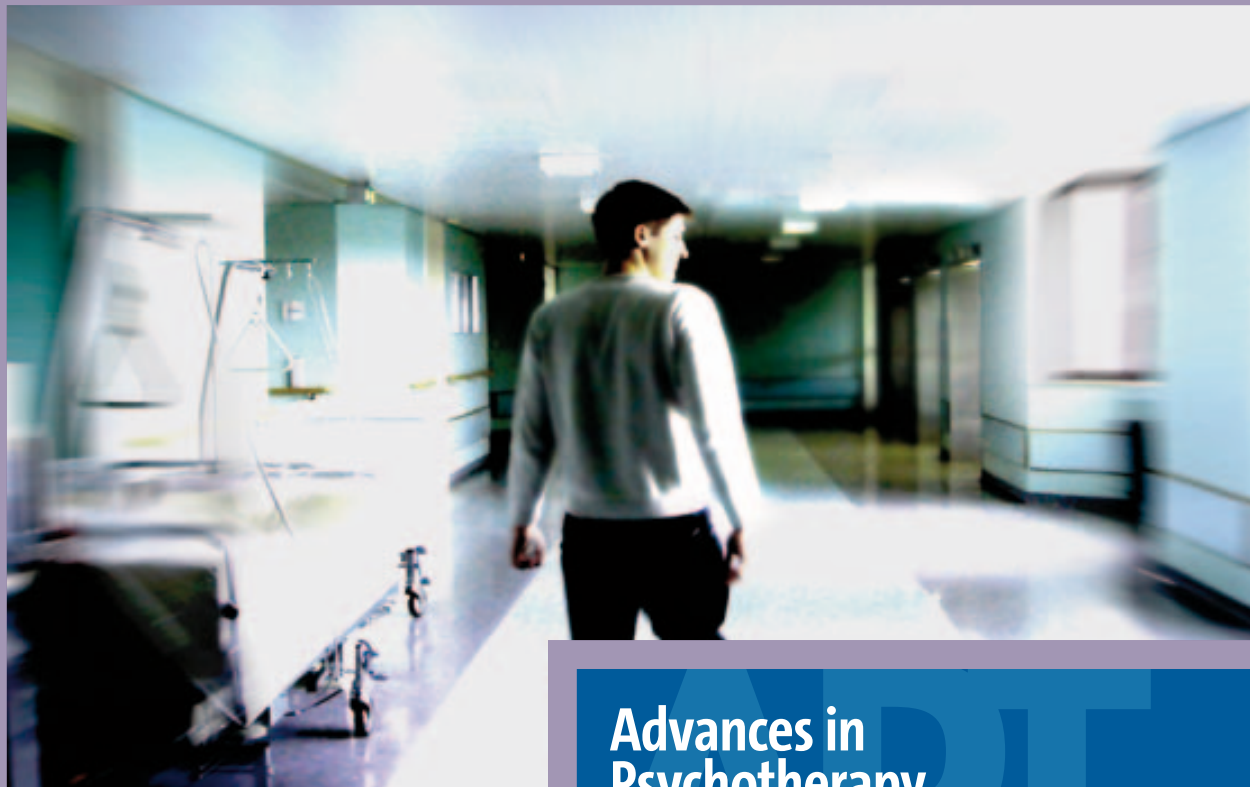


Jonathan S. Abramowitz · Autumn E. Braddock

# Hypochondriasis and Health Anxiety



**Advances in  
Psychotherapy**

Evidence-Based Practice

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# Hypochondriasis and Health Anxiety

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# Hypochondriasis and Health Anxiety

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From J. S. Abramowitz & A. E. Braddock: *Hypochondriasis and Health Anxiety* (ISBN 9781616763251) © 2011 Hogrefe Publishing.

Library of Congress Cataloging information for the print version of this book is available via the Library of Congress Marc Database

Cataloging data available from Library and Archives Canada

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<http://www.hogrefe.com>

#### PUBLISHING OFFICES

USA: Hogrefe Publishing, 875 Massachusetts Avenue, 7th Floor, Cambridge, MA 02139  
Phone (866) 823-4726, Fax (617) 354-6875;  
E-mail [customerservice@hogrefe-publishing.com](mailto:customerservice@hogrefe-publishing.com)

EUROPE: Hogrefe Publishing, Merkelstr. 3, 37085 Göttingen, Germany  
Phone +49 551 99950-0, Fax +49 551 99950-425,  
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#### SALES & DISTRIBUTION

USA: Hogrefe Publishing, Customer Services Department,  
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E-mail [customerservice@hogrefe.com](mailto:customerservice@hogrefe.com)

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E-mail [direct.orders@marston.co.uk](mailto:direct.orders@marston.co.uk)

EUROPE: Hogrefe Publishing, Merkelstr. 3, 37085 Göttingen, Germany  
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E-mail [publishing@hogrefe.com](mailto:publishing@hogrefe.com)

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Format: PDF

ISBN 978-1-61676-325-1

## Dedication

To our respective families: Stacy, Emily, and Miriam; Eric, Alyxzandria, and Sienna. Your love puts everything in perspective.



