What Is Generalized Anxiety Disorder?

“I always thought I was just a worrier. I’d feel keyed up and unable to relax. At times it would come and go, and at times it would be constant. It could go on for days. I’d worry about what I was going to fix for a dinner party, or what would be a great present for somebody. I just couldn’t let something go.”

“I’d have terrible sleeping problems. There were times I’d wake up wired in the middle of the night. I had trouble concentrating, even reading the newspaper or a novel. Sometimes I’d feel a little lightheaded. My heart would race or pound. And that would make me worry more. I was always imagining things were worse than they really were. When I got a stomachache, I’d think it was an ulcer.”

“I was worried all the time about everything. It didn't matter that there were no signs of problems, I just got upset. I was having trouble falling asleep at night, and I couldn't keep my mind focused at work. I felt angry at my family all the time.”

All of us worry about things like health, money, or family problems. But people with generalized anxiety disorder (GAD) are extremely worried about these and many other things, even when there is little or no reason to worry about them. They are very anxious about just getting through the day. They think things will always go badly. At times, worrying keeps people with GAD from doing everyday tasks.

Causes

GAD sometimes runs in families, but no one knows for sure why some people have it while others don't. Researchers have found that several parts of the brain are involved in fear and anxiety. By learning more about fear and anxiety in the brain, scientists may be able to create better treatments. Researchers are also looking for ways in which stress and environmental factors may play a role.

Signs & Symptoms

People with GAD can’t seem to get rid of their concerns, even though they usually realize that their anxiety is more intense than the situation warrants. They can’t relax, startle easily, and have difficulty concentrating. Often they have trouble falling asleep or staying asleep. Physical symptoms that often accompany the anxiety include fatigue, headaches, muscle tension, muscle aches, difficulty swallowing, trembling, twitching, irritability, sweating, nausea, lightheadedness, having to go to the bathroom frequently, feeling out of breath, and hot flashes.

GAD develops slowly. It often starts during the teen years or young adulthood. Symptoms may get better or worse at different times, and often are worse during times of stress.

When their anxiety level is mild, people with GAD can function socially and hold down a job. Although they don’t avoid certain situations as a result of their disorder, people with GAD can have difficulty carrying out the simplest daily activities if their anxiety is severe.

Who Is At Risk?

Generalized anxiety disorders affect about 3.1% American adults age 18 years and older (about 18%) in a given year, causing them to be filled with fearfulness and uncertainty.The average age of onset is 31 years old.

GAD affects about 6.8 million American adults, including twice as many women as men. The disorder develops gradually and can begin at any point in the life cycle, although the years of highest risk are between childhood and middle age.

Diagnosis

GAD is diagnosed when a person worries excessively about a variety of everyday problems for at least 6 months.

People with GAD may visit a doctor many times before they find out they have this disorder. They ask their doctors to help them with headaches or trouble falling asleep, which can be symptoms of GAD but they don't always get the help they need right away. It may take doctors some time to be sure that a person has GAD instead of something else.

First, talk to your doctor about your symptoms. Your doctor should do an exam to make sure that another physical problem isn't causing the symptoms. The doctor may refer you to a mental health specialist.

Treatments

GAD is generally treated with psychotherapy, medication, or both.

**Psychotherapy.** A type of psychotherapy called cognitive behavior therapy is especially useful for treating GAD. It teaches a person different ways of thinking, behaving, and reacting to situations that help him or her feel less anxious and worried.

**Medication.** Doctors also may prescribe medication to help treat GAD. Two types of medications are commonly used to treat GAD—anti-anxiety medications and antidepressants. Anti-anxiety medications are powerful and there are different types. Many types begin working right away, but they generally should not be taken for long periods.

