



# Institute for Women's Health Research Putting Women's Health First

December 2010

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**Recent Blogs** 

Sex on the Brain: Differences

Between Men and Women Many
people assume that brain differences
between men and women result from
sex hormones like estrogen and
testosterone.

Dear Friends,

The upcoming holiday season is a great time to share traditions and good times with family and friends. It can also be a time of great chaos and stress as we add more activities to our already full plate-extra entertaining, overnight guests, gift shopping and office parties, to name a few.

A certain amount of additional stress and anxiety is normal during this busy season. But for a few, especially those who suffer from one of the anxiety disorders, the holidays can become a true challenge.

This edition of our monthly e-newsletter focuses on anxiety disorders---along with some tips on general stress relief to either help yourself or someone you love who could use a little extra kindness during this season.

The Institute Staff







## **Anxiety Disorders**

Anxiety is a normal reaction to stress. It helps us deal with a tense situation in the office, study harder for an exam, and keep focused on an important event. But when anxiety becomes an excessive, irrational dread of everyday situations, it becomes a disabling disorder. Anxiety disorders (ADs) affect about 40 million American adults age 18 years and older (about 18%) in a given year. Unlike the relatively mild, brief anxiety caused by a stressful event, anxiety disorders last

for months and can get worse if not treated. Anxiety disorders commonly occur along with other mental or physical illnesses, including alcohol or substance abuse, which may mask symptoms or make them worse. Sometimes these other illnesses need to be treated before a person will respond to treatment for their anxiety disorder.

The most common ADs are:

- Generalized Anxiety Disorder (GAD)
- Phobias (several types)
- Panic Disorder (PD)
- Post-Traumatic Stress Disorder (PTSD)
- Obsessive-Compulsive Disorder (OCD)

This e-newsletter will focus on the first three on this list.

**Generalized Anxiety Disorder** is characterized by persistent, excessive, and unrealistic worry about everyday events. People with GAD experience exaggerated worry and tension, often expecting the worst, even when there is no apparent reason for concern. They anticipate disaster about many everyday things. GAD is diagnosed when a person worries excessively about everyday problems for at least 6 months. It is the most common anxiety disorder and can start at any age and occurs more often in women than in men.

The main symptom is the almost constant presence of unwarranted worry. Other symptoms include difficulty concentrating, fatigue, irritability, problems falling or staying asleep, and restlessness or feeling on edge. Muscle tension and headaches may be present. Depression and substance abuse may occur with GAD. There is a preliminary evidence that genes may play a role and a stressful life situation of learned behavior may also contribute to the development of GAD.

**Panic Disorders** are diagnosed in people who experience spontaneous panic attacks and are preoccupied with the fear of a recurring attack that can even appear during sleep. Typically they develop in early adulthood, and women are twice a likely as men to experience these attacks. Panic attack is defined as the abrupt onset of intense fear that reaches a peak within 10 minutes and includes at least four of the following symptoms:

- a feeling of imminent danger or doom
- the need to escape
- heart palpitations or trembling
- sweating
- · shortness of breath or a smothering feeling
- a feeling of choking
- chest pain or discomfort
- nausea or abdominal discomfort
- dizziness or lightheadedness
- a sense of things being unreal, depersonalization
- a fear of losing control or going crazy
- a fear of dving
- tingling sensation
- chills or heat flush.

Since many of these symptoms can be seen in other serious illnesses such as heart disease, thyroid problems or breathing disorders, people suffering from panic disorder often go to the emergency room, convinced they have a life-threatening illness. It often takes months to get a correct diagnosis.

Some people stop going into situations or to places in which they have experienced a panic attack. These people have agoraphobia and they typically avoid public places where they feel immediate escape might be difficult. They are constantly on guard, waiting for the next panic attack. It is important that people with panic attacks seek care before the condition progresses to agoraphobia.

**Phobias** are persistent and irrational fears of a particular object, animal, activity or situation that poses little to no actual danger, but when exposed to the feared stimulus may provoke extreme anxiety or a panic attack. Common phobias are fear of blood, needles, certain animals/reptiles, enclosed spaces, flying, high places, insects, and lightening.

One type of phobia, social phobia, is an irrational fear of situations that may involve judgment by others, such as parties and other social events. People with social phobias fear and avoid situations in which they may be subject to the scrutiny of others. It is not the same as being shy. Shy people

are able to participate in social functions.

Social phobia may begin in adolescence and may be associated with overprotective parents or limited social opportunities. Males and females are affected equally. Victims are at high risk for alcohol and drug dependence because they may come to rely on these substances to relax in a social situation. Social phobia can be limited to one specific situation (e.g. giving a speech) or be more broad (most social events).

Physical symptoms of social phobia include blushing, difficulty talking, nausea, sweating and trembling. Other signs that may occur are elevated blood pressure and rapid heart rate.

