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Stress Disorders
Part II Causes of Stress and Anxiety
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Reports continue to appear concerning the adverse health consequences related to the stress of evacuation from two recent hurricanes. As we continue to look at post traumatic stress disorder, we are increasingly aware of how vulnerable we all are to one extent or another to the ill effects of stress. The question does arise however as to why some or more affected than others.

Causes

A person's genetics, biochemistry, environment, history, and psychological profile all seem to contribute to the development of anxiety disorders. Most people with these disorders seem to have a biological vulnerability to stress, making them more susceptible than the rest of the population.

Biochemical Factors

Abnormalities in the Brain. Scientists are using imaging techniques, particularly magnetic resonance imaging (MRI), to identify different areas of the brain associated with anxiety responses.

Important research in anxiety disorders is focusing on changes in the amygdala, which is sometimes referred to as the "fear center." This part of the brain regulates fear, memory, and emotion and coordinates these resources with heart rate, blood pressure, and other physical responses to stressful events. Some evidence suggests that the amygdala in people with anxiety disorders is highly sensitive to novel or unfamiliar situations and reacts with a high stress response.

Obsessive-compulsive disorder (OCD) is the anxiety disorder most strongly associated with specific brain dysfunction. For example, abnormalities in a specific pathway of nerves have been linked to OCD, attention deficit disorder, and Tourette syndrome. The symptoms of the three disorders are similar and they often coexist.

A number of imaging studies have reported less volume in the hippocampus in people with post-traumatic stress disorder. This important region is related to emotion and memory storage.

Family Dynamics

The influence of the family on anxiety is complicated by both genetic and psychological factors.

Panic Disorder and Family Influence. Certain psychodynamic theories suggest, and a few studies support the idea, that some people may develop panic disorder if they cannot resolve the early childhood conflict of dependence vs. independence. In one study, for example, young adults who had experienced childhood anxiety were more likely to live with their parents until their early to mid-twenties. Many people with panic disorder perceive their parents as being extremely controlling and overly protective while showing little actual affection.

Phobias and Family Influence. Several studies show a strong correlation between a parent's fears and those of the offspring. Although an inherited trait may be present, some researchers believe that many children can "learn" fears and phobias, just by observing a parent or loved one's phobic or fearful reaction to an event. People who have social phobias and severe agoraphobia generally report less parental affection and more strictness, overprotection, and encouragement of dependence than those without these disorders.

Obsessive-Compulsive Disorder and Family Influence. One study found that parental influence played no part in obsessive-compulsive disorder if the OCD patient was also not suffering from depression. However, depression coexists in two-thirds of OCD patients, and in the study patients who had both OCD and depression reported lower levels of parental care and over-protectiveness.

Traumatic Events

Traumatic events generally trigger anxiety disorders in individuals who are susceptible to them because of psychological, genetic, or biochemical factors. The clearest example is post-traumatic stress disorder. Specific traumatic events in childhood, particularly those that threaten family integrity, such as spousal or child abuse, can also lead to other anxiety and emotional disorders. Some individuals may even have a biological propensity for specific phobias, for instance of spiders or snakes, that have been triggered and perpetuated after a single exposure.

Post-Traumatic Stress Disorder

Risk Factors

As many as 25% of all American adults experience intense anxiety sometime in their lives. The prevalence of true anxiety disorders is much lower, although they are still the most common psychiatric conditions in the United States and affect more than 20 million Americans.

Gender. With the exception of obsessive-compulsive disorder (OCD), women have twice the risk for most anxiety disorders as men. A number of factors may increase the reported risk in women, including cultural pressures to meet everyone else's needs except their own, and fewer self-restrictions on reporting anxiety to doctors.

Age. In general, phobias, OCD and separation anxiety show up early in childhood, while social phobia and panic disorder are often diagnosed during the teen years. Studies suggest that 3 - 5% of children and adolescents have some anxiety disorder. Children and adolescents who have an anxiety disorder are at risk of later developing other anxiety disorders, depression, and substance abuse.

Personality Factors. Children's personalities may indicate higher or lower risk for future anxiety disorders. For example, research suggests that extremely shy children and those likely to be the target of bullies are at higher risk for developing anxiety disorders later in life. Children who cannot tolerate uncertainty tend to be worriers, a major predictor of generalized anxiety. In fact, such traits may be biologically based and due to a hypersensitive amygdala -- the "fear center" in the brain.

Family History and Dynamics. Anxiety disorders tend to run in families. Genetic factors may play a role in some cases, but family dynamics and psychological influences are also often at work.

Social Factors. Several studies have reported a significant increase in anxiety levels in children and college students in the past two decades compared to children in the 1950s. In several studies, anxiety was associated with a lack of social connections and a sense of a more threatening environment. It also appears that more socially alienated populations have higher levels of anxiety. For example, a study of Mexican adults living in California reported that native-born Mexican Americans were three times more likely to have anxiety disorders (and even more likely to be depressed) as those who had recently immigrated to the U.S. The longer the immigrants lived in the U.S., the greater their risk for psychiatric problems. Traditional Mexican cultural and social ties seemed to protect recently arrived immigrants from mental illness.