Antidepressants are used to treat depression, but they also are helpful for GAD. They may take several weeks to start working. These medications may cause side effects such as headache, nausea, or difficulty sleeping. These side effects are usually not a problem for most people, especially if the dose starts off low and is increased slowly over time. **Talk to your doctor about any side effects you may have.**

It's important to know that although antidepressants can be safe and effective for many people, they may be risky for some, especially children, teens, and young adults. A "black box"—the most serious type of warning that a prescription drug can have—has been added to the labels of antidepressant medications. These labels warn people that antidepressants may cause some people to have suicidal thoughts or make suicide attempts. Anyone taking antidepressants should be monitored closely, especially when they first start treatment with medications.

Some people do better with cognitive behavior therapy, while others do better with medication. Still others do best with a combination of the two. Talk with your doctor about the best treatment for you.

Living With

If you think you have an anxiety disorder, the first person you should see is your family doctor. A physician can determine whether the symptoms that alarm you are due to an anxiety disorder, another medical condition, or both.

If an anxiety disorder is diagnosed, the next step is usually seeing a mental health professional. The practitioners who are most helpful with anxiety disorders are those who have training in cognitive-behavioral therapy and/or behavioral therapy, and who are open to using medication if it is needed.

You should feel comfortable talking with the mental health professional you choose. If you do not, you should seek help elsewhere. Once you find a mental health professional with whom you are comfortable, the two of you should work as a team and make a plan to treat your anxiety disorder together.

Remember that once you start on medication, it is important not to stop taking it abruptly. Certain drugs must be tapered off under the supervision of a doctor or bad reactions can occur. Make sure you talk to the doctor who prescribed your medication before you stop taking it. If you are having trouble with side effects, it’s possible that they can be eliminated by adjusting how much medication you take and when you take it.

Most insurance plans, including health maintenance organizations (HMOs), will cover treatment for anxiety disorders. Check with your insurance company and find out. If you don’t have insurance, the Health and Human Services division of your county government may offer mental health care at a public mental health center that charges people according to how much they are able to pay. If you are on public assistance, you may be able to get care through your state Medicaid plan.

**Ways to Make Treatment More Effective**

Many people with anxiety disorders benefit from joining a self-help or support group and sharing their problems and achievements with others. Internet chat rooms can also be useful in this regard, but any advice received over the Internet should be used with caution, as Internet acquaintances have usually never seen each other and false identities are common. Talking with a trusted friend or member of the clergy can also provide support, but it is not a substitute for care from a mental health professional.

Stress management techniques and meditation can help people with anxiety disorders calm themselves and may enhance the effects of therapy. There is preliminary evidence that aerobic exercise may have a calming effect. Since caffeine, certain illicit drugs, and even some over-the-counter cold medications can aggravate the symptoms of anxiety disorders, they should be avoided. Check with your physician or pharmacist before taking any additional medications.

The family is very important in the recovery of a person with an anxiety disorder. Ideally, the family should be supportive but not help perpetuate their loved one’s symptoms. Family members should not trivialize the disorder or demand improvement without treatment.

SOURCE: **http://www.nimh.nih.gov/health/topics/generalized-anxiety-disorder-gad/index.shtml**

What is Post-traumatic Stress Disorder (PTSD)?

When in danger, it’s natural to feel afraid. This fear triggers many split-second changes in the body to prepare to defend against the danger or to avoid it. This “fight-or-flight” response is a healthy reaction meant to protect a person from harm. But in post-traumatic stress disorder (PTSD), this reaction is changed or damaged. People who have PTSD may feel stressed or frightened even when they’re no longer in danger.

PTSD develops after a terrifying ordeal that involved physical harm or the threat of physical harm. The person who develops PTSD may have been the one who was harmed, the harm may have happened to a loved one, or the person may have witnessed a harmful event that happened to loved ones or strangers.

PTSD was first brought to public attention in relation to war veterans, but it can result from a variety of traumatic incidents, such as mugging, rape, torture, being kidnapped or held captive, child abuse, car accidents, train wrecks, plane crashes, bombings, or natural disasters such as floods or earthquakes.

