Anxiety disorders can be disabling and distressing and can lead to social isolation and reduction of quality of life. Understanding the cause of anxiety and accurate diagnosis are key to effective treatment.

**Anxiety disorders**

clinical features and diagnosis

By Stephen Bleakley, MSc, MRPharmS, MCHM

Anxiety disorders are a group of common mental health illnesses that can present alone or in combination with other psychiatric conditions (typically depression) or physical comorbidities. Short-term anxiety is a natural emotional response that can help drive performance and improve alertness; however, when anxiety becomes prolonged or severe it can be distressing and disabling.

**Prevalence**

Pooled analysis of European populations suggests that approximately one in five people will fit the diagnostic criteria for an anxiety disorder at some point in their adult lives. Specific phobias have a lifetime prevalence of 13.2% and are the most common anxiety disorder. This is followed by social anxiety disorder (5.8%) and generalised anxiety disorder (GAD, 5.1%). In general, twice as many women than men are affected by anxiety; however, this ratio varies between disorders. Although anxiety disorders can occur at any age, many patients develop symptoms during childhood that tend to persist if left untreated.

Around two thirds of people with anxiety disorders will have a psychiatric comorbidity. Depression is reported in around one third of cases and successful treatment of the depression often improves the symptoms of anxiety, too. It is also common for patients to experience more than one type of anxiety disorder; for example, panic disorder can frequently occur at the same time as GAD and social anxiety disorder.

Emerging data suggest that having an anxiety disorder can reduce quality of life and worsen outcomes for patients with chronic physical illnesses. Notably, strong associations have been identified between anxiety disorders and irritable bowel syndrome, asthma and chronic pain. Underlying anxiety disorders may also be independent risk factors for cardiovascular disease.

**Pathophysiology**

It is likely that interconnecting genetic and environmental influences (see Box 1, p282) alter neuronal pathways in anxiety. Neuroimaging studies have demonstrated altered brain activity in the amygdala, which mediates the fear response, and the hippocampus, which regulates memories from stressful events, and in multiple other sites too. The monoamine neurotransmitters serotonin and noradrenaline play an extensive role in regulating human response to anxiety. Serotonergic synapses are densely concentrated in limbic regions, such as the amygdala and hypothalamus (particularly in the dorsal and raphe nuclei). Noradrenaline systems are found within the locus coeruleus, which projects into the cortex, limbic structures, cerebellum and medulla. Dysfunction at these synapses has been proposed as a mechanism of action for anxiety disorders and depression. This may explain why antidepressants that enhance serotonin transmission, eg,
selective serotonin reuptake inhibitors, are effective in treating some anxiety states.

Gamma-amino butyric acid (GABA) is an important inhibitory neurotransmitter in the central nervous system and regulates the excitability of many brain regions. It is also intrinsically linked to our fear and anxiety responses; even mild attenuation of GABA transmission can cause arousal, anxiety, restlessness and insomnia.

Other neurotransmitters that are thought to be involved in anxiety disorders include dopamine, glutamine and neurokinin—these may be suitable targets for future drug development.

### Clinical features and diagnosis

Many people experience the symptoms of anxiety from time to time, but severity can vary considerably from person to person. Symptoms are often described as emotional or physical (see Figure, below). Details on the duration, onset and type of symptoms experienced by the patient help in the diagnosis of his or her anxiety disorder.

For general screening, the generalised anxiety disorder scale (GAD-2) can be used to identify patients who need more thorough investigation. Patients are asked to rate how often they have felt two types of emotion—feeling nervous or anxious and uncontrollable worrying—over the past week and a score is assigned to each frequency. A score of 3 or more is suggestive of an anxiety disorder. Further evaluation may take the form of the more extensive GAD-7 scale or the commonly used hospital anxiety and depression scale.

