

# Help for your patients who suffer from specific

Unlike other anxiety disorders, specific phobias generally do not respond well to medication. Here is how primary care physicians can help their phobic patients find relief from their paralyzing fears.

## Article at a glance

- Specific phobias are characterized by marked, persistent, and unreasonable anxiety or panic when faced with specific situations or objects.
- Most phobias seen in primary care are *not* specific phobias.
- When individuals with specific phobias present for treatment, it is usually because their education, health care, employment, relationships, or mobility is significantly disrupted by fearful avoidance.
- The hallmark of cognitive behavioral treatment for specific phobias is graduated exposure to the phobic stimulus leading to gradual habituation or extinction.
- Unlike the other anxiety disorders, specific phobias are generally not responsive to medication.
- Specialist referrals should be considered when the initial assessment is unclear or self-conducted treatment proves insufficient.

Specific phobias are the most prevalent and primordial of anxiety disorders. Long lists of phobias with myriad Greek roots are often cited in consumer press articles on anxiety, but these terms are of little use to clinicians. The research and clinical literature, as well as the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR)*, suggest a much more limited constellation of phobias.<sup>1</sup>

Specific phobias are characterized by marked, persistent, and unreasonable anxiety or panic when a person is faced with specific situations or objects (eg, flying, heights, animals, receiving an injection, seeing blood). Escape and avoidance are common. Individual specific phobias are highly comorbid with other anxiety disorders. The DSM-IV-TR “clinical significance” criterion may be especially important when you are diagnosing a specific phobia, since many phobias are present for a lifetime without significant disruption of everyday life.<sup>2</sup> When individuals with specific phobias do present for treatment, it is usually because their education, health care, employment, relationships, or mobility is significantly disrupted by fearful avoidance.

## Prevalence and course

Prevalence of a current specific phobia ranges over the life span from 10% of children in primary care to 8.9% in an urban, multiracial sample of people older than 55.<sup>3,4</sup> Lifetime prevalence is 12.5%.<sup>5</sup> Specific phobia is twice as common in women than in men; women are more prone to animal phobias, but men are more likely to fear heights.<sup>6</sup> Three out of 4 people with a specific phobia have more than one, and the “number of fears, independent of type, powerfully predicted impairment, co-morbidity, illness course, demographic features, and family psychopathology.”<sup>6</sup>

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# PHOBIAS

Community surveys show that most people who have specific phobias do not present for treatment. Those who do are more likely to fear commonly encountered situations (pets, elevators, transportation), to have multiple phobias, and to experience panic attacks in the context of their phobias. Untreated individuals are more likely to have a single phobia, especially of the blood-injury-injection type, and are unlikely to experience panic attacks.<sup>7</sup>

Specific phobias display broad variability in their impact on mobility and quality of life. Someone with a snake phobia may be able to arrange daily life to preclude virtually all potential exposures. In contrast, severe phobias related to heights, transportation, pets, or insects may significantly hamper mobility and social or employment possibilities. Dental phobia or blood-injury-injection phobia may lead to avoidance of needed health care with its attendant complications. Poor diabetic control has been reported among diabetics with blood-injury-injection phobia.<sup>8</sup>

## Etiology

Understanding of phobias has traditionally been based on fear-conditioning models. From this vantage, a phobia develops when a person, consciously or not, associates marked anxiety or panic with a specific trigger.<sup>9</sup> Less often, phobias may be acquired vicariously by observation of the fearful behavior of others or by very salient misinformation received from others.<sup>9</sup>

All components of the fear-conditioning process in humans demonstrate moderate heritability (35% to 45%).<sup>10</sup> Reported heritability estimates include



46% for situational phobias, 47% for animal phobias, and 59% for blood-injury-injection phobias.<sup>11</sup>

Twin studies are compatible with genetic models, which postulate that the vulnerability to phobias is largely innate and does not arise directly from environmental experiences.<sup>12</sup> From this viewpoint, phobias reflect genetically determined exaggerated fear and/or disgust responses to evolutionary, survival-relevant cues or a genetic deficiency in adaptation to such cues.

Differences in temperament (eg, neuroticism, introversion, behavioral inhibition, anxiety sensitivity) have been linked with vulnerability to fear conditioning. Identified brain substrates may underlie such individual differences; for example, thickness of the ventromedial prefrontal cortex may explain individual differences in fear modulation.<sup>13</sup> Carriers of the short allele of the serotonin transporter show stronger amygdala reactivity both to frightening stimuli and to stressful, uncertain stimuli.<sup>14</sup>

Although the traditional stress-diathesis model usually does not apply to specific phobias, it has

## ■ Specific phobias

**TABLE 1**  
**Phobias seen in primary care that often are not specific phobias**

If the presentation is . . .	Consider
"Illness phobia"	OCD; hypochondriasis
"Germ or toxin phobia"	OCD
"Claustrophobia"	Panic disorder; PTSD
"Driving phobia"	Panic disorder; PTSD
"Bridge/heights phobia"	Panic disorder or OCD with intrusive thoughts about losing control
"Flying phobia"	Panic disorder (fear of panic), often combined with specific phobia (fear of crashing)
"Fear of being alone"	OCD with self-harm obsessions; PTSD; separation anxiety disorder
"School phobia"	Willful refusal; reaction to bullying; separation anxiety disorder; social anxiety disorder; panic attacks; ADD; learning disorder

**Key:** ADD, attention deficit disorder; OCD, obsessive-compulsive disorder; PTSD, posttraumatic stress disorder.

been reported that difficult-to-control childhood experiences (such as chronic parental violence) can influence specific phobia onset.<sup>15</sup> In summary, the etiology of specific phobias is likely to be multifactorial with variation across phobia types and individuals.