Causes

**Genes.** Currently, many scientists are focusing on genes that play a role in creating fear memories. Understanding how fear memories are created may help to refine or find new interventions for reducing the symptoms of PTSD. For example, PTSD researchers have pinpointed genes that make:

Stathmin, a protein needed to form fear memories. In one study, mice that did not make stathmin were less likely than normal mice to “freeze,” a natural, protective response to danger, after being exposed to a fearful experience. They also showed less innate fear by exploring open spaces more willingly than normal mice.

GRP (gastrin-releasing peptide), a signaling chemical in the brain released during emotional events. In mice, GRP seems to help control the fear response, and lack of GRP may lead to the creation of greater and more lasting memories of fear.

Researchers have also found a version of the 5-HTTLPR gene, which controls levels of serotonin — a brain chemical related to mood-that appears to fuel the fear response. Like other mental disorders, it is likely that many genes with small effects are at work in PTSD.

**Brain Areas.** Studying parts of the brain involved in dealing with fear and stress also helps researchers to better understand possible causes of PTSD. One such brain structure is the amygdala, known for its role in emotion, learning, and memory. The amygdala appears to be active in fear acquisition, or learning to fear an event (such as touching a hot stove), as well as in the early stages of fear extinction, or learning not to fear.

Storing extinction memories and dampening the original fear response appears to involve the prefrontal cortex (PFC) area of the brain, involved in tasks such as decision-making, problem-solving, and judgment. Certain areas of the PFC play slightly different roles. For example, when it deems a source of stress controllable, the medial PFC suppresses the amygdala an alarm center deep in the brainstem and controls the stress response.5The ventromedial PFC helps sustain long-term extinction of fearful memories, and the size of this brain area may affect its ability to do so.

Individual differences in these genes or brain areas may only set the stage for PTSD without actually causing symptoms. Environmental factors, such as childhood trauma, head injury, or a history of mental illness, may further increase a person's risk by affecting the early growth of the brain. Also, personality and cognitive factors, such as optimism and the tendency to view challenges in a positive or negative way, as well as social factors, such as the availability and use of social support, appear to influence how people adjust to trauma. More research may show what combinations of these or perhaps other factors could be used someday to predict who will develop PTSD following a traumatic event.

**The Next Steps for PTSD Research**

In the last decade, rapid progress in research on the mental and biological foundations of PTSD has lead scientists to focus on prevention as a realistic and important goal.

For example, NIMH-funded researchers are exploring new and orphan medications thought to target underlying causes of PTSD in an effort to prevent the disorder. Other research is attempting to enhance cognitive, personality, and social protective factors and to minimize risk factors to ward off full-blown PTSD after trauma. Still other research is attempting to identify what factors determine whether someone with PTSD will respond well to one type of intervention or another, aiming to develop more personalized, effective and efficient treatments.

As gene research and brain imaging technologies continue to improve, scientists are more likely to be able to pinpoint when and where in the brain PTSD begins. This understanding may then lead to better targeted treatments to suit each person's own needs or even prevent the disorder before it causes harm.

Signs & Symptoms

PTSD can cause many symptoms. These symptoms can be grouped into three categories:

**1. Re-experiencing symptoms**

* Flashbacks—reliving the trauma over and over, including physical symptoms like a racing heart or sweating
* Bad dreams
* Frightening thoughts.

Re-experiencing symptoms may cause problems in a person’s everyday routine. They can start from the person’s own thoughts and feelings. Words, objects, or situations that are reminders of the event can also trigger re-experiencing.

**2. Avoidance symptoms**

* Staying away from places, events, or objects that are reminders of the experience
* Feeling emotionally numb
* Feeling strong guilt, depression, or worry
* Losing interest in activities that were enjoyable in the past
* Having trouble remembering the dangerous event.

Things that remind a person of the traumatic event can trigger avoidance symptoms. These symptoms may cause a person to change his or her personal routine. For example, after a bad car accident, a person who usually drives may avoid driving or riding in a car.

**3. Hyperarousal symptoms**

* Being easily startled
* Feeling tense or “on edge”
* Having difficulty sleeping, and/or having angry outbursts.