# Preface

This volume in the *Advances in Psychotherapy: Evidence-Based Practice* series describes the conceptualization, assessment, and psychological treatment of severe health anxiety, hypochondriasis, and related problems using empirically supported cognitive-behavioral therapy (CBT) techniques. The development of effective problem-focused treatments for severe health anxiety has created a growing need for the dissemination of treatment manuals, such as this one, to mental health professionals who want to know how to use these techniques with their patients.

This book builds upon psychological principles of behavior change. As such, it assumes that the reader has basic knowledge and some training in psychotherapeutic intervention. It is written for psychologists, psychiatrists, physicians, nurses, physician aides, social workers, students and trainees, and other health care practitioners who encounter patients with unexplained physical complaints.

The book is divided into five chapters. The first chapter describes the clinical phenomenon of health anxiety and related problems, and describes empirically supported diagnostic and assessment procedures. Chapter 2 reviews what is known about the leading theoretical models of health anxiety and their implications for successful treatment. In Chapter 3, we present a framework for conducting an initial assessment and for deciding whether a patient is a candidate for the psychological treatment program outlined in Chapter 4. Methods for discussing the psychological (as opposed to medical) aspects of treatment, and strategies for getting the patient to “buy in” to a psychological approach are also incorporated in Chapter 3. Chapter 4 presents the nuts and bolts of psychological treatment techniques for health anxiety. It also reviews scientific evidence for the efficacy of this program and describes a number of common obstacles to successful treatment. Finally, Chapter 5 includes a case example of the treatment of severe health anxiety. A variety of forms and patient handouts for use in treatment appear in the appendix.

Health anxiety is a heterogeneous clinical condition. Some patients experience fears of dying a slow death due to cancer, while others have recurring, anxiety-evoking doubts that their unexplained pain or other bodily sensations are symptoms of a rare or previously undiscovered disease. At the time of this writing, the DSM-V Task Force on Somatoform Disorders is considering a new diagnosis, Complex Somatic Symptom Disorder, which would be even more heterogeneous and subsume a number of DSM-IV-TR conditions, such as hypochondriasis, somatization disorder, pain disorders, and undifferentiated somatoform disorder.

Although a systematic and multicomponent treatment approach is advocated in this book, we do not intend it to be a “cookbook.” Rather, it guides the clinician in tailoring specific treatment components to individual patients’ needs. It provides a practical and structured approach with supporting didactic materials for both clinicians and patients.



## Acknowledgments

We are indebted to many people, including series editor Danny Wedding, associate editor Ken Freedland, and Robert Dimpleby of Hogrefe Publishing, for their invaluable guidance and suggestions. We also appreciate Kristy Gura's hard work in helping us prepare this book for publication. The pages of this volume echo clinical insights we acquired during our work at the Mayo Clinic in Rochester, Minnesota. We are grateful for the support of terrific colleagues including Stephen Whiteside, Sarah Kalsy, Brett Deacon, Katherine Moore, Kristi Dahlman, and Jill Snuggerud.

Dr. Braddock acknowledges the professional mentorship of Gary Wolfe, PhD, and Lisa Altman, MD, who have given unwavering support of primary care psychology and patient-centered care within the VA of Greater Los Angeles Healthcare System. She also thanks her colleagues Kellie Condon, PhD; Leigh Anne Selby, PsyD; and Mike Young, LCSW, and the numerous primary care providers, for their ongoing collaboration, guidance, and friendship.

Jointly, we dedicate this book to the brave patients who came to us – sometimes unwillingly – when their search for a medical explanation for their bodily complaints turned up empty. Not knowing what to expect, they courageously challenged themselves to embrace a psychological perspective on their complaints. They accepted their bodily sensations as benign, confronted their fears, and defeated their anxiety. They believed in us, confided in us, challenged us, and educated us. We thank them for their willingness to open their minds to our approach.

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# 1

## Description of Health Anxiety

### 1.1 Terminology

Anxiety is a cognitive, emotional, physiological, and behavioral response to the perception of threat. It occurs when one doubts his or her ability to cope with the perceived threat. **Health anxiety** refers to inappropriate or excessive health-related fears based on misperceptions of innocuous bodily cues and sensations as indicative of a serious medical problem. Moreover, the individual with health anxiety perceives him or herself as unable to cope with or prevent the perceived threat, in this case the presence of a serious medical illness.

