

# basic facts

Generalized anxiety disorder (GAD) is a psychiatric disorder that is characterized by uncontrollable worry and anxiety. Although it is common for most people to experience some anxiety and worry from time to time, the symptoms are much more severe for those with GAD. Further, they experience physical symptoms associated with their anxiety, such as sleep difficulties, muscle tension, and feelings of restlessness. People with GAD worry on most days and have difficulties controlling it. There are a variety of topics that people with GAD might worry too much about, for example, the health of themselves or loved ones, job or school-related issues, and finances. They might also worry about minor things, like being on time or getting errands or household chores done. Some people with GAD also worry excessively about world-related issues, such as environmental problems or natural or man-made disasters. Most people with GAD also experience another anxiety disorder and/or a mood disorder (e.g., major depression).

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## Prevalence

Approximately 5.7% of people will have a diagnosis of GAD at some point in their lifetime, and it is about twice as common in females. Subclinical GAD is even more common than GAD. This is defined as having some symptoms of the disorder, but not enough for a diagnosis to be made. An additional 8 – 13.7% of people will experience subclinical GAD at some point in their life. Even though they don't have all the symptoms needed for a diagnosis of GAD, they too have higher levels of distress and impairment in their lives as compared to those without these anxiety symptoms. They are also at risk for developing another psychiatric disorder; between 42 – 86.3% of those with subclinical GAD have symptoms or a diagnosis of another disorder.

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## Course of Illness

Although the median age of onset of GAD is age 30, many people develop the disorder as early as adolescence and as late as middle age (or even older). Many people have symptoms of GAD throughout their lives and many report being anxious and a worrier for as long as they can remember. GAD tends to be chronic, with symptoms that wax and wane across a lifetime. It is the most common anxiety disorder seen in older adults. Most people with GAD also have at least one co-occurring disorder, usually another anxiety disorder or a mood disorder, like depression.

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## Causes

There are several factors that contribute to the development of GAD, including a family history of GAD or other anxiety or mood disorders, biological factors, personality and psychological factors, stressful life events, and environmental stressors.

Although much is unknown about the role of genes in the development of GAD, genetics research indicates that multiple genes are likely involved. Approximately one third of the risk of developing GAD is due to genetic factors. These factors tend to overlap with other anxiety disorders and major depressive disorder, so if someone in a family has GAD, there is a good chance that someone else in their family will have GAD and/or another anxiety disorder or depression.

In addition to genes, other risk factors need to be present for someone to develop GAD. For example, many scientists believe that there is a biological contribution to the development and maintenance of GAD, such as an imbalance in brain chemicals, specifically GABA, serotonin, and norepinephrine.

Personality style and psychological risk factors may also contribute to the development of GAD. For example, a personality trait called neuroticism (the tendency to experience high levels of negative emotions, such as irritability, stress, and sadness), is a considered a risk factor for GAD. Another risk factor is called behavioral inhibition, in which a person tends to be very fearful and



avoidant of new situations. Behavioral inhibition has been seen in infants as young as nine months old and is associated with the future development of anxiety disorders, such as GAD. Neuroticism and behavioral inhibition are believed to be genetically linked.

Another personality characteristic often seen in people with GAD is a difficulty tolerating uncertainty. People with GAD tend to view uncertainty as being bad, stressful, and to be avoided. As a result they might worry to try to reduce this uncertainty. For example, a person who is anxious about going to a party might worry about all of the possible things that could go wrong at the party in an attempt to reduce their uncertainty about it. Thus, they might feel like worrying like this gives them a sense of control over the uncertainty. Finally, people with GAD tend to be risk-averse and more likely than those without GAD to avoid dangerous or risky things.

None of these risk factors alone are the sole cause of GAD. Stressful life events and environmental factors are often contributors as well. These factors can include childhood loss, trauma,

or abuse, or stressful life events as an adult. Stressful life events include negative events such as a death of a loved one, divorce, financial stress, loss of a job, or chronic medical problems. They can also include significant positive life events, such as getting married, having a baby, or getting promoted at work. The use and withdrawal from substances such as caffeine, nicotine, and alcohol can also increase anxiety.

In sum, although it is unclear exactly how GAD is caused, there are many possible factors that could play a role. These factors are likely to be different for different people. It is important to keep in mind that there are effective treatments for GAD even though the cause is not completely understood.