Hyperarousal symptoms are usually constant, instead of being triggered by things that remind one of the traumatic event. They can make the person feel stressed and angry. These symptoms may make it hard to do daily tasks, such as sleeping, eating, or concentrating.

It’s natural to have some of these symptoms after a dangerous event. Sometimes people have very serious symptoms that go away after a few weeks. This is called acute stress disorder, or ASD. When the symptoms last more than a few weeks and become an ongoing problem, they might be PTSD. Some people with PTSD don’t show any symptoms for weeks or months.

**Do children react differently than adults?**

Children and teens can have extreme reactions to trauma, but their symptoms may not be the same as adults. In very young children, these symptoms can include:

* Bedwetting, when they’d learned how to use the toilet before
* Forgetting how or being unable to talk
* Acting out the scary event during playtime
* Being unusually clingy with a parent or other adult.

Older children and teens usually show symptoms more like those seen in adults. They may also develop disruptive, disrespectful, or destructive behaviors. Older children and teens may feel guilty for not preventing injury or deaths. They may also haDve thoughts of revenge. For more information, see the NIMH booklets on helping children cope with violence and disasters. (from [**Post-Traumatic Stress Disorder (PTSD)**](http://www.nimh.nih.gov/health/publications/post-traumatic-stress-disorder-ptsd/index.shtml) )

Who Is At Risk?

PTSD affects about 7.7 million American adults, but it can occur at any age, including childhood. Women are more likely to develop PTSD than men, and there is some evidence that susceptibility to the disorder may run in families.

Anyone can get PTSD at any age. This includes war veterans and survivors of physical and sexual assault, abuse, accidents, disasters, and many other serious events.

Not everyone with PTSD has been through a dangerous event. Some people get PTSD after a friend or family member experiences danger or is harmed. The sudden, unexpected death of a loved one can also cause PTSD.

**Why do some people get PTSD and other people do not?**

It is important to remember that not everyone who lives through a dangerous event gets PTSD. In fact, most will not get the disorder.

Many factors play a part in whether a person will get PTSD. Some of these are risk factors that make a person more likely to get PTSD. Other factors, called resilience factors, can help reduce the risk of the disorder. Some of these risk and resilience factors are present before the trauma and others become important during and after a traumatic event.

Risk factors for PTSD include:

* Living through dangerous events and traumas
* Having a history of mental illness
* Getting hurt
* Seeing people hurt or killed
* Feeling horror, helplessness, or extreme fear
* Having little or no social support after the event
* Dealing with extra stress after the event, such as loss of a loved one, pain and injury, or loss of a job or home.

Resilience factors that may reduce the risk of PTSD include:

* Seeking out support from other people, such as friends and family
* Finding a support group after a traumatic event
* Feeling good about one’s own actions in the face of danger
* Having a coping strategy, or a way of getting through the bad event and learning from it
* Being able to act and respond effectively despite feeling fear.

Researchers are studying the importance of various risk and resilience factors. With more study, it may be possible someday to predict who is likely to get PTSD and prevent it.

Diagnosis

Not every traumatized person develops full-blown or even minor PTSD. Symptoms usually begin within 3 months of the incident but occasionally emerge years afterward. They must last more than a month to be considered PTSD. The course of the illness varies. Some people recover within 6 months, while others have symptoms that last much longer. In some people, the condition becomes chronic.

A doctor who has experience helping people with mental illnesses, such as a psychiatrist or psychologist, can diagnose PTSD. The diagnosis is made after the doctor talks with the person who has symptoms of PTSD.

To be diagnosed with PTSD, a person must have all of the following for at least 1 month:

* At least one re-experiencing symptom
* At least three avoidance symptoms
* At least two hyperarousal symptoms

Symptoms that make it hard to go about daily life, go to school or work, be with friends, and take care of important tasks.

PTSD is often accompanied by depression, substance abuse, or one or more of the other anxiety disorders.

