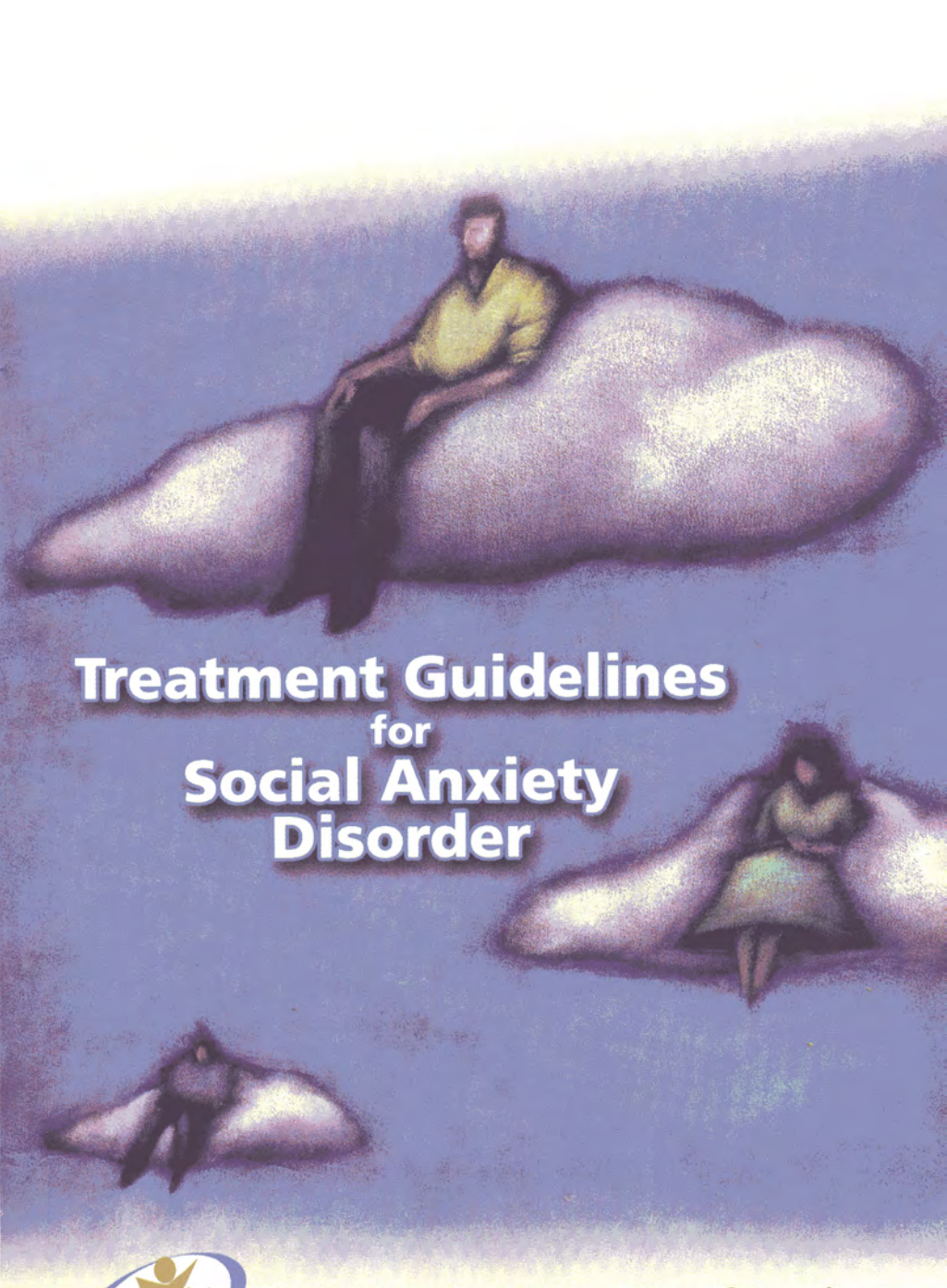

Treatment Guidelines for Social Anxiety Disorder

Anxiety Disorders Association of Canada
Association Canadienne des Troubles Anxieux