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## diagnosis and symptoms

GAD cannot be diagnosed with a blood test, CAT-scan, or any other laboratory test. The only way to diagnose GAD is with a clinical interview, in which the interviewer will ask about the symptoms of GAD and the degree of related distress and interference. A physical exam is also important to rule out medical causes for the symptoms.

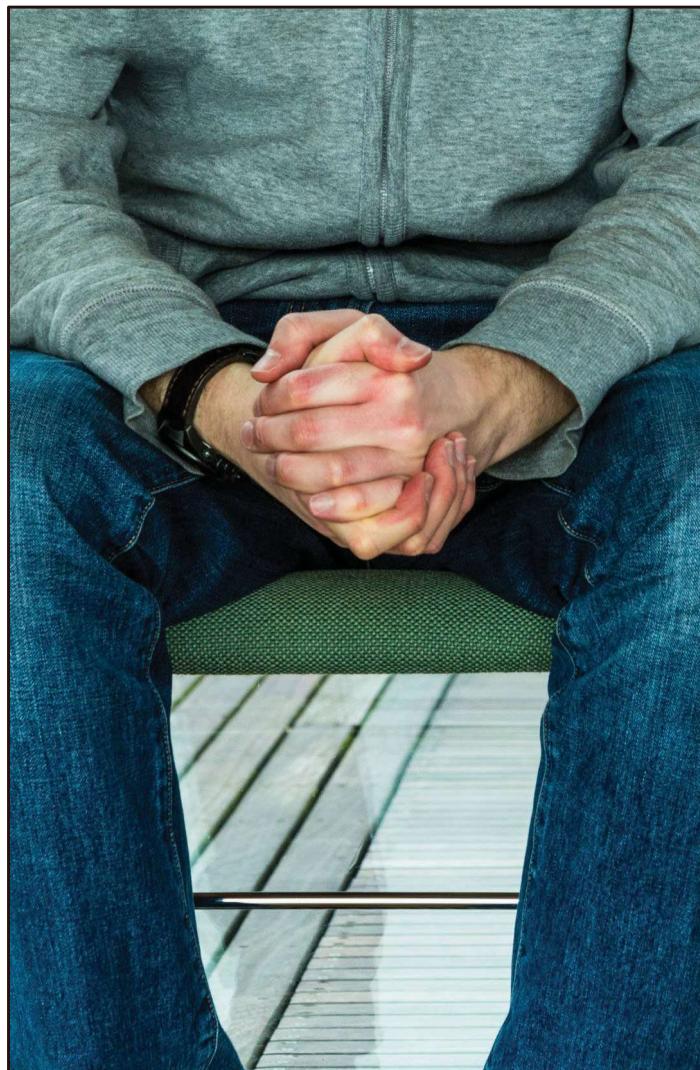
A person who has a diagnosis of GAD has high levels of anxiety and worry for at least six months, occurring on more days than not. They worry about several different things (e.g., work or school performance, finances, health of themselves and/or loved ones), and they find it difficult to control the worry. To receive a diagnosis of GAD, the person must also have at least three of the following six symptoms:

- Restlessness or feeling keyed up or on edge
- Being easily fatigued
- Difficulties concentrating or mind going blank
- Irritability
- Muscle tension
- Sleep disturbance (difficulty falling or staying asleep, or restless, unsatisfying sleep)

For a GAD diagnosis, the anxiety, worry, or physical symptoms need to cause significant distress or impairment in important areas of life, such as social, school, or work functioning.

In making a diagnosis, the clinician will need to check that these symptoms are not the result of the effects of a substance (e.g., medication, alcohol, or abused drug) or another medical condition, such as hyperthyroidism. Also, GAD would not be diagnosed if its symptoms are better explained by another psychiatric disorder.

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# similar psychiatric disorders

Several other psychiatric disorders have characteristics of anxiety and/or worry. For example, if someone's source of worry is primarily about being judged in social situations, social anxiety disorder might be diagnosed instead. Obsessive-compulsive disorder (OCD) is characterized by obsessions (e.g., contamination, something bad happening). These worries could be confused with the worries seen in GAD. However, the worries in GAD tend to be about real life concerns, while obsessions tend to be less realistic and more unusual. Panic disorder would be diagnosed instead of GAD if the primary focus of worry is on having a panic attack or the consequences of an attack. If a person worries excessively about their health, somatic symptom disorder (or hypochondriasis) might be diagnosed. If someone has excessive anxiety and worry about gaining weight, leading them to alter their eating behavior, an eating disorder might be diagnosed. It is important to mention again that it is common for other disorders to co-occur with GAD, so a person with GAD might also have one or more of the disorders listed (especially social anxiety, OCD, and panic disorder).