Treatments

The main treatments for people with PTSD are psychotherapy (“talk” therapy), medications, or both. Everyone is different, so a treatment that works for one person may not work for another. It is important for anyone with PTSD to be treated by a mental health care provider who is experienced with PTSD. Some people with PTSD need to try different treatments to find what works for their symptoms.

If someone with PTSD is going through an ongoing trauma, such as being in an abusive relationship, both of the problems need to be treated. Other ongoing problems can include panic disorder, depression, substance abuse, and feeling suicidal.

**Psychotherapy**

Psychotherapy is “talk” therapy. It involves talking with a mental health professional to treat a mental illness. Psychotherapy can occur one-on-one or in a group. Talk therapy treatment for PTSD usually lasts 6 to 12 weeks, but can take more time. Research shows that support from family and friends can be an important part of therapy.

Many types of psychotherapy can help people with PTSD. Some types target the symptoms of PTSD directly. Other therapies focus on social, family, or job-related problems. The doctor or therapist may combine different therapies depending on each person’s needs.

One helpful therapy is called cognitive behavioral therapy, or CBT. There are several parts to CBT, including:

* **Exposure therapy.** This therapy helps people face and control their fear. It exposes them to the trauma they experienced in a safe way. It uses mental imagery, writing, or visits to the place where the event happened. The therapist uses these tools to help people with PTSD cope with their feelings.
* **Cognitive restructuring.** This therapy helps people make sense of the bad memories. Sometimes people remember the event differently than how it happened. They may feel guilt or shame about what is not their fault. The therapist helps people with PTSD look at what happened in a realistic way.
* **Stress inoculation training.** This therapy tries to reduce PTSD symptoms by teaching a person how to reduce anxiety. Like cognitive restructuring, this treatment helps people look at their memories in a healthy way.

Other types of treatment can also help people with PTSD. People with PTSD should talk about all treatment options with their therapist.

**How Talk Therapies Help People Overcome PTSD**

Talk therapies teach people helpful ways to react to frightening events that trigger their PTSD symptoms. Based on this general goal, different types of therapy may:

* Teach about trauma and its effects.
* Use relaxation and anger control skills.
* Provide tips for better sleep, diet, and exercise habits.
* Help people identify and deal with guilt, shame, and other feelings about the event.
* Focus on changing how people react to their PTSD symptoms. For example, therapy helps people visit places and people that are reminders of the trauma.

**Medications**

The U.S. Food and Drug Administration (FDA) has approved two medications for treating adults with PTSD:

* sertraline (Zoloft)
* paroxetine (Paxil)

Both of these medications are antidepressants, which are also used to treat depression. They may help control PTSD symptoms such as sadness, worry, anger, and feeling numb inside. Taking these medications may make it easier to go through psychotherapy.

Sometimes people taking these medications have side effects. The effects can be annoying, but they usually go away. However, medications affect everyone differently. Any side effects or unusual reactions should be reported to a doctor immediately.

SOURCE: http://www.nimh.nih.gov/health/topics/post-traumatic-stress-disorder-ptsd/index.shtml

What is Obsessive-Compulsive Disorder (OCD)?

Everyone double checks things sometimes. For example, you might double check to make sure the stove or iron is turned off before leaving the house. But people with obsessive-compulsive disorder (OCD) feel the need to check things repeatedly, or have certain thoughts or perform routines and rituals over and over. The thoughts and rituals associated with OCD cause distress and get in the way of daily life.

The frequent upsetting thoughts are called obsessions. To try to control them, a person will feel an overwhelming urge to repeat certain rituals or behaviors called compulsions. People with OCD can't control these obsessions and compulsions. Most of the time, the rituals end up controlling them.

For example, if people are obsessed with germs or dirt, they may develop a compulsion to wash their hands over and over again. If they develop an obsession with intruders, they may lock and relock their doors many times before going to bed. Being afraid of social embarrassment may prompt people with OCD to comb their hair compulsively in front of a mirror-sometimes they get “caught” in the mirror and can’t move away from it. Performing such rituals is not pleasurable. At best, it produces temporary relief from the anxiety created by obsessive thoughts.