ADAC/ACTA

P.O. Box 461, Station D, Scarborough, Ontario M1R 5B8

December 2003

Anxiety Disorders Association of Canada (ADAC) l'Association canadienne des Troubles Anxieux (ACTA) is a registered charity and non-profit corporation which was founded in August 2001, through an initiative of four Provincial anxiety associations, including: Anxiety Disorders Association of British Columbia (ADABC), Anxiety Disorders Association of Manitoba (ADAM) Anxiety Disorders Association of Ontario (ADAO) and l'Association des Troubles Anxieux du Québec (ATAQ).

Our mission statement includes the following points:

- Encourage research to expand our understanding of the causes of anxiety disorders/conditions.
- Advocate for improved access to treatment and support for those who are experiencing significant distress and disability due to anxiety disorders/conditions.
- Promote the role of consumers in making informed choices among empirically validated treatments.
- Encourage consumer and family involvement in self-help mutual support, educational and advocacy activities
  - Improve the education resources available to consumers, health services and policy makers.
  - Broaden collaboration among consumers, families, health service providers, community groups, researchers and governments.
- Encourage the development of effective approaches to the prevention of anxiety disorders.
- Promote the sharing of expertise and resources across Canada and internationally.

The ADAC/ACTA held its first Canadian Anxiety Disorders Conference, on March 30th and 31st, 2003, in Toronto, entitled: **Getting help to those who need it: planning for the big picture.** This meeting was held in conjunction with the Anxiety Disorders Association of America (ADAA), and in the opinion of participants it was a vibrant success.

We are proud to mention our founding partners, **GlaxoSmithKline and Wyeth Canada.** Additional sponsors were, Astra Zeneca Canada, Janssen-Ortho, Lundbeck Canada and Organon Canada.

The current guidelines are the first of a proposed series of documents aimed at increasing the awareness of and treatments for anxiety disorders, and their common comorbid conditions, depression and substance abuse disorders. Our target audience includes clinicians, namely primary care physicians and psychologists, social workers, nurses, other mental health counselors.

Financial support for these guidelines was generously provided as an unrestricted educational grant by Wyeth Canada.

Additional copies may be obtained by calling 1-888-223-2252. ADAC/ACTA can be reached at the following address ADAC/ACTA, P.O. Box 461, Station D, Scarborough, ON, M1R 5B8; Telephone 1-888- 223-2252 or at our web site: www.anxietydisorder.ca.

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PATIENT PROFILE #1

The day was finally coming to an end for Sandy. Sandy knew she held her job by a thread. Perhaps it was her inability to suggest new ways to challenge her company's competition. She felt it was silly that she could not express her ideas, because she had many of them (she had been at the same company in the same entry level position for 12 years) but she was always unsure of whether to speak up. In fact, recently her boss suggested that her inability to move up in the company might mean that this job was not right for her. The thought of that made her ill. If she lost her job she feared she would starve. She could not go out looking for jobs, as she felt anxious and ill just imagining the job interview. Ironically, this job was far too easy, completely unchallenging and far below what she felt she could do.

This could have been the story of her life, in part, because in almost every situation in her life, Sandy was living at a level that was far below her potential. Teachers in school said she could do better. She wrote well they told her, but she often did not hand in assignments or handed them in unfinished for fear that they would not be perfect. Her fears of not being perfect made her delay, and procrastinate about almost everything, yet this was somehow comforting because at least it was an excuse for imperfect work.

Sandy was too nervous to date, and so she stayed alone. She had dated before, but it was always with men who chose her. When she did begin a relationship, she always stuck around even if he treated her poorly. Yet on the occasions she dated, usually when the loneliness got overwhelming, she needed something (usually a few drinks) to get up the nerve. Often that left her drunk and vulnerable.