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## how family members can help

### Encourage Treatment

GAD is a treatable problem. Psychotherapy and medications can help ease the symptoms of GAD and reduce distress. It is important for a person with GAD to first visit a mental health professional for a thorough evaluation. If possible, family members could also attend to help answer questions and to provide support. If the person with GAD is prescribed medications that need to be taken at regular times, the family member can help give support around that. Taking medication can be difficult - there might be times when a person does not want to take it or just might forget to take it. Family members can help encourage and remind them to take their medications. Family members can also support attendance to psychotherapy appointments by giving reminders and providing transportation.

### Reinforce Treatment Concepts

GAD can have a negative impact on the family. For example, family members might be pulled into providing reassurance for anxious thoughts. Although family members might feel like they are "helping" their relative by providing reassurance, these behaviors actually make things worse. Reassurance reinforces worries and anxiety. The affected family member can become dependent on the reassurance. As a result, they do not learn how to tolerate anxiety and uncertainty, and things don't get better. How can family members eliminate providing reassurance? For example, when asked by their relative with GAD for reassurance, family members can gently say something like, "I can't answer that for you, see if you can sit with these feelings."

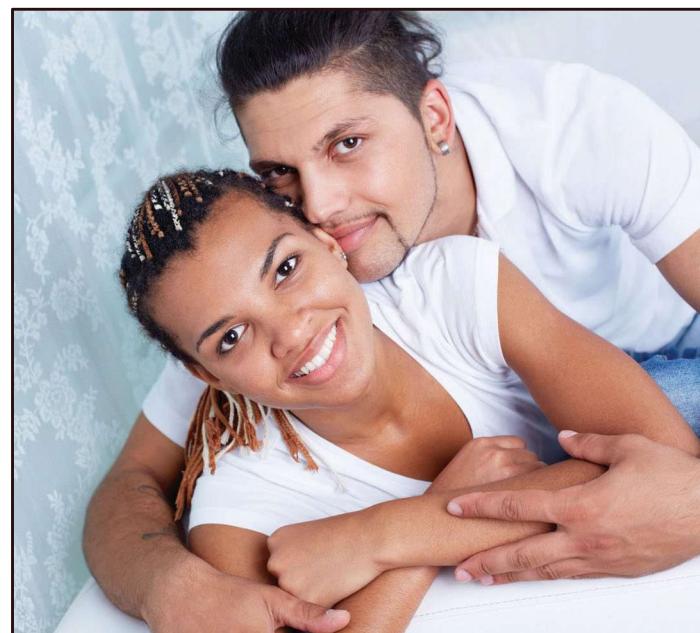
Family members often feel guilty about not providing reassurance but having an understanding of the cognitive-behavioral model of GAD can help reduce feelings of guilt. Family members can talk with a CBT therapist to learn specifics about how they can reduce providing reassurance and provide support of the treatment. For example, CBT is comprised of homework assignments; family members can encourage their relative to engage in the homework, such as cognitive restructuring, and offer to help, if relevant. If mindfulness is part of the treatment, family members can offer to join in such practice at home. If the family member with GAD is dealing with insomnia, family members can help by supporting positive sleep behaviors (e.g., not working or using electronics in bed themselves and not bringing up challenging discussion topics right before bed). Even if a person is not receiv-

ing psychotherapy for GAD, relatives can help reinforce some of these concepts.

### Take Care of Themselves

Given some of the challenges that family members may face, it is important that they take care of themselves as well. There are many ways to do this. Family members should not allow their relative with GAD to monopolize all of their time, and spending time alone or with other family members or friends is important for their own well-being. Family members may also consider joining a support or therapy group. Counseling can often help family and friends better cope with a loved one's GAD. Finally, family members should not feel responsible for solving the problem themselves. They can't. They should get the help of a mental health professional if needed.

*Family members can help their relative with GAD by encouraging treatment, eliminating reassurance, and reinforcing treatment concepts. Family members should also remember to take care of themselves.*



## Medication

There are different types of medications that can be used to treat GAD. The section titled, "Anti-Anxiety Medication: What You Should Know" (pages 6-7) provides general information about these medications.