Symptoms need to be present for a certain amount of time, be causing considerable distress and have reduced the patient’s quality of life before a diagnosis of an anxiety disorder can be made. The fifth edition of the diagnostic statistical manual (DSM-5), produced by the American Psychiatric Association, provides the most up-to-date formal classification of mental illnesses, including anxiety disorders. DSM-5 divides anxiety disorders into seven types. These are:

- Separation anxiety disorder
- Selective mutism
- Phobias
- Social anxiety disorder (previously known as social phobia)
- Panic disorder
- Agoraphobia
- GAD

### Box 1: Risk factors

Many complex and interacting factors can contribute to the development of an anxiety disorder. Risk factors include:

- Family history
- Childhood adversity
- Stressful life events
- Certain personality traits (e.g., excessive worrying)
- Certain parenting styles, such as being overprotective, a lack of emotional warmth or parents modeling fear and avoidance
- Younger age
- Being female, unmarried or unemployed
- Poor physical or mental health

### Common signs and symptoms of anxiety

![Image of common signs and symptoms of anxiety]
A brief description of each disorder and diagnostic criteria according to DSM-5 are described in Box 2. Previous editions classified post-traumatic stress disorder and obsessive compulsive disorder as anxiety disorders; however, these are now considered to be separate entities. The World Health Organization is also updating its formal disease classification system, the International Classification of Diseases, and the revised edition is expected to be launched in 2015. Resources for patients and healthcare professionals on the diagnosis and management of anxiety disorders are listed in Box 3.

### Differential diagnosis

Conditions that can mimic the clinical features of anxiety include: metabolic disorders, such as thyrotoxicosis and hypoglycaemia; overuse of stimulant drugs, such as caffeine or amphetamines; and withdrawal from alcohol or benzodiazepines. Although it is important to assess the physical health of a patient who is experiencing anxiety, health professionals should be aware that extensive tests may worsen the anxiety and reinforce the patient’s fear of having a serious medical problem.

### References


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**Box 2: Anxiety disorders**

<table>
<thead>
<tr>
<th>DISORDER</th>
<th>DESCRIPTION</th>
<th>DURATION FOR DIAGNOSIS</th>
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<tbody>
<tr>
<td>Separation anxiety disorder</td>
<td>Excessive fear or anxiety concerning separation from home or attachment figures</td>
<td>At least four weeks in children and six months in adults</td>
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<tr>
<td>Selective mutism</td>
<td>Consistent failure to speak in social situations where there is an expectation to do so</td>
<td>At least one month</td>
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<tr>
<td>Generalised anxiety disorder</td>
<td>Excessive worry about a number of events or activities and difficulty controlling this</td>
<td>At least six months</td>
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<tr>
<td>Agoraphobia</td>
<td>A marked fear or anxiety about situations (eg, public transport, open or enclosed spaces) where escape might be difficult</td>
<td>At least six months</td>
</tr>
<tr>
<td>Panic disorder</td>
<td>The presence of recurring unforeseen panic attacks. A panic attack is an abrupt surge of intense fear</td>
<td>Panic attack followed by one month of persistent worry about additional attacks</td>
</tr>
<tr>
<td>Social anxiety disorder</td>
<td>Persistent fear or anxiety about one or more social or performance situations that is out of proportion</td>
<td>At least six months</td>
</tr>
<tr>
<td>Specific phobia</td>
<td>Marked fear or anxiety about a specific object or situation</td>
<td>At least six months</td>
</tr>
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**Box 3: Useful resources**

Resources are available to help patients and healthcare professionals identify and manage anxiety disorders, and help raise awareness of the conditions.

### Resources for patients and health professionals

- Anxiety UK — www.anxietyuk.org.uk
- No Panic — www.nopanic.org.uk
- The Samaritans provides 24-hour, confidential emotional support for anyone feeling distressed or in despair — www.samaritans.org
- “Time to change” is a campaign designed to reduce stigma and discrimination associated with mental illness — www.time-to-change.org.uk
- Fear Fighter provides computer-aided cognitive behavioural therapy for panic and phobia disorders. It has been recommended by the National Institute for Health and Care Excellence; however, availability of services depends on local funding arrangements — www.fearfighter.com
- “Live life to the full” is a free online life-skills course for distressed people and their carers — www.lttf.com
- “Big white wall” is an early intervention online service for people experiencing emotional distress — www.big whitewall.com
- The British Association for Behavioural and Cognitive Psychotherapies maintains a database of cognitive behavioural therapy specialists who are accredited in the UK and Ireland — www.babcp.com
- Choice and Medication provides reliable, up-to-date and straightforward information and advice about the medicines used in mental illness — www.choiceandmedication.org.uk

### Recommended reading

- Jeffers S. Feel the fear and do it anyway. London: Vermillion; 2007

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