PREFACE

It is with great excitement and pride that we present this, the first in a series of guidelines for various mental health problems, "Treatment Guidelines for Social Anxiety Disorder." These guidelines for social anxiety disorder (otherwise known as social phobia) were developed to address what we believe to be a serious need in the community for a set of clear and concise guidelines to improve the understanding of the epidemiology, pathophysiology, psychobiology, diagnosis, and treatment options in the management of this very serious but poorly treated illness.

Although one of the more common mental illnesses, social anxiety disorder is one of the least often recognized and treated mental disorders at all levels of care, with less than 4-6% of patients having sought or received treatment.[1-4] The prevalence of social anxiety disorder varies widely in differing populations, and when using differing criteria, but all reveal social anxiety disorder to be a highly prevalent disorder. Canadian data from the Ontario Health Survey found that social phobia was the most common form of mental illness, with a one-year prevalence of 5.4% in men and 7.9% in women.[5] The large-scale National Comorbidity Survey in the US reported a lifetime prevalence of 13.3% and a 12-month prevalence of 7.8%.[6] Females are more likely than males to meet diagnostic criteria,[6] with some studies suggesting a female to male ratio as high as 2.5 to 1.[7] There are, however, cultural variations in these data. In children and adolescents, the prevalence of social phobia has been approximated to be 0.9 to1.1%.[8]

The nature of social anxiety disorder itself may be, ironically, one of the greatest barriers to initiating treatment. The fear of negative evaluation by a doctor, the stigma of mental illness, coupled with a lack of widespread knowledge about the nature and treatability of the disorder lead to a huge number of untreated sufferers. It has been estimated that only 4-5% of individuals with social anxiety disorder seek help, and that 2.4 million individuals in the U.S. are untreated.[9] Even when individuals with social anxiety disorder reluctantly present to a primary care setting, the diagnosis is made in only one quarter of individuals suffering from the disorder.[10] Lack of treatment seeking and detection is particularly unfortunate given that highly effective treatments have been developed for social anxiety disorder over the past two decades.

With the onset of social anxiety disorder being predominantly in childhood (mean age of onset between 13 and 20 years),[2,4,11-13] with some reports of onset even earlier, (21% of sufferers reported onset between 0 and 5 years[2]), we are left with a large undiagnosed, untreated population with enormous costs to our society. In fact, in Canada, social anxiety disorder affects 750,000 individuals aged 15 and over, and in 1998, Health Canada estimated that psychiatric disorders were the third highest source of direct health care costs at $4.7 billion.[14] The annual economic impact (including direct and indirect costs) of anxiety in general has been estimated to be in the range of $42 billion in the

US in 1990[15] and $65 billion in 1994.[16] The latter figure includes cost of physicians, hospitalizations, morbidity, mortality and other related costs such as social welfare administration. Moreover, delays in treatment seeking of eight years or more, have been documented for anxiety.[17]

The challenge is therefore to identify at an early age, people who are at an increased risk for developing social anxiety disorder (and the other anxiety disorders) in order that they may be provided with opportunities for treatment. This could facilitate the initiation of measures aimed at potentially preventing the development of an anxiety disorder. For example, recent investigation of factors influencing the development of social anxiety disorder, has suggested that the temperamental construct of behavioural inhibition[18] may be an early identifiable risk factor for anxiety disorders and therefore useful for identifying and intervening with children at risk.

It is with the goal of enhancing our nation's clinical skills and perhaps facilitating the prevention of social anxiety disorder, that these guidelines were developed, and in fact why the ADAC-ACTA was created. The Anxiety Disorders Association of Canada (ADAC) l'Association Canadienne des Troubles Anxieux (ACTA) is a non-profit corporation and is a registered charity, which was founded in August 2001. It's mission is to encourage research, advocate for improved treatment access, support consumers in making informed choices among empirically validated treatments, improve the education resources available to consumers, health services, and policy makers, and broaden collaboration among consumers, families, health service providers, community groups and researchers.