Other common rituals are a need to repeatedly check things, touch things (especially in a particular sequence), or count things. Some common obsessions include having frequent thoughts of violence and harming loved ones, persistently thinking about performing sexual acts the person dislikes, or having thoughts that are prohibited by religious beliefs. People with OCD may also be preoccupied with order and symmetry, have difficulty throwing things out (so they accumulate), or hoard unneeded items.

Healthy people also have rituals, such as checking to see if the stove is off several times before leaving the house. The difference is that people with OCD perform their rituals even though doing so interferes with daily life and they find the repetition distressing. Although most adults with OCD recognize that what they are doing is senseless, some adults and most children may not realize that their behavior is out of the ordinary.

Causes

OCD sometimes runs in families, but no one knows for sure why some people have it while others don't. Researchers have found that several parts of the brain are involved in fear and anxiety. By learning more about fear and anxiety in the brain, scientists may be able to create better treatments. Researchers are also looking for ways in which stress and environmental factors may play a role.

Signs & Symptoms

People with OCD generally:

* Have repeated thoughts or images about many different things, such as fear of germs, dirt, or intruders; acts of violence; hurting loved ones; sexual acts; conflicts with religious beliefs; or being overly tidy
* Do the same rituals over and over such as washing hands, locking and unlocking doors, counting, keeping unneeded items, or repeating the same steps again and again
* Can't control the unwanted thoughts and behaviors
* Don't get pleasure when performing the behaviors or rituals, but get brief relief from the anxiety the thoughts cause
* Spend at least 1 hour a day on the thoughts and rituals, which cause distress and get in the way of daily life.

Who Is At Risk?

For many people, OCD starts during childhood or the teen years. Most people are diagnosed by about age 19. Symptoms of OCD may come and go and be better or worse at different times.

OCD affects about 2.2 million American adults. It strikes men and women in roughly equal numbers and usually appears in childhood, adolescence, or early adulthood. One-third of adults with OCD develop symptoms as children, and research indicates that OCD might run in families.

Diagnosis

The course of the disease is quite varied. Symptoms may come and go, ease over time, or get worse. If OCD becomes severe, it can keep a person from working or carrying out normal responsibilities at home. People with OCD may try to help themselves by avoiding situations that trigger their obsessions, or they may use alcohol or drugs to calm themselves.

OCD can be accompanied by eating disorders, other anxiety disorders, or depression.

First, talk to your doctor about your symptoms. Your doctor should do an exam to make sure that another physical problem isn't causing the symptoms. The doctor may refer you to a mental health specialist.

Treatments

OCD is generally treated with psychotherapy, medication, or both.

**Psychotherapy.** A type of psychotherapy called cognitive behavior therapy is especially useful for treating OCD. It teaches a person different ways of thinking, behaving, and reacting to situations that help him or her feel less anxious or fearful without having obsessive thoughts or acting compulsively. One type of therapy called exposure and response prevention is especially helpful in reducing compulsive behaviors in OCD.

**Medication.** Doctors also may prescribe medication to help treat OCD. The most commonly prescribed medications for OCD are anti-anxiety medications and antidepressants. Anti-anxiety medications are powerful and there are different types. Many types begin working right away, but they generally should not be taken for long periods.

Antidepressants are used to treat depression, but they are also particularly helpful for OCD, probably more so than anti-anxiety medications. They may take several weeks—10 to 12 weeks for some—to start working. Some of these medications may cause side effects such as headache, nausea, or difficulty sleeping. These side effects are usually not a problem for most people, especially if the dose starts off low and is increased slowly over time. **Talk to your doctor about any side effects you may have.**

It's important to know that although antidepressants can be safe and effective for many people, they may be risky for some, especially children, teens, and young adults. A "black box"—the most serious type of warning that a prescription drug can have—has been added to the labels of antidepressant medications. These labels warn people that antidepressants may cause some people to have suicidal thoughts or make suicide attempts. Anyone taking antidepressants should be monitored closely, especially when they first start treatment with medications.