### 1.2 Definition

Anxiety is an adaptive response which prepares us to take action when confronted with possible danger (i.e., the *fight or flight* response). Some degree of health-related anxiety may therefore be constructive if it motivates a person to take appropriate measures or seek proper medical attention. For example, apprehension concerning shortness of breath in a person with asthma can lead to prompt administration of inhalant bronchodilator medication to prevent respiratory fatigue or even death by suffocation. **Clinical health anxiety**, on the other hand, is extreme in relation to the actual degree of threat (if any threat even exists). It causes distress and interferes with various domains of functioning, including interpersonal relationships, self-care, work or school, and leisure.

**Definition of health anxiety and hypochondriasis**

**Hypochondriasis.** Hypochondriasis is classified as a somatoform disorder in DSM-IV-TR (American Psychiatric Association [APA], 2000) and characterized by a preoccupation with fears of having, or the idea that one has, a serious medical condition such as a chronic, life threatening or life-altering sickness (see Table 1). This “disease conviction” is (a) based on a misinterpretation of harmless or minor bodily sensations or perturbations and (b) persists in spite of appropriate medical evaluation and reassurance of good health.

The health-related preoccupation might concern specific bodily functions such as peristalsis or heart beat; slight benign abnormalities, signs, and sensations such as an occasional cough, pulled muscle, mole, or bruise on the skin; vague and ambiguous complaints such as “a hollow head” or “weak spine;” or specific organs (e.g., kidneys), body parts (e.g., prostate gland), or diseases (e.g., rabies, cancer).

**Table 1**  
**Summary of the DSM-IV-TR Diagnostic Criteria for Hypochondriasis**

- A. Preoccupation with fears of having, or the idea that one has, a serious disease based on the person's misinterpretation of bodily symptoms.
- B. The preoccupation persists despite appropriate medical evaluation and reassurance.
- C. The belief in criterion A is not a delusion and is not restricted to a circumscribed concern about appearance (as in Body Dysmorphic Disorder).
- D. The preoccupation causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- E. The duration of the disturbance is at least 6 months.
- F. The preoccupation is not better accounted for by another Axis I disorder such as Generalized Anxiety Disorder, Obsessive-Compulsive Disorder, Panic Disorder, a Major Depressive Episode, Separation Anxiety, or another Somatoform Disorder.

Adapted from the DSM-IV diagnostic criteria for hypochondriasis (American Psychiatric Association [APA], 1994). Adapted with permission.

Patients with clinical health anxiety often fixate on the cause, meaning, and authenticity of their complaints. Common expressions of this fixation include excessive seeking of reassurance about the physical complaints (e.g., repeated doctor visits and unnecessary tests), asking questions of medical professionals, seeking information from medical texts and websites, and extensive body checking (e.g., inspecting the skin, inspecting excrement, repeatedly measuring vital signs). Some patients avoid external triggers of health anxiety (e.g., hospitals, people with illnesses). Table 2 lists some common hypochondriacal and health anxiety-related behaviors.

**Clinical Pearl**  
**Hypochondriasis Versus Health Anxiety**

The term "health anxiety" is beginning to replace the term "hypochondriasis" for the following reasons:

1. "Health anxiety" provides a clearer and more meaningful description of the emotional and behavioral aspects of this problem. "Hypochondriasis," on the other hand, derives from the Greek hypo (below) and chondros (cartilage of the breast bone) and was used by ancient Greek physicians to describe unexplained stomach pains. During the 19th Century, this became the male counterpart to hysteria.
2. Hypochondriasis is but one of several clinical disorders that involve health-related fears and worries. Thus, health anxiety is not a clinical diagnosis per se, but rather a phenomenon that can be present in a number of psychological conditions as well as medical diagnoses that often present with overlapping psychological symptoms (as we describe below).
3. Whereas the term "health anxiety" is more or less value neutral, "hypochondriasis" has pejorative connotations.

**Table 2**  
**Examples of Common Hypochondriacal and Health Anxiety-Related Behaviors**

Checking and assurance-seeking

- Repeated visits to doctors to have symptoms checked
- “Doctor-shopping” to check if the diagnosis is correct
- Repeated Internet searches to find information about a certain symptom
- Repeatedly discussing or asking questions about the feared problem
- Reviewing test results and notes taken during doctor visits
- Persistently mentioning and describing symptoms to others
- Repeatedly reviewing medical texts or journal articles for information about illnesses or body symptoms

Body checking

- Repeatedly measuring heart rate, blood pressure, temperature, etc.
- Constantly monitoring levels of “throat tightness,” dizziness, or pain
- Frequently palpating the throat or breasts for lumps
- Checking urine and stool for blood and consistency
- Frequent inspections of sores and moles on the skin

Safety signals

- Remain within a certain distance of the doctor’s office, hospital, or medical center
- Keep medications on hand at all times
- Swallowing until it feels “normal”
- Rigid adherence to a strict diet

Avoidance

- Hospitals
- People with illnesses
- Television shows, movies, news articles, and other stories about sick people, illnesses, or death
- Physical exertion
- Routine physical exams
- Self-examinations (e.g., breast, testicles)
- Funerals and cemeteries

**Poor Insight.** Some individuals with hypochondriasis recognize that their health-related fears, preoccupations, and behaviors are excessive (i.e., they have “good insight”). The DSM-IV-TR diagnostic specifier, “**with poor insight**” is reserved for those who, most of the time, do not realize that their health-related fears and concerns are unrealistic.

