

NIH News in Health

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Dealing With Trauma Recovering From Frightening Events

It's natural to be afraid after something scary or dangerous happens. When you feel you're in danger, your body responds with a rush of chemicals that make you more alert. This is called the "flight or fight" response. It helps us survive life-threatening events.

But the brain's response to frightening events can also lead to chronic problems. This can include trouble sleeping; feeling on edge frequently; being very easily startled, anxious, or jumpy; having flashbacks; or avoiding things that remind you of the event.

Sometimes these symptoms go away after a few weeks. But sometimes they last much longer. If symptoms last more than a month and become severe enough to interfere with relationships or work, it may be a sign of post-traumatic stress disorder, or PTSD.

"There are real neurobiological consequences of trauma that are associated with PTSD," explains Dr. Farris Tuma, who oversees the NIH traumatic stress research program. NIH-funded researchers are uncovering the biology behind these brain changes and looking for ways to prevent and treat PTSD.

What is Trauma? • "Most people associate post-traumatic stress symptoms with veterans and combat situations," says Dr. Amit Etkin, an



NIH-funded mental health expert at Stanford University. "However, all sorts of trauma happen during one's life that can lead to post-traumatic stress disorder and post-traumatic stress disorder-like symptoms." This includes people who have been through a physical or sexual assault, abuse, an accident, a disaster, or many other serious events.

Anyone can develop PTSD, at any age. According to the National Center for Post-Traumatic Stress Disorder, about 7 or 8 out of every 100 people will experience PTSD at some point in their lives.

"We don't have a blood test that would tell you or question you can ask somebody to know if they're in the highest risk group for developing PTSD," Tuma says. "But we do know that there are some things that increase risk in general and

some things that protect against it."

Biology of Traumatic Stress • Researchers are looking into what puts people at risk for PTSD. One team, led by Dr. Samuel McLean, a trauma expert at the University of North Carolina, is investigating how post-traumatic stress symptoms develop in the brain. They will be following 5,000 trauma survivors for one year.

"We're enrolling people who visit trauma centers immediately after a trauma because evidence suggests that a lot

of the important biological changes that lead to persistent symptoms happen in the early aftermath of the trauma," McLean says.

They're gathering information about life history prior to trauma, identifying post-traumatic symptoms, collecting genetic and other types of biological data, and performing brain scans. The study is also using smart watches and smart phone apps to measure the body's response to trauma. These tools will help researchers uncover how trau-

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ma affects people's daily lives, such as their activity, sleep, and mood.

"Our goal is that there will be a time when trauma survivors come in for care and receive screening and interventions to prevent PTSD, just in the same way that they would be screened with X-rays to set broken bones," McLean explains.

Coping With Trauma • How you react when something traumatic happens, and shortly afterward, can help or delay your recovery.

"It's important to have a coping strategy for getting through the bad feelings of a traumatic event," Tuma says. A good coping strategy, he explains, is finding somebody to talk with about your feelings. A bad coping strategy would be turning to alcohol or drugs.

Having a positive coping strategy and learning something from the situation can help you recover from a traumatic event. So can seeking support from friends, family, or a support group.

Talking with a mental health professional can help someone with post-traumatic stress symptoms learn to cope. It's important for

anyone with PTSD-like symptoms to be treated by a mental health professional who is trained in trauma-focused therapy.

A self-help website and apps developed by the U.S. Department of Veterans Affairs can also provide support when you need it following a trauma (www.ptsd.va.gov/public/treatment/cope/index.asp).

"For those who start therapy and go through it, a large percentage of those will get better and will get some relief," Tuma says. Some medications can help treat certain symptoms, too.

PTSD affects people differently, so a treatment that works for one person may not work for another. Some people with PTSD need to try different treatments to find what works for their symptoms.

Finding Treatments • "While we currently diagnose this as one disorder in psychiatry, in truth, there's a lot of variation between people and the kinds of symptoms that they have," Etkin says.

These differences can make it difficult to find a treatment that works. Etkin's team is trying to understand why some people's brains respond to treatment and others do not.