Genetic Factors. Up to 50% of people with panic disorder and 40% of patients with generalized anxiety (GAD) have close relatives with the disorder. (About half of GAD patients also have family members with panic disorder, and about 30% have relatives with simple phobias.)

Obsessive-compulsive disorder (OCD) is also strongly related to a family history of the disorder. Close relatives of people with OCD are up to 9 times more likely to develop OCD themselves. Researchers are making progress in identifying specific genetic factors that might contribute to an inherited risk. Of particular interest are genes that regulate specific neurotransmitters (brain chemical

messengers), including serotonin and glutamate. Recent research has suggested that the SLC1A1 gene, which is associated with glutamate regulation, may play an important role in early-onset OCD in boys. Research is also beginning to pinpoint regions on specific chromosomes (1, 3, 7, 6, 9, 15) that may contain genes linked to OCD.

However, there are no genetic tests to date that can identify patients at risk for anxiety disorders.

Medical Conditions. Although no causal relationships have been established, certain medical conditions have been associated with panic disorder. They include migraines, obstructive sleep apnea, mitral valve prolapse, irritable bowel syndrome, chronic fatigue syndrome, and premenstrual syndrome.

Risk Factors for Generalized Anxiety (GAD)

GAD affects about 1 - 5% of Americans in the course of their lives and is more common in women than in men. Some experts believe that it is under diagnosed and more common than any other anxiety disorder. It is certainly the most common anxiety disorder among the elderly. GAD usually begins in childhood and often becomes a chronic ailment, particularly when left untreated. Depression in adolescence may be a strong predictor of GAD in adulthood. Depression commonly accompanies this anxiety disorder in any case.

Risk Factors for Panic Disorder

Age and Panic Disorder. Studies indicate that the prevalence of panic disorder among adults is between 1.6 - 2% and is much higher in adolescence, 3.5 - 9%. Panic disorder usually first occurs either in late adolescence or in the mid-30s.

Gender and Panic Disorder. Women have about twice the risk for panic disorder as men. Panic attacks are very common after menopause. In one study, nearly 18% of older women reported panic attacks within a 6-month period, with over half of these attacks being full-blown. They tended to be associated with stressful life events and poor health. The effects of pregnancy on panic disorder appear to be mixed. It seems to improve the condition in some women and worsen it in others.

Risk Factors for Obsessive-Compulsive Disorder (OCD) Obsessive-compulsive disorder occurs equally in men and women, and it affects about 2 - 3% of people over a lifespan. Most cases of OCD first develop in childhood or adolescence, although the disorder can occur throughout the life span.

Risk Factors for Social Phobias Social anxiety disorder is currently estimated to be the third most common psychiatric disorder in the U.S. Studies have reported a prevalence of 7 - 12% in Western nations.

Age and Phobias. The onset of social anxiety disorder is usually during the early teenage years.

Gender and Phobias. Women are more likely to develop social anxiety disorder than men, although equal numbers of men and women seek treatment for it. Most people seeking treatment have had symptoms for at least 10 years.

Risk Factors for Post-Traumatic Stress Disorder

Studies estimate a lifetime risk for PTSD in the U.S. of up to 8%. People exposed to traumatic events, of course, are at highest risk, but many people can go through such events and not experience PTSD. Studies estimate that 6 - 30% or more of trauma survivors develop PTSD, with children and young people being among those at the high end of the range. Women have the twice the risk of PTSD as men.

Furthermore, PTSD can occur in people not directly involved with a traumatic event. For example, 17% of the U.S. population outside New York City reported some symptoms of post-traumatic stress 2 months after the September 11 attack on the World Trade Towers. (In the city itself, where the attack occurred, an estimated 7.5% of New York's population reported PTSD within the month of the event, which declined to 0.6% at 6 months.)

Researchers are trying to determine factors that might increase vulnerability to catastrophic events and put people at risk for develop PTSD. Some studies report the following may be risk factors:

- Pre-existing emotional disorder. People who have a history of an emotional disorder, particularly depression, before the traumatic event are at higher risk for PTSD.
- Drug or alcohol abuse
- A family history of anxiety
- A history of abuse, particularly that which threatens family integrity, such as spousal or child abuse. Studies of individuals who had suffered physical or sexual abuse or neglect as children suggest that up to one-third develop PTSD.
- An early separation from parents
- Lack of social support and poverty
- Sleep disorders. Insomnia and excessive daytime sleepiness even within a month after a traumatic event are important predictors for the development of PTSD. One specific sleep disorder -- sleep apnea -- may even intensify symptoms of PTSD, including sleeplessness and nightmares. Sleep apnea occurs when tissues in the upper throat (or airway) collapse at intervals during sleep, thereby blocking the passage of air. In one study, 91% of crime victims with PTSD had either sleep apnea or a lesser condition that partially blocked the airways during sleep. In fact, in one study treatment of

sleep apnea eased PTSD. Sleep apnea has also been associated with a risk for panic disorder.

Next week, we will discuss the treatment of anxiety and post traumatic stress.