his thoughts, how he reacts to anxiety-provoking situations will also change.⁴² The patients themselves are the primary agents of change, not the therapist or any other external agent. It encourages self-control among patients.⁴³
- **Rational Emotive Behavior Therapy (REBT).** This approach focuses on the uncovering of underlying unrealistic beliefs at the root of emotional disturbances. For example, a patient experiencing panic attacks ceased socializing with her family and friends because she feared that if she had another panic attack, her family and friends would think she was going crazy.

Using REBT, her underlying irrational beliefs were found to be her fear of becoming worthless if she loses the approval of other people, and her feeling that she must avoid unpleasant situations and doing anything unpleasant so as not to lose other people's regard. After detecting the irrational beliefs, the REBT therapist challenged the patient's beliefs and reworded them to a more logical and realistic idea. In this case, the patient was able to start thinking that though it would be uncomfortable and inconvenient to have a panic attack while she was out with friends, it would not really be devastating. She could still be a worthy person, even if other people disapproved of her.⁴⁴

⁴² <http://panicdisorder.about.com/od/treatments/a/PsychoTreatment.htm>

⁴³ <http://www.txautism.net/docs/Guide/Interventions/CognitiveBehaviorModification.pdf>

⁴⁴ <http://panicdisorder.about.com/od/treatments/a/rebt.htm>

- **Panic-Focused Psychodynamic Psychotherapy (PFPP).** This treatment is based on core psychoanalytical concepts, such as the existence and centrality of the unconscious, and generation of symptoms due to conflicts between both unconscious defense mechanisms and unconscious wishes. A small dose of anxiety may alert the ego to the presence of wishes or impulses that are unconsciously deemed as threatening, and triggers defense mechanisms. The failure of the defenses to modulate the unconscious threats lead to traumatic levels of anxiety or panic attacks.

During PFPP, the patient's unconscious conflicts and expectations from his past relationships are redirected to his present relationship with the therapist. This phenomenon, known as transference, allows the articulation of these unconscious desires and defense mechanisms, giving the patient increased understanding and control of them. Patients become engaged in the treatment as the therapist identifies links between feelings and circumstances surrounding panic onset and patients' emotional lives.⁴⁵



⁴⁵ <http://www.psychiatrictimes.com/display/article/10168/1147526>

Conclusion

The varied modalities that have been used for treating anxiety and panic disorders have had varying degrees of effectiveness on patients. Some patients fully respond to medication and psychotherapy. Others just show short-term improvements on their symptoms in response to a particular treatment.⁴⁶

Given the prevalence of the illness and its debilitating impact on the lives of patients, it is important to continue studies on developing and improving treatments for this affliction.



⁴⁶ <http://www.psychiatrictimes.com/display/article/10168/1147526?pageNumber=1>