**Patients vary in terms of their insight into the excessiveness of their health concerns**

### 1.3 Epidemiology

The lifetime prevalence of hypochondriasis in the general population has been estimated at anywhere between 0.02% and 7.7%. In primary care settings, estimates range from 0.8% to 8.5%. The estimated prevalence is 1.2% among cardiology outpatients and 1.0% among chronic pain patients. Men and women are about equally likely to be affected (APA, 2000).

## 1.4 Course and Prognosis

**Most patients with health anxiety require professional help to avoid long-term suffering**

Although symptoms of health anxiety may be present at any age, little is known about the average age of onset, or about the prevalence of health anxiety among children. Onset usually occurs in early adulthood, which coincides with the time at which most people assume greater responsibility for maintaining personal health. Other potential onset triggers include increased life stress, a personal experience with illness, the illness or death of a loved one, and exposure to mass media coverage of illnesses. Some health anxiety patients endure a long-term burden of functional impairment and personal distress if effective treatment is not sought.

## 1.5 Differential Diagnoses

**A number of psychological disorders involve health anxiety to one degree or another**

Health anxiety is not a DSM-IV-TR diagnosis. Rather, it is a collection of signs and symptoms featuring medically unexplained physical complaints; fears, concerns, and preoccupation with health and illness; and behaviors such as avoidance, checking, and other types of reassurance-seeking. Hypochondriasis can be

**Table 3**  
**Proposed Diagnostic Criteria for Complex Somatic Symptom Disorder (CSSD) in DSM-V**

Criteria A, B, and C are necessary:

A. Somatic symptoms:

Multiple somatic symptoms that are distressing, or one severe symptom

B. Misattributions, excessive concern or preoccupation with symptoms and illness: At least two of the following are required to meet this criterion:

1. *High level of health-related anxiety.*
2. *Normal bodily symptoms are viewed as threatening and harmful*
3. *A tendency to assume the worst about their health (catastrophizing).*
4. *Belief in the medical seriousness of their symptoms despite evidence to the contrary.*
5. *Health concerns assume a central role in their lives*

C. Chronicity: Although any one symptom may not be continuously present, the state of being symptomatic is chronic and persistent (at least 6 months).

The following optional specifiers may be applied to a diagnosis of CSSD where one of the following dominates the clinical presentation:

1. Multiplicity of somatic complaints (somatization disorder in DSM-IV)
2. High health anxiety (hypochondriasis in DSM-IV) [If patients present solely with health-related anxiety in the absence of somatic symptoms, they may be more appropriately diagnosed as having an anxiety disorder.]
3. Pain disorder. This classification is reserved for individuals presenting predominantly with pain complaints who also have many of the features described under criterion B. Patients with other presentations of pain may better fit other psychiatric diagnoses such as major depression or adjustment disorder.

considered the quintessential “health anxiety disorder,” yet it is one of several conditions characterized by health anxiety. At the time of this writing, the DSM-V Task Force on Somatoform Disorders is considering a new diagnosis – **Complex Somatic Symptom Disorder (CSSD)** – to encompass many of the conditions described below. The diagnostic criteria for the proposed CSSD appear in Table 3.

### 1.5.1 Somatization Disorder

*Somatization disorder* is defined in DSM-IV-TR as involving a persistent pattern of chronic, medically unexplained physical complaints beginning before age 30. The focus of the physical complaints may shift over time, but the complaints always result in excessive treatment-seeking and substantial impairment in social, occupational, or other areas of functioning. To meet criteria for this condition, the individual must experience pain (e.g., headache), gastrointestinal symptoms (e.g., unexplained vomiting), problems with sexual functioning (e.g., dyspareunia), or at least one pseudoneurological symptom (e.g., chronic dizziness). Repeated doctor visits and “shopping around” for new doctors are common. Patients frequently feel disparaged and misunderstood when medical tests repeatedly come up negative.

### 1.5.2 Somatic Delusions

Somatic delusions (included in the DSM-IV-TR under Delusional Disorder, Somatic Type) involve bizarre, fixed beliefs about one’s health. For example, the belief that one is emitting a foul odor, infested with insects or parasites, or that certain parts of the body (contrary to objective observation) are misshapen or not functioning properly. These patients might seek medical attention or take additional measures for their supposed condition (e.g., contacting pest control agencies to exterminate supposed infestation). It is unclear whether somatic delusions are best considered symptoms of hypochondriasis with poor insight, or whether they are indeed psychotic symptoms.