"PTSD is very common. But the variety of ways that it manifests in the brain is vast," Etkin explains. "We don't know how many underlying conditions there are, or distinct brain problems there are, that lead to PTSD. So we're trying to figure that part out."

His team has identified brain circuits that show when therapy is working. They've found a separate brain circuit that can predict who will respond to treatment.

His group is now testing a technique called noninvasive brain stimulation for people who don't respond to treatment. They hope that



Wise Choices

Tips to Help With Trauma Recovery

- Talk with others about how you feel. Don't isolate yourself.
- Calm yourself. Try meditation or deep breathing exercises. Do physical activity, like walking or yoga.
- Take care of yourself. Get plenty of sleep. Eat a healthy diet. Drink enough water.
- Avoid using alcohol, drugs, and tobacco.
- Get back to your daily routine. Do the things you would normally do, even if you don't feel like it.
- Get involved in your community. Volunteering is a great way to create a sense of meaning.
- Get help if symptoms persist. Talk with a mental health professional.
- If you're trying to help a friend, listen and find out where they are in the coping process. Try to accept their feelings and help in any way you can.

Adapted from SAMHSA:
store.samhsa.gov/shin/content//SMA13-4777/SMA13-4777.pdf

stimulating certain brain circuits will make therapy more effective.

Most people recover naturally from trauma. But it can take time. If you're having symptoms for too long—or that are too intense—talk with your health care provider or a mental health professional. In times of crisis, call the National Suicide Prevention Lifeline at 1-800-273-TALK (8255) or visit the emergency room.

"PTSD is real. This is not a weakness in any way," Tuma explains. "People shouldn't struggle alone and in silence." ■

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Editor Harrison Wein, Ph.D.

Managing Editor Tianna Hicklin, Ph.D.

Graphics Alan Defibaugh (illustrations),
Bryan Ewsichek (design)

Contributors Tianna Hicklin and Geri Piazza

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Office of Communications & Public Liaison
Building 31, Room 5B52
Bethesda, MD 20892-2094
email: niHnewsinhealth@od.nih.gov
phone: 301-451-8224



Web Links

For more about post-traumatic stress, see "Links" in the online article: newsinhealth.nih.gov/2018/06/dealing-trauma

Herpes Can Happen to Anyone

Share Facts, Not Fears

Did you know that the virus that causes “cold sores” or “fever blisters” on or around the mouth can also infect other areas of the body? The infection is caused by the herpes simplex virus. And it’s very common.

Most people with herpes infection don’t even know it. They may not have symptoms or not notice them.

For people who do have symptoms, a herpes infection may show up as one or more blisters. These can be on or near the mouth, eyes, genitals, or rectum. After the blisters break, they turn into sores or ulcers. These sores are painful and take about a week to heal.

Once someone is infected with herpes simplex, the virus goes into hiding and stays in the body for the rest of their lives. The virus can re-emerge at any time and cause an outbreak. Some people have outbreaks several times per year. Tingling or burning in the area can signal that an outbreak is looming.

There are two types of herpes simplex viruses: HSV-1 and HSV-2. HSV-1 is often transmitted during childhood. You can get it from close contact with someone who has the

infection. For example, a family member with a cold sore may kiss a child. HSV-1 is the main cause of herpes of the mouth or eyes. Although it’s possible for HSV-2 to infect the mouth or eyes, it’s usually found in the genital area.

There’s no cure for herpes. But anti-herpes medicine can speed healing of the sores. If taken every day, this medicine can also lower the risk of future outbreaks.

“It’s the first episode that is particularly important to treat,” says Dr. Jeffrey I. Cohen, a herpes infection expert at NIH. That’s because the first outbreak is often the most severe. In addition to sores, you may have a fever and body aches. Also, the nearby lymph nodes might be swollen and painful.

A doctor may suspect a diagnosis of herpes from looking at a sore. But lab tests on a sample taken from the sore is needed to confirm the diagnosis. A blood test for HSV-1 and HSV-2 is also available to confirm if someone has been infected.

Researchers are working to develop herpes vaccines. “There are two different types of vaccines being developed for herpes virus,” Cohen explains. “One is a vaccine that would prevent infection in people who have not been infected with the virus.” Cohen’s research team at NIH is working on this type of vaccine.