## Cognitive Behavioral Therapy (CBT)

Research shows that cognitive behavioral therapy (CBT) is one of the most effective treatments for GAD. CBT is a blend of two types of therapies, cognitive therapy and behavioral therapy, and can be delivered in an individual or group format. Family members can also be involved in the treatment and can help reinforce treatment concepts. CBT starts with a thorough assessment of symptoms. Using information from the assessment, the therapist will then provide education about GAD and tailor it to the person's specific symptoms.

The cognitive therapy component of CBT focuses on a person's thoughts and beliefs and is often used to help people with GAD change their anxious thoughts or distorted thinking. People with GAD often believe that bad things, or catastrophes, are looming in the future, and a therapist can help with managing these thoughts. First, many people with GAD often treat their fears as a given and don't look at realistic probabilities. For example, consider a good student who worries about failing every test she takes. With the help of the therapist, she could see that she has never actually failed a test, and she is greatly overestimating the probability it will happen. Second, a therapist will help with de-catastrophizing and facing fears head-on; that is, helping the person figure out how they will cope if their dreaded worry occurs. In the example of the student with academic anxiety, the therapist will help her examine how she would cope if she did actually fail. Helping a person face their fears and see that it wouldn't be the end of the world can help deflate the power of a worry.

The behavioral component of CBT for GAD is also helpful in reducing worry and related anxiety. Imaginal exposure is one technique that a therapist might use. The therapist will systematically help guide the person to imagine the things that they worry about, over and over again. With repeated practice, the worries will no longer hold so much power over the person, and their anxiety will decrease. Another behavioral strategy involves reducing or eliminating behaviors that reinforce fears. For example, a person who is excessively worried about finances and goes online to check their bank accounts multiple times a week will be directed to stop checking so much, as it only fuels the anxiety. Similarly, a person who frequently asks others for reassurance about their fears will be taught to eliminate that behavior.

## Relaxation Training

Some therapists use relaxation training as a method of reducing anxiety. It can be used along with CBT and/or medication. Most professionals agree that relaxation training alone is probably not sufficient to fully get rid of anxiety symptoms for most people. One type of relaxation strategy often used for generalized anxiety is progressive muscle relaxation, a type of relaxation which involves tensing and relaxing different muscles in the body and then applying this relaxation in moments of distress and worry. Another relaxation strategy is diaphragmatic breathing, or belly breathing. This type of breathing, which leads to deeper breaths and more oxygen in the lungs, can be very relaxing for many people.

## Mindfulness and Acceptance Practices

Mindfulness is another technique often used with CBT and/or medication. Mindfulness practice involves purposely paying attention fully to the present moment, without judgment. For example, one type of mindfulness practice involves paying attention to one's breath, and when their mind begins to wander, to bring their attention back to their breath. Contrary to what most people think, mindfulness and relaxation are not the same thing, although some people find practicing mindfulness to be relaxing. Rather, mindfulness practice helps people gain the ability to be more comfortable and clear in their minds when they are in distress and having bouts of worry.

There are many ways to practice mindfulness. One common way is to sit quietly and focus attention on one's breath, without actually trying to change the breath. People who regularly practice mindfulness can learn to be less reactive to their emotions and changes in their bodies. They can learn to be more accepting of negative emotional states, such as anxiety. For those with generalized anxiety disorder, mindfulness can teach people to observe their anxiety and worry and learn to let them go. Thus, acceptance of one's anxiety can cause the anxiety to lessen and feel less scary. People who regularly practice mindfulness can learn to be less judgmental and reactive and be more accepting of their negative thoughts and emotions. Mindfulness can teach people with GAD to simply observe their anxiety and worry rather than feeding into them with additional fearful thoughts and behaviors that reinforce the worry.

## Acceptance and Commitment Therapy

Acceptance and Commitment Therapy (ACT) is a newer treatment that has been used for GAD. There has been limited



# treatment (cont'd)

research on ACT and GAD, but the studies that have been conducted thus far are promising. An overarching goal of ACT is to help people identify what they value most in their lives, such as family, work, social relationships, and community, and help them take action to support living in-line with these values. Unlike CBT, in ACT, the goal is not to reduce the frequency or intensity of unpleasant thoughts and feelings; rather, the ACT therapist teaches people to reduce their struggle to get rid of, or control their thoughts, through cognitive defusion techniques. Cognitive defusion refers to noticing thoughts as just thoughts, rather than getting caught up in them. For example, a person who has the thought, "I'm going to fail this test," will learn to respond to that thought by saying to themselves, "I'm having the thought, I'm going to fail this test." Although we can't change the thoughts that pop up in our minds, we can change the way we respond to them, and the result can be less time having these unpleasant thoughts and worries, which will lead to a reduction in anxiety. ACT also uses mindfulness as a technique to help people learn cognitive defusion. In sum, acceptance of one's anxious thoughts and feelings can cause the anxiety to lessen and feel less scary. People can be freed up to do more things in their life that they find meaningful and important.