### 1.5.3 Illness or Disease Phobia

Illness phobia (or disease phobia) is described in the DSM-IV-TR as a specific phobia and is defined as an unreasonable fear of contracting a disease. Core features include distress, apprehension, and avoidance of situations that are perceived to lead to the feared illness. Whereas illness phobia involves fear of *developing* a disease (through means other than contamination as in obsessive-compulsive disorder, hypochondriasis involves the conviction that the feared disease is *already present*. Moreover, whereas hypochondriasis is characterized by somatic complaints, such complaints are not always present in illness phobia. Finally, illness phobia typically involves fears of acutely life-threatening conditions (e.g., choking, heart attack, stroke), whereas the feared health consequences in hypochondriasis are typically long-term and progressive (e.g., slow physical or mental decline).



### 1.5.4 Panic Disorder

Panic disorder is an anxiety disorder in DSM-IV-TR involving recurrent, unexpected panic attacks that involve intense physiological (anxious) arousal (e.g., rapid heart rate, shortness of breath, dizziness, tingling sensations), as well as a subjective sense of doom and fear (e.g., “I’m dying,” “I’m having a heart attack,” etc.) and behavioral avoidance of situations that might trigger an attack (APA, 2000). Many patients with panic disorder attribute these sensations to organic causes (e.g., a heart attack) and may seek excessive medical examination, avoid sources of bodily stress (e.g., strenuous activity), and engage in behaviors that lead them to feel safe from panic or a medical emergency (e.g., keeping medication or a cell phone on-hand at all times).

Although many people with hypochondriasis also have panic attacks, patients with panic disorder experience a sense of doom during panic attacks that involves fears of *immediate* and life-threatening physical catastrophe (e.g., a heart attack, aneurysm). In hypochondriasis, patients display a more insipid fear of *delayed* or protracted consequences (e.g., “I am slowly dying from lung cancer and no doctor will help me”).

### 1.5.5 Obsessive-Compulsive Disorder

Obsessive-compulsive disorder (OCD), also an anxiety disorder, is characterized by (a) recurrent intrusive senseless thoughts, ideas, or images (obsessions) that provoke anxiety; and (b) efforts to resist obsessional anxiety by ritualistically engaging in some other thought or action (compulsive rituals; APA, 2000). Common obsessions include fears of making mistakes, unwanted sexual, violent or sacrilegious images, ideas of causing harm or bad luck, thoughts that objects are not arranged “just right,” and thoughts of contamination and illnesses. Common compulsive rituals include washing and cleaning, checking, repeating routine behaviors (e.g., repeatedly turning off the light switch), re-ordering, counting, seeking reassurance, and mentally replacing unacceptable thoughts with “good” or “safe” thoughts.

Some authors have likened the persistent preoccupation with illness in hypochondriasis and other forms of health anxiety to obsessions in OCD, whereas the repetitive reassurance-seeking and checking with doctors are compulsive rituals (e.g., Fallon, Javitch, Hollander, & Liebowitz, 1991). While individuals with OCD tend to show multiple types of obsessions and compulsions, some of which may be concerned with health and illness, patients with hypochondriasis tend to be singly “obsessed” with health/illness-related concerns.

### 1.5.6 Generalized Anxiety Disorder

Persistent and uncontrollable doubt and worry, which are main features of generalized anxiety disorder (GAD), are also present in health anxiety. Individuals with GAD worry excessively about numerous mundane circumstances (e.g., relationships, work or school, finances, their own and others’ health, and world affairs; APA, 2000). However, health-related worries in GAD are less

frequent and less intrusive than those observed in hypochondriasis and health anxiety. Additionally, people with GAD report fewer somatic symptoms and fewer misinterpretations of specific bodily sensations relative to those with hypochondriasis.

### 1.5.7 Pain Disorder

The predominant feature of pain disorder, which is classified in the DSM-IV-TR (APA, 2000) as a somatoform disorder, is the perception of severe pain at one or more anatomic sites. The pain may or may not occur along with a medical condition, but it is not explained by organic factors and is reported as more severe than would typically be observed in patients with a medical condition. Individuals with health anxiety may report excessive pain, but they tend to persevere on their fear that the symptoms are indicative of a serious medical illness.

## 1.6 Comorbidity

Comorbidity with other Axis I disorders is common. The most frequently co-occurring diagnoses are anxiety disorders, such as panic disorder and GAD. Unipolar mood disorders (e.g., depression and dysthymia) are also common. Estimates of the number of patients with comorbid conditions vary widely (e.g., from 20% to 70%).