We would like to specifically acknowledge the leadership of many of our colleagues who have contributed to the following sections: epidemiology (Dr. Pratap Chokka), patient profiles (Dr. Denis Audet, Dr. Diane McIntosh), neuro-psycho-biological causes (Dr. Pierre Bleau) the burden of disease in Canada (Dr. P. McLean, Dr. John Walker, Dr. Martin Katzman), diagnosis, assessment and measures (Dr. Richard Swinson), comorbidity (Dr. David Bakish), treatment options (pharmacotherapy – Dr. Kevin Kjernisted, Dr. Martin Katzman; alternative medicine – Dr. Alan Logan, Dr. Martin Katzman; cognitive behavioural therapy – Dr. Steven Taylor; treatment in children – Dr. Lyse Turgeon).

We hope that you the reader will find these guidelines useful.

The Editorial Board

Martin A. Katzman, MD, FRCPC (Psychiatrist)
Henny A. Westra, PhD (Psychologist)
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PATIENT PROFILE #2

Lydia is a 22-year-old PhD student anxiously preparing for her thesis presentation. She states, "I'm seriously thinking of leaving the program but I've worked so hard I feel like it would be a huge waste." She reported having enormous struggles over the last year working with her thesis supervisor. She said she feels he is frustrated with her, and this has led her to feel he is unsupportive and critical.

Lydia has always found presentations difficult, and when the work is her own research she feels even more uncomfortable. She greatly fears others will find her work "frivolous" or "useless" and she feels "like a fraud about to be exposed." Lydia reported she has always excelled in her written work, but in groups she tends to work in the background and allow others to take the presentation part of the project for fear of appearing incompetent.

Lydia reported experiencing a number of physical symptoms when she speaks to her supervisor, including profuse perspiration, shaking, and at times even feeling faint. She has burst into tears twice and finds it hard to stop feeling that the relationship is beyond repair because she's made a fool of herself.

EPIDEMIOLOGY OF SOCIAL ANXIETY DISORDER

Over the past 20 years, several epidemiological surveys have established a much clearer understanding of the prevalence, incidence, developmental pattern, severity, and comorbid disorders associated with social anxiety disorder. Advances in our understanding of the neurobiological and psychosocial correlates and developmental influences, have clearly entrenched social anxiety disorder as a common and disabling medical condition. Although, apprehension and the fear of being the center of attention in social situations is very common; most people report some discomfort with at least one social situation, and a majority of people believe that they are more nervous than others.[1] When the resulting distress and anxiety cause an elevated level of functional impairment and disability a diagnosis of social anxiety disorder should be considered.[2] Although one of the most common, social anxiety disorder is one of the least often recognized and treated mental disorders at all levels of care.[3] Two large community surveys, the National Comorbidity Study (NCS) and the Epidemiological Catchment Area (ECA) study found that only 4-6% of patients had sought or received treatment.[4-6]

Prevalence of social anxiety disorder

- Most prevalent anxiety disorder[7]
- 3rd most common psychiatric disorder after depression and alcohol abuse[7]
- Lifetime prevalence of 7%-15%[7-9] in community samples are similar to primary care studies done in the United States,[10] France[11] and Hungary[12]
- Although more common in women than men (ratio of ~3:2), men tend to seek treatment at higher rates[1,4,6-8,13]
- Prevalence varies by setting, cultural differences and diagnostic thresholds used in surveys[14]

Age of onset

- Social anxiety disorder is a disorder of childhood and adolescence with a mean age of onset between 13 and 20 years. The highest risk period occurs from ages 11-15[4,6,13,15,16]
  - Can occur very early in life, 21% reported onset between 0 and 5 years[4]
- Onset after age 25 is rare[4,6,13,15]
  - In a Canadian study of people with public-speaking fears, 50% had onset by age 13 and 90% by age 19[17]
- Temperamental factors such as shyness or behavioural inhibition in childhood may be risk factors for social anxiety disorder in later life.[18]

Natural history

- Untreated, social anxiety disorder is generally chronic with periods of exacerbation[16,19]

- Mean duration of approximately 20 years[16,19]
- The Early Development Stages of Psychopathology Study (EDPS), a large 5 year prospective, longitudinal community study of 3021 cases showed that most individuals with social anxiety disorder will have a waxing and waning course with very few spontaneous remissions, frequent disability, reduced quality of life, and high rates of comorbidity over time.[20]

