

Contributions of Behavioral and Social Sciences Research (BSSR)

The Public Health Problem

19M An estimated 19 million individuals in the United States have one or more phobias.¹ Approximately 22% have experienced serious impairments, 30% have experienced moderate impairments, and 48% have experienced mild impairments due to their phobia.²

40% Up to 40 percent of individuals with phobias treated with pharmacological medications experience only partial long-term symptom alleviation, and most individuals do not achieve remission using pharmacological interventions alone.^{3, 4}

9-10 years The average age of onset for phobia is between 9 and 10 years.⁵ Children can develop phobias as young as age 7 years, while other specific phobias can emerge later in young adulthood.⁶ The average duration of a specific phobia is 20 years.⁷

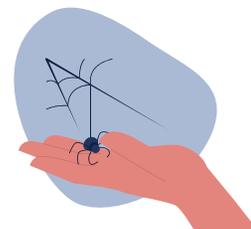
Phobias can increase a person's risk for other mental and physical conditions, including the following:

- Generalized anxiety disorder
- Depression
- Substance use disorder
- Social anxiety disorder
- Obsessive compulsive disorder
- Gastrointestinal disease
- Respiratory disease
- Cardiovascular disease
- Migraines
- Hypertension

BSSR Health Impacts

Exposure Therapy

Exposure therapy is considered the gold standard for treating phobias, successfully treating up to 80-90% of patients who complete it.^{8, 9} Exposure therapy enables patients to overcome anxieties by gradually introducing them to feared scenarios or objects in a safe environment, often starting with small, indirect exposures before progressing to more direct exposures.¹⁰ Clinicians tailor exposure therapy sessions to the specific needs of the patient to enhance therapeutic effectiveness.¹¹



Cognitive Behavioral Therapy (CBT)

CBT uses cognitive restructuring techniques¹² and coping strategies to help efficaciously treat some phobias, particularly claustrophobia. CBT can be used both alone and in combination with exposure therapy techniques to enhance their effects.^{13, 14}



Mindfulness Therapy

Mindfulness-based stress reduction is a CBT-based technique that aims to reduce symptoms of stress and anxiety by improving emotional regulation. Mindfulness strategies, which promote attention to the present moment, are proven to reduce emotional reactivity and negative emotional experiences in individuals with social phobia.¹⁵



Virtual Reality (VR)

New technological advances have led to the use of VR to help treat patients with specific phobias.¹⁶ Exposure therapy using VR technology can enable patients to face specific fears that may be logistically difficult or costly to integrate into regular clinical visits (e.g., fear of flying and of planes).¹⁷ Some studies suggest that VR-based psychotherapy may be as effective as standard cognitive therapy, whereas other studies assert that VR can enhance cognitive therapy outcomes; these results make VR a promising area for further research.¹⁸



References and Definitions

- 1 Johns Hopkins Medicine. [Phobias](#). [\[Back\]](#)
- 2 National Institute of Mental Health. (2017, November). [Specific Phobia](#). U.S. Department of Health and Human Services, National Institutes of Health. [\[Back\]](#)
- 3 Singewald, N., Schmuckermair, C., Whittle, N., Holmes, A., & Ressler, K.J. (2015). [Pharmacology of cognitive enhancers for exposure-based therapy of fear, anxiety, and trauma-related disorders](#). *Pharmacology & Therapeutics*, 149, 150-190. [\[Back\]](#)
- 4 Garcia, R. (2017). [Neurobiology of fear and specific phobias](#). *Learning & Memory*, 24(9), 462-471. [\[Back\]](#)
- 5 Davis, T.E., Ollendick, T.H., & Lars-Göran Öst, L. (2009). [Intensive treatment of specific phobias in children and adolescents](#). *Cognitive and Behavioral Practice*, 16(3), 294-303. [\[Back\]](#)
- 6 Öst, L. (1987). [Age of onset in different phobias](#). *Journal of Abnormal Psychology*, 96(3), 223-229. [\[Back\]](#)
- 7 Stinson F.S., Dawson, D.A., Chou S.P., Smith, S., Goldstein, R.B., Ruan, W.J., & Grant, B.F. [The epidemiology of DSM-IV specific phobia in the USA: Results from the National Epidemiologic Survey on Alcohol and Related Conditions](#). *Psychological Medicine*, 37(7), 1047-1059. [\[Back\]](#)
- 8 Garcia, R. (2017). [Neurobiology of fear and specific phobias](#). *Learning & Memory*, 24(9), 462-471. [\[Back\]](#)
- 9 Choy, Y., Fyer A.J., & Lipsitz, J.D. (2007). [Treatment of specific phobia in adults](#). *Clinical Psychology Review*, 27(3), 266-286. [\[Back\]](#)
- 10 Raeder, F., Merz, C.J., Margraf, J., & Zlomuzica, A. (2020). [The association between fear extinction, the ability to accomplish exposure and exposure therapy outcome in specific phobia](#). *Scientific Reports*, 10(1), 4288. [\[Back\]](#)
- 11 Craske, M.G., Treanor, M., Conway, C. Zbozinek, T., & Vervliet, B. (2014). [Maximizing exposure therapy: An inhibitory learning approach](#). *Behaviour Research and Therapy*, 58, 10-23. [\[Back\]](#)
- 12 Cognitive restructuring refers to a set of therapeutics techniques designed to help people notice and modify their negative thinking patterns.
– Definition adapted from Healthline [\[Back\]](#)
- 13 Choy, Y., Fyer A.J., & Lipsitz, J.D. (2007). [Treatment of specific phobia in adults](#). *Clinical Psychology Review*, 27(3), 266-286. [\[Back\]](#)
- 14 Kaczurkin, A.N., & Foa, E.B. (2015). [Cognitive-behavioral therapy for anxiety disorders: An update on the empirical evidence](#). *Dialogues in Clinical Neuroscience*, 17(3), 337-346. [\[Back\]](#)
- 15 Goldin, P.R., & Gross, J.J. (2010). [Effects of Mindfulness-Based Stress Reduction \(MBSR\) on emotion regulation in social anxiety disorder](#). *Emotion*, 10(1), 83-91. [\[Back\]](#)
- 16 Oing, T., & Prescott, J. (2018). [Implementations of virtual reality for anxiety-related disorders: Systematic review](#). *JMIR Serious Games*, 6(4), e10965. [\[Back\]](#)
- 17 Laker, M. (2012). [Specific phobia: Flight](#). *Activitas Nervosa Superior*, 54(3), 108-117. [\[Back\]](#)
- 18 Choy, Y., Fyer A.J., & Lipsitz, J.D. (2007). [Treatment of specific phobia in adults](#). *Clinical Psychology Review*, 27(3), 266-286. [\[Back\]](#)