Personality disorders (PDs) and personality traits characteristic of the anxious cluster (Cluster C; e.g., dependent), dramatic, emotional and erratic cluster (Cluster B; e.g., histrionic) and less often, the odd and eccentric cluster (Cluster A; schizotypal) may also co-occur with health anxiety and hypochondriasis. Prevalence rates vary widely from study to study.

**Many people with health anxiety also suffer from other Axis I and Axis II psychological disorders**

## 1.7 Diagnostic Procedures and Documentation

This section reviews empirically established, structured and semi-structured diagnostic interviews, self-report measures, and methods for documenting symptom changes during a course of psychological treatment.

### 1.7.1 Structured Diagnostic Interviews

Two anxiety-focused structured interviews can be used to assess health anxiety symptoms: the **Anxiety Disorders Interview Schedule for DSM-IV** (ADIS; Brown, DiNardo, & Barlow, 1994) and the **Structured Diagnostic Interview for Hypochondriasis** (SDI-H; Barsky et al., 1992). The ADIS is available from Oxford University Press and the SDI-H can be found in Barsky and colleagues (1992). Additional structured interviews include the

**Structured Clinical Interview for DSM-IV-TR (SCID-IV;** First, Spitzer, Gibbon, & Williams, 1996) and the **Mini International Neuropsychiatric Interview (MINI;** Sheehan et al., 1998). The SCID-IV is available at [www.scid4.org](http://www.scid4.org), and the MINI is available at no cost from [https://www.medical-outcomes.com/HTMLFiles/MINI/MINI\\_Registration.htm](https://www.medical-outcomes.com/HTMLFiles/MINI/MINI_Registration.htm). The MINI is preferable to the SCID due to its brevity and excellent reliability and validity. A limitation of some of these interviews, however, is that they do not contain a sufficient number of items assessing somatoform disorders. Thus, these tools may be best suited for ruling out co-occurring anxiety and mood disorders.

### 1.7.2 Semi-Structured Symptom Interviews

**The Y-BOCS can be used to measure health anxiety symptoms**

Although developed to measure OCD symptom severity, the Yale-Brown Obsessive Compulsive Scale (Y-BOCS; Goodman, Price, Rasmussen, Mazure, Delgado, et al., 1989; Goodman, Price, Rasmussen, Mazure, Fleischmann, et al., 1989) is a semi-structured interview that can also serve as a measure of health anxiety severity. The Y-BOCS includes 10 items to assess the following five parameters of obsessions (items 1-5) and compulsions (items 6-10): (a) time, (b) interference, (c) distress, (d) efforts to resist, and (e) perceived control. Each item is rated on a scale from 0-4 and the item scores are summed to produce a total score ranging from 0 (no symptoms) to 40 (extreme). When used to assess health anxiety, preoccupation with illness is scored on the obsessions subscale. Behaviors such as checking, reassurance-seeking, and consulting with doctors are scored on the compulsions subscale. Scores on each of the 10 items are summed to produce a total score ranging from 0 to 40. In most instances, scores of 0 to 7 represent subclinical symptoms, those from 8 to 15 represent mild symptoms, scores of 16 to 23 relate to moderate symptoms, scores from 24 to 31 suggest severe symptoms, and scores of 32 to 40 imply extreme symptoms. Our adapted version of this measure appears in Appendix A of our comprehensive text on the treatment of health anxiety (Abramowitz & Braddock, 2008). The reliability and validity of the Y-BOCS when used in this way, however, has not been formerly examined. As a measure of OCD, it is reliable, valid, and sensitive to the effects of treatment (Goodman, Price, Rasmussen, Mazure, Delgado, et al., 1989; Goodman, Price, Rasmussen, Mazure, Fleischmann, et al., 1989).

**The BABS – a measure of insight in health anxiety**

The **Brown Assessment of Beliefs Scale (BABS;** Eisen et al., 1998) is a brief, (7 items) continuous measure of insight into the senselessness of strongly held beliefs (e.g., beliefs about the presence of a serious illness), which has good reliability, validity, and sensitivity to change. Administration begins with the interviewer and patient identifying one or two of the patient's specific illness beliefs that have been of significant concern over the past week. Examples include, "My heart is weak and is likely to fail" and "The floaters in my eye indicate that I have a serious medical condition." Next, individual items assess the patient's (a) conviction in this belief, (b) perceptions of how others view this belief, (c) explanation for why others hold a different view, (d) willingness to challenge the belief, (e) attempts to disprove the belief, (f) insight into the senselessness of the belief, and (g) ideas/delusions of refer-

ence. Only the first six items are summed to produce a total score. The BABS is included in Appendix B of Abramowitz and Braddock (2008).