## Cognitive Behavioral Therapy for Insomnia (CBT-I)

People with GAD commonly experience sleep problems. CBT can be an effective tool in helping to improve sleep. A ther-

apist will first do a thorough assessment of the insomnia to get a better understanding of what might be causing it. A common practice for CBT-I is to instill good sleep hygiene practices, which might include going to bed and waking up around the same time every day, taking time to wind down before bed, not drinking caffeine from the mid-afternoon on, not using alcohol before bedtime (can disrupt sleep rhythms), not using electronics in bed, and not doing work in bed. Another important facet of CBT-I is making sure the bed is not associated with stress and anxiety, which means having the person with insomnia get out of bed and do something relaxing and calming if they haven't fallen asleep after approximately 15 minutes. They can return to bed after they feel sleepy again.

A therapist will also use cognitive techniques, like decatastrophizing, to help a person address anxious thoughts associated with sleep. Often people who have insomnia have fearful thoughts about sleep (e.g., "I'll never get a good night's sleep again," or "What if I don't sleep tonight?"), which is counterproductive to sleep. It's important that these thoughts are addressed because they increase anxiety, making it harder to fall asleep. A therapist might assign "worry time" during the day or early evening. During this time, the person will allow themselves to worry and/or plan as much as they need to do, in order to get their worries out of their system before bed. Finally, a person might be instructed to do relaxation or mindfulness activities to help them wind down before going to sleep.

# medication: what you should know

- The most widely recommended medications for GAD are antidepressant medications. Other medications that may be used include buspirone and benzodiazepines.
- These medications are thought to work by modulating gamma-aminobutyric acid (GABA), serotonin, norepinephrine, or dopamine, which are neurotransmitters believed to regulate anxiety and mood.
- All medications may cause side effects, but many people have no side effects or minor side effects with their anti-anxiety medications. The side effects people typically experience are tolerable and subside in a few days. Check with your doctor if any of the common side effects listed persist or become bothersome. In rare cases, these medications can cause severe side effects. Contact your doctor immediately if you experience one or more severe symptoms.
- When taking medications for GAD, if you forget to take a dose, a safe rule of thumb is: if you missed your regular time by *4 hours or less*, you should take that dose when you remember it. If it is *more than 4 hours* after the dose should have been taken, just skip the forgotten dose and resume your medication at the next regularly scheduled time. *Never double up on doses of your medication to "catch up" on those you have forgotten.*

## Antidepressant Medications

- Antidepressant medications, while initially developed for depression, have been found to be successful in treating anxiety disorders and are commonly used to treat GAD. While many available antidepressants are listed below, the evidence for their effectiveness in treating GAD varies considerably. You should discuss medication choices with your doctor.
- Antidepressant medications impact levels of various neu-

rotransmitters in the brain (serotonin, norepinephrine, and/or dopamine) though it is still uncertain if that is the mechanism by which they work to reduce symptoms of anxiety and depression.

- Antidepressants must be taken as prescribed for three to four weeks before you can expect to see the start of positive changes in your symptoms. And it may take several months to see maximum effects. So don't stop taking your medication because you think it's not working after only a week or two. Give it time and discuss with your doctor.
- Once you have responded to treatment, it is important to continue treatment. It is recommended that treatment continue for 9-12 months once a good response has been achieved. Discontinuing treatment earlier may lead to a relapse of symptoms. If you have a more severe or chronic case of generalized anxiety disorder, your doctor might recommend longer term treatment.
- To prevent the anxiety from coming back or worsening, do not abruptly stop taking your medication, even if you are feeling better. Stopping your medication too soon or abruptly can cause a relapse. Medication should only be stopped (and usually tapered slowly) under your doctor's supervision. If you want to stop taking your medication, talk to your doctor about how to correctly stop it.