### Assessment

In addition to the Fear Survey Schedule, which is available for screening, many other questionnaires focus on particular specific phobias (eg, heights, claustrophobia, spiders, snakes, dental or medical procedures).<sup>16</sup> However, none of these is likely to be useful in primary care.

Outcome studies assess the actual behavioral approach to the phobic stimulus in analogue situations (eg, video, pictures, virtual reality), real world situa-

tions, and, preferably, long-term follow-up. Assessment of fear during exposure is usually measured in subjective units of distress (SUDS) from 0 (no distress) to 100 (maximum distress). The SUDS concept is useful for self-conducted exposure and for tracking progress.

When presented with a possible phobia, the primary care physician should clarify the course, distress, avoidance, and disruption to daily living. Assessment should focus on 2 points:

- Whether the symptoms and course are best accounted for by one of the other anxiety disorders with different treatment implications
- Whether a program of graduated exposure is indicated, either through patient education and self-conducted exposure or through specialty referral.

Specific phobias are highly comorbid with other anxiety disorders. Note, too, that apparent "phobias" seen in primary care are often not specific phobias per se and may have quite different implications for treatment (see Table 1). For example, a patient who has panic attacks only in response to a single specific phobic stim-

ulus that is perceived as dangerous may well have a specific phobia. Panic attacks in response to bodily arousal that is perceived as dangerous and occurring in multiple situations suggest the diagnosis of panic disorder. In this case, a selective serotonin reuptake inhibitor (SSRI) and/or cognitive behavioral treatment (CBT) that emphasizes interoceptive exposure to bodily arousal is indicated. (Interoceptive exposure involves using other means to recreate the feared bodily sensations that occur in the phobic situation—exercise for tachycardia, hyperventilation for lightheadedness, bodily spinning for dizziness.)

Similarly, panic attacks in response to intrusive thought content ("What if I lose control of myself and drive my car off the bridge?") may indicate obsessive-compulsive disorder rather than a specific

phobia of bridges or heights. Depending on the phobic content, (eg, fear of the dark, assault, or driving), screen for a trauma history that could be relevant to symptom onset or perpetuation.

### Cognitive behavioral treatment

The hallmark of CBT for specific phobias is graduated exposure to the feared situation or object. Graduated exposure may be imaginal or in vivo, self-conducted or specialist-directed, via actual or virtual reality cues, and/or interoceptive. Typically, willingness to confront a hierarchy from lesser to greater fear-arousing situations leads to gradual habituation and, often, extinction of the fear response. Animal research suggests that extinction is not the erasure of fear-conditioned memories but rather the formation of new, competing memories that dampen or eliminate the fear response.<sup>17</sup>

Recent reviews have documented the effectiveness of CBT for specific phobias in both children and adults.<sup>18,19</sup> For example, 14 controlled studies of in vivo exposure for specific phobias have consistently demonstrated benefit. Indeed, in vivo exposure results in good treatment outcome for most types of specific phobias if it is sustained until a brief period of minimal to no anxiety.<sup>19</sup>

Although in vivo exposure is the standard, a large study of dog phobics suggested that imaginal exposure was equally effective.<sup>20</sup> Two studies suggested no difference between in vivo and virtual reality exposure, but the latter may be helpful for phobias in which repetitive in vivo exposure is difficult (eg, flying).<sup>19</sup> Outcomes may be comparable whether exposure treatment is self- or specialist-conducted.<sup>21</sup> Self-help approaches yield greater benefit for specific phobias than for other anxiety disorders (see “Treatment resources for specific phobias,” page 24).<sup>22,23</sup>

Facing one’s distress may be less daunting with preparatory cognitive therapy that addresses distorted risk assessments, anxiety-escalating self-talk, feelings of being overwhelmed, and the demoralization that accompanies chronic avoidance. Anxiety management skills (eg, diaphragmatic breathing, staying in the moment, observing fluctuations in anxiety, letting go of the need to control anxiety) encourage

**In contrast to the other anxiety disorders, psychopharmacologic treatment rarely has a place in the treatment of specific phobias.**

acceptance of distress without escape or distraction in order to facilitate extinction. The emphasis in CBT has shifted to encouraging willingness to seek and accept anxiety rather than to control it through conscious effort or relaxation techniques.

