

## Even a minor stroke might lead to stress and anxiety

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A stroke, or brain attack, is caused by bleeding inside the head or sudden loss of blood flow to the brain. A stroke can cause brain cells to die, so a person with a stroke might have paralysis, loss of feeling, speech problems, or memory and reasoning problems. The damage left by a stroke might also cause emotional problems such as depression. In this issue of *Neurology*, researchers in Switzerland<sup>1</sup> looked for evidence that people who have had a stroke might have anxiety. Specifically, these researchers wanted to know whether living through the experience of a stroke might have caused an anxiety problem called posttraumatic stress disorder, or PTSD. This is a condition that can happen after a life-threatening or traumatic event, when the person feels as though he or she is re-experiencing the event. Usually the person does not want to think about what happened because it makes him or her feel numb or nervous and uncomfortable. More information about PTSD can be found on the next page.

### **How could a stroke cause PTSD?**

The researchers had the idea that even a minor stroke could be a frightening enough event to result in PTSD. The researchers thought that if people did not know what was happening to them when they had a stroke, and if they reacted

strongly with fear or worry, they might have some nervous anxiety about the stroke. Also, the researchers thought that if patients did not remember exactly what happened, or if they were not aware of the cause of their stroke, they might have more fear and worry about it. These ideas were put to the test in this research.

### **How was the research done?**

Approximately 1 year after having a nonsevere stroke, 49 patients completed three questionnaires asking them about the impact of their stroke, the trauma of the experience, and their memories of the stroke event itself. In addition, the same patients participated in an evaluation of their memory and their depression and anxiety levels. Magnetic resonance brain imaging (MRI) showed where the stroke occurred in their brains. The information from all these tests and questionnaires was examined to determine whether there were any patterns.

### **What did the research study show?**

The researchers found that 1 year after their stroke, 15 (31%) of the study participants showed signs of PTSD. Specifically, many things reminded them of the feelings they had during their stroke or they had unwanted thoughts and memories about the stroke they could not get

rid of, even when they tried to avoid thinking about it. The patients with PTSD symptoms tended to be the ones who were concerned about death or felt helpless and hopeless at the time of the stroke. Most of the study participants had minor neurologic problems with very little physical disability and most of them had very good recollections of the stroke event. They said that they knew what was happening to them when they were experiencing the stroke. The PTSD symptoms did not depend on their memory of the stroke event or their general memory overall. Also, PTSD symptoms did not depend on where in the brain the stroke happened, although some of the unwanted thoughts may be related to strokes in a particular area of the brain called the basal ganglia.

### **What does this mean for me?**

If you had a stroke and it was a frightening event that still bothers you, it might be worthwhile to talk with your doctor about being evaluated to see whether you have an anxiety problem, such as PTSD. Additional information about this is on the next page.

### **Reference**

1. Bruggimann L, Annoni JM, Staub F, von Steinbüchel N, Van der Linden M, Bogousslavsky J. Chronic posttraumatic stress symptoms after nonsevere stroke. *Neurology* 2006;66:513-516.

### **What is PTSD?**

PTSD stands for posttraumatic stress disorder. It is a lasting reaction to a traumatic event. Surviving a life-threatening situation that causes extreme fear, helplessness, or horror can lead to a severe emotional reaction. Having this kind of reaction does not mean the person is crazy or weak. He or she is reacting to a horrible situation. Probably everyone would develop PTSD if exposed to severe enough trauma.

### **What are the symptoms or effects of PTSD?**

Survivors of trauma often re-experience the trauma. It is a reaction of the body and mind, as they try to cope with the trauma. Unfortunately, it can make trauma survivors feel worse. They might feel as though they are living through it all over again, with the same mental, emotional, and physical experiences that happened the first time. They might have upsetting memories, images, or thoughts when they are awake, or nightmares and bad dreams might disrupt their sleep. They might feel panicky or they might feel as though they are in danger even when they know they probably are not.

Thinking about the trauma and feeling in danger is upsetting, so people often try to avoid reminders of the trauma to reduce the times when they feel they are reliving it. They may avoid thinking about anything or anyone that might remind them. Shutting down and feeling emotionally numb, or feeling disconnected from other people, might also be a way to try to avoid the trauma. Many times trauma survivors do not even realize they are doing this. All the avoiding might seem to help, but it makes it harder to deal with the event in the long run. Instead, these avoiding attempts might lead to depression, despair, hopeless-

ness, personality changes, trouble in relationships, social isolation, physical health problems, and trouble with alcohol and drug use.

### **What kind of event can trigger PTSD?**

The kinds of events that might trigger PTSD are ones that involve death or serious injury, or some other kind of threat to yourself or other people. Examples include violent assault, kidnapping, torture, natural or manmade disasters, severe car accidents, being diagnosed with a serious illness, life-threatening medical conditions such as heart attack and severe injuries, war, or unexpectedly seeing a dead body. Even though people often think of PTSD in association with war or sexual assault, there are many other events that might cause it too.

### **Who is vulnerable to PTSD?**

Everyone who lives through a horrifying experience will have a reaction to it, and this reaction may include distress and avoidance. Reliving the event in thoughts, images, and dreams may contribute to the healing process and provide a way to overcome the trauma. This normal response will usually disappear gradually, over time.

For about 8% of men and 20% of women the symptoms persist and become chronic. It can be hard to predict who will get PTSD, since it can happen to anyone with severe enough trauma. People who already had depression or anxiety might have an especially hard time coping with a traumatic event. Sometimes people experience more than one event like this in their life, and each one becomes harder to deal with.

### **What treatments are available?**

The most successful treatments are cognitive-behavioral therapy and

medication. Excellent results have been obtained with some combinations of exposure therapy and cognitive restructuring. Sertraline (Zoloft) and paroxetine (Paxil) are selective serotonin reuptake inhibitors (SSRIs) that are the first medications to have received FDA approval as indicated treatments for PTSD.

### **Is there a screening for PTSD?**

The following questions are a very brief screening for PTSD.

In your life, have you ever had an experience that was so frightening, horrible, or upsetting, that, in the *past month*, you:

1. Had nightmares about it or thought about it when you did not want to?
2. Tried hard not to think about it or went out of your way to avoid situations that reminded you of it?
3. Were constantly on guard, watchful, or easily startled?
4. Felt numb or detached from others, activities, or your surroundings?

If you answered yes to *3 or more*, this does not mean that you have PTSD, but it means that you should ask your doctor about getting a referral to be evaluated for PTSD. If you have it, treatment will make a big difference in your life.

### **What should I do if I think I have PTSD?**

Talk with your doctor. Mention the symptoms you are noticing. You do not have to tell your doctor the details of the trauma if you are uncomfortable talking about it. Your doctor will be able to refer you to a mental health provider who can do an assessment and help with treatment options.

### **For more information**

National Center for PTSD  
<http://www.ncptsd.va.gov/>

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