#### **Treatment for Anxiety Disorders**

In general, anxiety disorders are treated with medication, certain types of psychotherapy, or both. Before treatment, you need a thorough medical exam to rule out any possible physical problems. Your provider also needs to look for combinations of psychological disorders because anxiety disorders often co-exist with other conditions such as depression.

Medication will not cure ADs but it can keep them under control while you try psychotherapy. The most common drugs given for ADs include antidepressants (serotonin reuptake inhibitors, tricyclics, monoamine oxidase inhibitors), anti-anxiety drugs (benzodiazepines such as clonazepam, xanax, and lorazepam or busipiron), and beta blockers which treat heart conditions that often accompany certain anxiety disorders. Some of the anti-anxiety drugs can lead to dependency and are generally used for a limited time.

Cognitive-Behavioral Therapy is useful in treating ADs. The cognitive part helps people change the thinking patterns that support their fears, and the behavioral part helps people change the way they react to anxiety-provoking situations.

A new treatment model for ADs that shows improved results is called Coordinated Anxiety Learning and Management (CALM). CALM includes cognitive behavioral therapy, along with medication, tailored to one of four ADs: panic disorder, GAD, social phobia or PTSD.

#### **Anxiety Disorders Research**

According to the Anxiety Disorders Resource Center, animal and human studies have targeted specific brain areas and pathways that are involved in anxiety and fear, which underlie ADs. The body's fear response is coordinated by a small structure deep inside the brain called the amygdala. When confronted with danger, the body's senses launch two sets of signals to different parts of the brain. One signal goes to the cerebral cortex, the cognitive part of the brain that "explains" what the danger is. The other signal goes to the amygdala, which sets the fear response in motion, readying the body (heart pounds, blood diverts to muscles) for quick action even before the cognitive part of the brain comprehends what is wrong. This triggered action prepares the body to fight or flee. As a preventive measure for future dangers, the learned fear response becomes "etched" on the amygdala. In anxiety disorders, this etched memory can result in hyper vigilance, that leads to heightened anxiety preventing people from completing simple tasks. If, as studies suggest, the memories stored in the amygdala are relatively indelible, one aim of research is to develop therapies for anxiety disorders that increase cognitive control over the amygdala so that the "act now, think later" response can be interrupted.

Research also points to genetics as a factor in the origin of anxiety disorders. Florida State University recently was awarded a \$1.8M grant from the National Institute of Mental Health to investigate the sex differences in anxiety. The research team at FSU is working to identify the role of a gene called zif268. This gene is known to impact learning, memory and drug addiction and the FSU team's work implicates it in anxiety reactions. They have also noticed that the zif268 gene showed a different pattern of expression in male and female rats and that testosterone may protect the males from developing anxiety.

#### **Sex and Gender Research on Anxiety Disorders**

While women are more prone to ADs, until recently the amount of research in this area has focused mainly on its prevalence and origin. There was little in the literature on sex and gender differences in

response to treatment modalities. One study did report that women, particularly those who develop GAD later in life, responded less favorably than men to fluoxetine treatment (Simon, 2006) The World Health Organization has issued a paper on Gender and Women's Mental Health that states: "Gender is a critical determinant of mental health and mental illness. The morbidity associated with mental illness has received substantially more attention than the gender specific determinants and mechanisms that promote and protect mental health and foster resilience to stress and adversity." Hopefully, this will encourage more sex based research in the future.

#### Sources:

Anxiety Disorders Association of America

**Anxiety Disorders Resource Center** 

Bekker MJ, Van Mens-VerhulstJ (2007). Gender Medicine. Vol 4.

Florida State University Press Release

National Institute of Mental Health

NIH MedlinePlus

Simon et al (2006). Depression & Anxiety, 23(6).

WHO, Gender and Women's Mental Health

### **Upcoming Events**

December 14, 2010

Institute for Women's Health Research Monthly Forum

Scleroderma - Virginia Steen, MD

Prentice Women's Hospital, Chicago, Illinois

January 11, 2011

Advances in Contraception: Your Choices in Birth Control

Prentice Women's Hospital, Chicago, Illinois

## **Health Tip:**

Not everyone has an AD but most of us experience stress. Here are some lifestyle adjustments you can make to lower your stress:

- Eat a well-balanced, healthy diet
- Get plenty of sleep
- Exercise regularly
- Limit caffeine and alcohol
- Don't use nicotine or recreational drugs
- Learn relaxation techniques (guided imagery, yoga, etc)
- Find a balance of work, fun and leisure time
- Learn to make things with your hands (needlepoint, woodwork)
- Play an instrument or listen to music.

#### Source:

NIH Medline Plus

#### Join the Illinois Women's Health Registry

Registry participants number 5400+, and our goal is to reach 6,000 by the end of the year! If you have not joined yet, please do, and encourage your family and friends, to <a href="help us advance women's health research!">help us advance women's health research!</a>





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