“The other type of vaccine is for people who are already infected,” he



says. “The idea is that we could boost their immune system so that they have fewer recurrences.”

The fact that most people don’t know that they’re infected makes vaccines especially important.

When someone is diagnosed with herpes, they may feel anger, sadness, or shame. They also may fear rejection by romantic partners.

Keep in mind that herpes outbreaks can be managed. People can lower the risk of infecting someone else by avoiding direct contact during an outbreak. For those with genital herpes, using anti-herpes medicine every day and condoms during sexual activity also reduces the risk of infection for a romantic partner.

Talk with your doctor if you have questions about preventing or managing herpes. And help fight the stigma of herpes by sharing the facts in the Wise Choices box. ■



Wise Choices

Help Fight the Stigma of Herpes

Don’t tell jokes with herpes as the punchline. And share the facts:

- Herpes infection is common.
- It may not cause any symptoms.
- Herpes can be spread by someone who doesn’t know they have it.
- You can get herpes in many ways, such as a kiss, sharing drinks or utensils, or sexual activity.
- Having herpes doesn’t mean you’re a bad person, immoral, or promiscuous.



Web Links

For more about herpes, see “Links” in the online article: newsinhealth.nih.gov/2018/06/herpes-can-happen-anyone



Health Capsules

For links to more information, please visit our website and see these stories online.

Healthy Habits Can Lengthen Life

Have you heard the advice to exercise, choose a healthy diet, keep a lean weight, never smoke, and limit alcohol? Researchers wanted to find out whether people who follow this advice live longer than those who don't. So, they compared lifespan and other data from thousands of adults with all five of these healthy habits to those without.

People in the healthy habits group got at least 30 minutes of exercise each day. They ate the recommended amounts of fruits, vegetables, nuts, whole grains, and healthy fats. And

they limited salt, sugary drinks, trans fat, and red and processed meats. They also limited alcohol. Women had no more than one drink each day and men no more than two drinks. They also maintained a normal weight and didn't smoke.

The people in the other group didn't exercise, have a healthy diet, or limit drinking. They smoked and were overweight.

Based on the results, the researchers estimated that a 50-year-old woman who had all five habits would live, on average, to age

93. In contrast, if she didn't have any of these habits, she would live on average to age 79.

For a 50-year-old man, the average lifespan was about 88 years old with healthy behaviors and only 76 years without.

"This study underscores the importance of following healthy lifestyle habits for improving longevity in the U.S. population," says Dr. Frank B. Hu of Harvard T.H. Chan School of Public Health, senior author of the study. ■

Join With NIH to Personalize Medicine

NIH wants to speed up research and improve health. That's why we're asking adults to join the All of Us Research Program. We hope that 1 million or more people nationwide will share their health information with the program. This will help researchers gather data that reflects the country's diversity.

All of Us aims to build a resource to help discover how to stay healthy and manage disease in more personalized ways. The goal is to understand why some people get sick and

others stay healthy, and to learn why some treatments don't always work for everyone.

Having data from a large, diverse group of people could help researchers discover better ways to prevent, treat, and cure disease. It may help them develop new tests to detect illnesses, new treatments, and better ways of using ones we already have.

If you join, you'll be asked to answer survey questions and to provide your electronic health records. Personal information will

be removed from all data, and any samples you provide will be stored securely. You'll have access to study information and data about yourself, and can choose how much to receive.

"The All of Us Research Program is an opportunity for individuals from all walks of life to be represented in research and pioneer the next era of medicine," says NIH Director Dr. Francis S. Collins.

To learn more about the program and how to join, please visit www.joinallofus.org. ■



Featured Website

Healthy Moments Radio

www.niddk.nih.gov/health-information/healthy-moments

Got a minute? Tune in to Healthy Moments Radio to hear one-minute tips from NIH health expert Dr. Griffin P. Rodgers and other expert guests on living a healthy lifestyle.

This weekly show features advice on how to prevent and manage diseases. Visit the website to play past episodes and to see the full list of radio stations airing the show.

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