Both functional MRI and positron emission tomography studies suggest that exposure-based CBT modifies the dysfunctional neural circuitry that underpins specific phobias.<sup>24,25</sup> CBT has yielded changes in brain areas associated with both automatic processing (amygdala) and evaluatory processing of fear stimuli (insula and anterior cingulate cortex).<sup>26,27</sup>

Exposure treatment may fail because of

- Initial refusal
- Premature dropout
- Deliberate distraction or substance use during exposure
- Repeated escape before arousal wanes
- Sporadic rather than repetitive exposure.

Relapse after successful treatment is likely if intermittent self-conducted exposure is abandoned.

### Blood-injury-injection phobia: A special case

In contrast to the bodily arousal (eg, tachycardia) observed in response to most phobic stimuli, exposure to blood-injury-injection cues provokes the opposite bodily response: Initial hyperarousal (perhaps coupled with disgust), followed moments later by abrupt bradycardia and hypotension. This response is probably the remnant of evolutionary adaptation comparable to the reflexive immobility of a rabbit caught in the jaws of a fox (in which the absence of movement and stanch blood flow promote survival). If the vasovagal response is marked, syncope can result and may contribute to subsequent phobic conditioning.

Exposure treatment is also utilized for blood-

### Treatment resources for specific phobias

#### Self-directed or parent-directed exposure treatment

Antony MM, Craske MG, Barlow DH. *Mastering Your Fears and Phobias: Workbook*. 2nd ed. New York, NY: Oxford University Press; 2006.

Antony MM, McCabe RE. *Overcoming Animal and Insect Phobias*. Oakland, CA: New Harbinger; 2005.

Antony MM, Watling M. *Overcoming Medical Phobias*. Oakland, CA: New Harbinger; 2006.

Bourne EJ. *Overcoming Specific Phobia: A Hierarchy and Exposure-Based Protocol for the Treatment of All Specific Phobias (Client Manual)*. Oakland, CA: New Harbinger; 1998.

#### Anxiety specialist referrals

Anxiety Disorders Association of America: <http://www.ADAA.org>

Association for Behavioral and Cognitive Therapies: <http://www.aabt.org>

State Psychological Associations: <http://www.apa.org/practice/refer.html>

injury-injection phobias, often beginning with verbal descriptions or pictures, but progressing to direct exposure to the relevant cues (eg, donating blood). The unique bodily response in these phobias requires special adaptation. Patients are instructed to increase muscle tension or to stimulate memories of angry feelings that can counter the bradycardia and hypotension that occur during exposure.<sup>28</sup> When making a referral for CBT, primary care physicians should confirm that the therapist understands this disorder and how it is usually treated.

#### Special considerations for children

Most children have normal, transient fears (darkness, intruders, water) that do not lead to the persistent avoidance and distress that characterize phobias. However, onset of most specific phobias does occur during childhood. In one study, 17.6% of children met the criteria for a specific phobia.<sup>29</sup>

The efficacy of graduated exposure treatment for childhood phobias is well established, sometimes with a single session of exposure treatment.<sup>18,30</sup> Treatment may require specialist-directed exposure or, in some cases, facilitation by a supportive and well-informed parent. Modeling of gradual approach

to the phobic stimulus with self-talk that notices and accepts anxious thoughts and arousal may be especially helpful. Pairing desired rewards (eg, a special outing or purchase) with initial exposure can facilitate subsequent exposure through increased incentive and positive reinforcement.

#### Psychopharmacologic treatment

In contrast to the other anxiety disorders, psychopharmacologic treatment rarely has a place in the treatment of specific phobias. Benzo-

diazepines may detract from exposure and inhibit extinction.<sup>31</sup> However, pragmatism is the rule (eg, "But doctor, I have a flight next week.") Some phobic individuals will not consider initial exposure without feeling bolstered by preemptive use of a benzodiazepine. However, habituation and extinction are context-dependent; that is, patients who attribute their success to medication are less likely to experience durable extinction of the phobia.

SSRIs and other antidepressants have demonstrated anxiolytic effects for all the other anxiety disorders but are not an established treatment for specific phobias. A single, small, double-blinded, placebo-controlled study reported the effectiveness of a 4-week trial of paroxetine, 20 mg/d, for specific phobia.<sup>32</sup> However, in the 7 years since publication, no replications or supporting data have appeared.

A new approach that seeks to augment exposure treatment has received preliminary support.<sup>33</sup> Both animal and human studies report that acute administration of D-cycloserine shortly before exposure can enhance the new learning that is necessary for extinction. Two placebo-controlled studies have reported the efficacy of D-cycloserine, 50 mg, in augmenting exposure treatment for fear of heights and for social anxiety disorder.<sup>34,35</sup> However, other

recent human studies raise questions about the effectiveness and durability of D-cycloserine augmentation.<sup>36,37</sup> Despite these intriguing findings, no clinical protocols for use of D-cycloserine have been published.

## Referral

Primary care physicians should consider referring certain phobic patients to a skilled cognitive behav-

ioral specialist. Referral may be indicated when the initial assessment is unclear or when self-conducted treatment for a phobia is insufficient. □

*This article was contributed by Drs Shearer and Dwyer and edited by Peter D'Epiro, PhD.*

*Drs Shearer and Dwyer disclose that they have no financial relationship with any manufacturer in this area of medicine.*

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