### 1.7.3 Self-Report Inventories

The **Short Health Anxiety Inventory** (SHAI; Salkovskis, Rimes, Warwick, & Clark, 2002) is an 18-item questionnaire that assesses health anxiety independent of physical health status. For each item the respondent chooses from a series of four statements (ranging in severity from 0 [least severe] to 3 [most severe]) that best reflects his or her feelings over the past several months. Items address the following aspects of health anxiety: worry about health, awareness of bodily sensations and changes, and feared consequences of having an illness. The SHAI contains two factors: (a) the feared likelihood of becoming ill and (b) the feared negative consequences of becoming ill. The measure has good reliability and validity in clinical and nonclinical samples and can also be used to assess health anxiety within other psychological disorders (e.g., anxiety disorders). The full SHAI is reprinted in an article by Salkovskis and colleagues (2002).

The **Illness Attitudes Scale** (IAS; Kellner, 1986; 1987) is a 29-item questionnaire that measures (a) fear of illness/disease/pain/death, (b) symptoms' interference with lifestyle, (c) treatment experience, and (d) disease conviction (Hadjistavropoulos, Frombach, & Asmundson, 1999). Respondents are asked how often a list of thoughts and behaviors occur, with responses ranging from "never" to "most of the time". Overall, the measure has good reliability and validity. This scale is reproduced in Kellner (1987).

The **Cognitions about Body and Health Questionnaire** (CBHQ; Rief, Hiller, & Margraf, 1998) is a 31-item measure developed to help differentiate individuals with severe health anxiety from those with somatization disorder. It measures catastrophic interpretations of (a) bodily complaints, (b) autonomic sensations, (c) bodily weakness, (d) bodily complaints, and (e) health habits. Items assess agreement with catastrophic interpretations of bodily complaints and are rated on a 4-point scale ranging from "completely wrong" to "completely right." Overall, the psychometric properties of the CBHQ are adequate. The CBHQ is reprinted in an article by Rief and colleagues (1998).

Self-report inventories are used to gather additional severity data

The SHAI – a brief screening measure of health anxiety severity

The CBHQ – a measure of the cognitive basis of health anxiety

### 1.7.4 Documenting Changes in Symptom Levels

Continual assessment of health anxiety and related symptoms throughout the course of psychological treatment assists the clinician in evaluating treatment response. It is not enough to simply assume that "he seems to be less preoccupied," or "it looks like she has cut down on her reassurance-seeking," or even for the patient to report that he or she "feels better." Periodic re-assessment, using the aforementioned diagnostic tools and comparison with baseline symptom levels, should be conducted to objectively clarify whether and in which ways treatment has been helpful, and to identify problems that may require further treatment.

Assessing health anxiety throughout a course of treatment

## Theories and Models of Health Anxiety

**The biopsychosocial model of health anxiety**

This chapter outlines a well-studied **biopsychosocial theory** of the development and maintenance of health anxiety. The treatment implications of this model are also discussed.

### 2.1 Development of Health Anxiety

**How does one develop problems with severe health anxiety?**

According to the biopsychosocial model, health anxiety arises from normal physiological, psychological, and environmental processes. When people acquire certain maladaptive beliefs about health and illness, they begin routinely misinterpreting benign bodily sensations as indicative of serious illness.

#### 2.1.1 The Human Body Is “Noisy”

**We all have “noisy bodies”**

The biopsychosocial model of health anxiety begins with the reality that the human body is ever-changing, that it is receptive and responsive to a myriad of external and internal stimuli, and that it has many interrelated systems that constantly influence one another. We may occasionally notice this “body noise,” especially if we “listen” carefully enough (e.g., stomach grumbling, a “pulled” muscle). People with health anxiety, however, habitually listen to their bodies and therefore become exquisitely sensitive to even very subtle bodily variations that most people would ignore or not even detect. It is this hypervigilance to the near steady stream of more or less benign body cues and sensations that sets the stage for health anxiety. Table 4 lists common sources of benign bodily sensations, perturbations, and variations that are frequently misinterpreted as signs of serious illness.

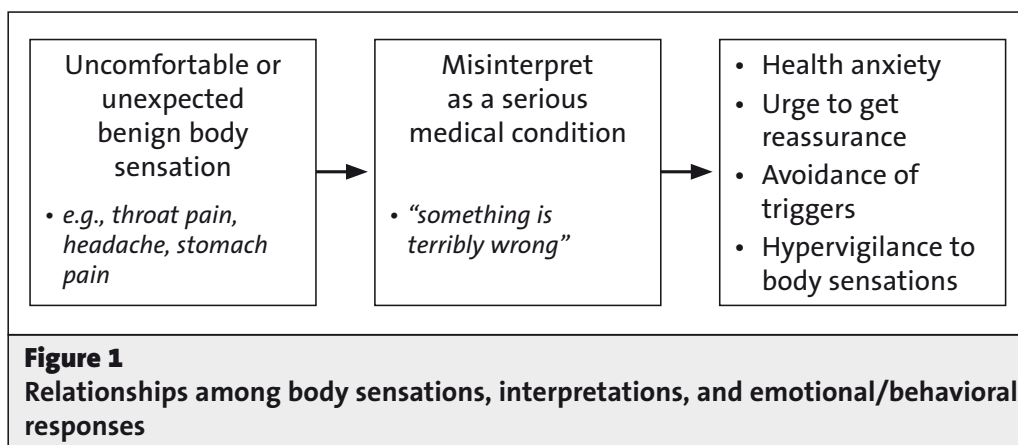
#### 2.1.2 Beliefs and Interpretations Lead to Health Anxiety