Some people with OCD do better with cognitive behavior therapy, especially exposure and response prevention. Others do better with medication. Still others do best with a combination of the two. Talk with your doctor about the best treatment for you.

OCD usually responds well to treatment with certain medications and/or exposure-based psychotherapy, in which people face situations that cause fear or anxiety and become less sensitive (desensitized) to them. NIMH is supporting research into new treatment approaches for people whose OCD does not respond well to the usual therapies. These approaches include combination and augmentation (add-on) treatments, as well as modern techniques such as deep brain stimulation.

Living With

"I couldn't do anything without rituals. They invaded every aspect of my life. Counting really bogged me down. I would wash my hair three times as opposed to once because three was a good luck number and one wasn't. It took me longer to read because I'd count the lines in a paragraph. When I set my alarm at night, I had to set it to a number that wouldn't add up to a 'bad' number."

"Getting dressed in the morning was tough, because I had a routine, and if I didn't follow the routine, I'd get anxious and would have to get dressed again. I always worried that if I didn't do something, my parents were going to die. I'd have these terrible thoughts of harming my parents. I knew that was completely irrational, but the thoughts triggered more anxiety and more senseless behavior. Because of the time I spent on rituals, I was unable to do a lot of things that were important to me."

"I knew the rituals didn't make sense, and I was deeply ashamed of them, but I couldn't seem to overcome them until I got treatment." (from Obsessive-Compulsive Disorder: When Unwanted Thoughts Take Over: What is it like having OCD? )

**SOURCE:** http://www.nimh.nih.gov/health/topics/obsessive-compulsive-disorder-ocd/index.shtml

Lozol® (indapamide) is an oral antihypertensive/diuretic. Its [molecule](http://www.rxlist.com/script/main/art.asp?articlekey=4418) contains both a polar sulfamoyl chlorobenzamide moiety and a lipid-soluble methylindoline moiety. It differs chemically from the thiazides in that it does not possess the thiazide ring system and contains only one sulfonamide group. The chemical name of Lozol (indapamide) is 1-(4-chloro-3sulfamoylbenzamido)-2-methylindoline, and its molecular weight is 365.84. The compound is a weak acid, pKa=8.8, and is soluble in aqueous solutions of strong bases. It is a white to yellow-white crystalline (tetragonal) powder.

The tablets also contain microcrystalline cellulose, coloring agent, corn starch, pregelatinized starch, hypromellose, [lactose](http://www.rxlist.com/script/main/art.asp?articlekey=25973), [magnesium](http://www.rxlist.com/script/main/art.asp?articlekey=4243) stearate, polyethylene glycol, and [talc](http://www.rxlist.com/script/main/art.asp?articlekey=13003).

**What are the possible side effects of indapamide (Lozol)?**

Get emergency medical help if you have any of these **signs of an allergic reaction:** hives; difficulty breathing; swelling of your face, lips, tongue, or throat.

Stop using this medication and call your doctor at once if you have a serious side effect such as:

* dry mouth, thirst, nausea, vomiting;
* feeling weak, drowsy, restless, or light-headed;
* fast or uneven heartbeat; or
* muscle pain or weakness.

Less serious side effects may include: dizziness; headache; or mild skin rash.

**What are the precautions when taking indapamide (Lozol)?**

Before taking indapamide, tell your doctor or pharmacist if you are allergic to it; or if you have any other allergies. This product may contain inactive ingredients, which can cause allergic reactions or other problems. Talk to your pharmacist for more details.

Before using this medication, tell your doctor or pharmacist your medical history, especially of: diabetes, gout, kidney problems, liver disease, a certain nerve surgery (sympathectomy).

Sources: <http://dailymed.nlm.nih.gov/dailymed/fda/fdaDrugXsl.cfm?id=8770>

<http://www.healthcentral.com/high-blood-pressure/r/medications/indapamide-oral-12360/side-effects>