## SELECTIVE SEROTONIN REUPTAKE INHIBITORS (SSRIs) AND SEROTONIN MODULATORS

- Citalopram (Celexa)
- Escitalopram (Lexapro)
- Fluoxetine (Prozac)
- Fluvoxamine (Luvox)

Paroxetine (Paxil)  
Sertraline (Zoloft)  
Vilazodone (Viibryd)  
Vortioxetine (Trintellix)

## SEROTONIN AND NOREPINEPHRINE REUPTAKE INHIBITORS (SNRIs)

Desvenlafaxine (Pristiq)  
Duloxetine (Cymbalta)  
Levomilnacipran (Fetzima)  
Venlafaxine (Effexor)

## ATYPICAL ANTIDEPRESSANTS

Bupropion (Wellbutrin)  
Mirtazapine (Remeron)  
Nefazodone (Serzone)  
Trazodone (Desyrel)

## TRICYCLICS AND TETRACYCLICS (TCAs AND TECAs)

Amitriptyline (Elavil or Endep)  
Amoxapine (Asendin)  
Clomipramine (Anafranil)  
Desipramine (Norpramin or Pertofrane)  
Doxepin (Sinequan or Adapin)  
Imipramine (Tofranil)  
Maprotiline (Ludiomil)  
Nortriptyline (Pamelor)  
Protriptyline (Vivactil)  
Trimipramine (Surmontil)

## MONOAMINE OXIDASE INHIBITORS (MAOIs)

Phenelzine (Nardil)  
Selegiline (Emsam) patch  
Tranylcypromine (Parnate)

## Buspirone (Buspar)

- Buspirone is a medication that has been approved by the FDA to treat anxiety disorders such as GAD and is neither an antidepressant or a benzodiazepine.
- Buspirone impacts the neurotransmitters dopamine and serotonin, but the mechanism by which it reduces anxiety is not known.
- Like the antidepressants, buspirone usually takes at least several weeks to positively affect symptoms of anxiety. Once you have responded to treatment with buspirone, it is important to continue treatment. It is recommended that treatment continue for 9-12 months once a good response has been achieved. Discontinuing treatment earlier may lead to a relapse of symptoms. If you have a more severe or chronic case of GAD, your doctor might recommend longer term treatment. Finally, to prevent the anxiety from coming back or worsening, do not abruptly stop taking your medication, even if you are feeling better.

## Benzodiazepines

- Benzodiazepines are a different type of medication that are used for anxiety. Benzodiazepines work by enhancing the effects of the neurotransmitter GABA, which has a calming effect.
- Benzodiazepines can be taken on an as needed basis (p.r.n.) or might be prescribed to be taken on a regular schedule. Discuss with your physician which of these approaches to use.

- Users of these medications can feel the effects quite quickly (sometimes in less than a half hour), and the effects can last for several hours up to a day, depending on what medication is being taken.
- While benzodiazepines can be effective in the short-term, for most people, they are not the best long-term treatment strategy. Many doctors prescribe a benzodiazepine as a person is getting started on an antidepressant. Use of an antidepressant is usually a better long-term medication management strategy than benzodiazepines. Hence, the doctor might taper the individual off the benzodiazepine once they are experiencing the benefits of the antidepressant.
- Benzodiazepines may be habit-forming.. Those who take benzodiazepines on a regular basis are at risk for dependency and withdrawal. People might need to increase the dosage of their medication in order to get the desired effect, although this happens rarely if used according to doctor's instructions. They are likely to experience symptoms of withdrawal when coming off the medication; always consult with your physician if you are considering stopping, as a slow taper is usually recommended. Stopping abruptly can be dangerous and life-threatening. Because of their potential for abuse or misuse, benzodiazepines should generally not be prescribed to people with a history of substance abuse problems.
- Benzodiazepines can cause drowsiness, impair coordination and concentration, and reduce short term memory. Patients should use caution when driving or in other situations where they may be impaired. They should not be used simultaneously with alcohol or opioid medications.

Commonly used benzodiazepines for anxiety include:

Alprazolam (Xanax)  
Clonazepam (Klonopin)  
Diazepam (Valium)  
Lorazepam (Ativan)



This handout provides only general information about medication for generalized anxiety disorder. It does not cover all possible uses, actions, precautions, side effects, or interactions of the medicines mentioned. This information does not constitute medical advice or treatment and is not intended as medical advice for individual problems or for making an evaluation as to the risks and benefits of taking a particular medication. The treating physician, relying on experience and knowledge of the patient, must determine dosages and the best treatment for the patient.