**How we interpret body sensations determines how health anxious we become**

Following from Beck’s (1976) cognitive model of emotion, health anxiety results when benign bodily sensations are *misinterpreted* as signs that a serious medical condition is present (e.g., “This pain in my groin means I have prostate cancer”). Once this happens, the innocuous bodily sensations (e.g., body noise) become the target of preoccupation (hypervigilance), and the person tries to avoid or reduce the perceived threat. This sequence is depicted in Figure 1.

**Table 4**  
Sources of Benign Bodily Sensations and Cues

Source	Description
Homeostasis (the body's self-regulatory processes)	Different systems are activated and deactivated depending upon the body's needs. For example, the body must maintain a near constant temperature and oxygen level. Thus, healthy people invariably experience normal fluctuations in their heart rate, breathing rate, muscle tension, sweat gland activity, etc.
Diet	Changes in diet may cause odorous or discolored urine, changes in stool texture, and gastrointestinal discomfort, bloating, and mild hypoglycemia, which can cause sweating, tachycardia, and faintness.
Emotional and physiological arousal	Emotions such as anxiety, fear, worry, elation, excitement and anger are all accompanied by activation of the body's sympathetic nervous system and the release of adrenaline. This produces uncomfortable but benign body changes such as increased heart rate, breathing, muscle tension, pupil dilation, sweating, salivation, nausea, urinary urgency, dizziness, among other sensations. Moreover, physiologic arousal may lead to exhaustion and fatigue, blurred vision, numbness and tingling, feelings of choking or smothering, pain, trembling and twitching, hot or cold flashes, and dry mouth.
Benign medical conditions	Many benign or minor medical conditions can produce vague and diffuse bodily sensations. Examples include aerophagia, rumination syndrome, irritable bowel syndrome, postural, orthostatic tachycardia syndrome, vertigo, floaters, lipomas, hives, urticaria, nonepileptic seizures, and vasovagal syncope.



Why do some people misappraise benign bodily sensations as threatening whereas others do not? Such misinterpretations result from dysfunctional core beliefs such as those summarized in Table 5.

**Table 5**  
**Domains of Dysfunctional Beliefs in Health Anxiety**

Core belief	Description
Overestimates of threat	Beliefs that illnesses are more common, more easily transmitted, and more serious than they actually are
Anxiety sensitivity	Beliefs that the physical sensations associated with anxious arousal are dangerous
Intolerance of uncertainty	Belief that it is necessary (and possible) to be 100% certain that negative outcomes will not occur
Rigid health beliefs	Beliefs that being healthy requires being 100% symptom free and that all bodily signs and symptoms have a medical explanation
Maladaptive beliefs about general health	Belief that one is sick or especially susceptible to medical ailments
Distrust of medicine	Beliefs that physicians and medical tests are incompetent and invalid
Beliefs about death	Beliefs involving the assumption that consciousness endures after death

### 2.1.3 Origins of Dysfunctional Core Beliefs

**Where do dysfunctional beliefs about body sensations come from?**

Why do some people hold maladaptive, dysfunctional beliefs about health, illness, death, and medicine, such as those described in Table 5? Certain types of stressful or traumatic events, such as suffering from an illness or even watching a relative suffer, can lead a person to overestimate health risks. Many people with severe health anxiety report having had one or more bona fide medical problems in their past. Dysfunctional health-relevant beliefs might also be shaped by observing loved ones and authority figures deal with illnesses. Children, for example, learn attitudes about health and illness by watching their parents manage these situations. Overreactions to minor injuries, excessive use of healthcare, and frequent complaining could also convey to a child that *any* type of pain or injury is a *serious* problem that must not be ignored. Finally, health-related beliefs and attitudes may be transmitted directly through authority figures or via the media. Extensive media coverage of illnesses such as the H1N1 influenza epidemic in 2009, can also lead to overestimation of the probability, severity, and consequences of such conditions.

**Why does health anxiety persist even if the person is medically healthy?**

## 2.2 Maintenance of Health Anxiety

If clinical health anxiety develops from *mistaken* beliefs and *misinterpretations* of non-dangerous body sensations, why does it persist? Why don't people with this problem listen to their doctors, correct their flawed beliefs, and change their maladaptive behavior? Why do people with clinical health