Patient characteristics

Less well educated	More than half did not complete high school[4]
Lower socioeconomic status socioeconomically[4]	Over 70% were in the lowest [2] quartiles 22% received welfare[4] More work absenteeism[10]
Unmarried	1.5 times more likely to be separated or divorced[6] Twice as likely to have never married[6]
Greater functional impairment	More functional impairment in relation to work, family/home, and social situations[10]
Poor health and physical functioning	More likely to consult with primary care providers about various complaints[8,10,21] Increased suicidal ideation[8]
High rate of comorbid conditions	Major depressive disorder (33-58%)[8,10] Generalized anxiety disorder (27-31%)[8,10] Substance abuse disorders (~25%)[8,10]

Risk factors

Although the exact pathogenic mechanisms are unknown, several studies have demonstrated that social anxiety disorder runs in families with both familial genetic and environmental contributions. Twin studies in females suggest concordance of 24.4% between dizygotic twins.[22] Evidence also exists for familial aggregation and an inherited propensity toward anxiousness. Other sources of familial aggregation are attributed to child rearing style, restricted exposure to social situations within the family, and parental modeling.[23]

"There is clear evidence that adverse experiences during the childhood and adolescent years increase the risk of social anxiety disorder."[24,25]

Cultural concerns

- Consider cultural context when assessing patients for social anxiety disorder
- Probe for cultural factors that may impact a patient's avoidance of social situations

Indicators of good prognosis include higher level of education, later age at onset (after 11 years) and a lack of comorbid diagnoses.[13]

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NEURO-PSYCHO-BIOLOGY OF SOCIAL ANXIETY DISORDER

Social anxiety disorder represents a phenotype of shyness. Many causes may lead to the expression of this phenotype and a number of mechanisms are thought to be involved in the development of the disorder. These include irregularities in neurotransmitter systems, genetics, environment, and psychobiological factors. Whether those factors can produce the syndrome alone, or are integrated, remains to be seen.

Temperamental Factors

Multiple theories have arisen to understand the interplay between the various genetic, psychobiologic, psychological and social factors. While there have been a number of constructs to understand the temperamental risks to develop serious anxiety disorders,[1,2] the best understood has been Kagan's concept of behavioural inhibition.[2] In fact, the temperamental construct of behavioural inhibition has been shown by Kagan,[2] and others,[3-11] to potentially be an early identifiable risk factor for the development of an anxiety disorder and specifically social anxiety disorder.[3]

Children with behavioural inhibition are also likely to have parents with higher risks of related psychopathology.[8] Biederman et al.[3] reported that behavioural inhibition in young children (aged 2 to 6 years) of parents with panic disorder or major depressive disorder (MDD) was associated with an increased risk of developing social anxiety disorder. The role of behavioural inhibition in the development of social anxiety disorder was supported by Hayward et al.[9] who in a 4-year prospective study of high school students (grades 9 through 12), found 22.3% of subjects with social avoidance and fearfulness developed social anxiety disorder, a risk more than 4 times greater than that for subjects without either feature of behavioural inhibition. Similar linkages between behavioural inhibition and the social anxiety have been reported in other studies[7,10]

Neurobiology of social anxiety disorder

The amygdala and orbitomedial prefrontal cortex (OMPFC) are involved in assigning emotional value to stimuli.[12] These can be positive or negative reinforcers, such as food or pain.[13] In addition, the amygdala and OMPFC can learn links between primary reinforcers and associated stimuli, which become secondary reinforcers. Many reinforcers are complex, such as the faces of loved ones. Both systems have projections to multiple brain systems that produce the physical, cognitive, and behavioural components of an emotional response.[12] Lesions of the amygdala have been associated with a loss of social fear and the ability to make negative social judgments.[14] Lesions of the OMPFC have been associated with an inability to read facial signs of emotion in others and to respond appropriately, thereby preserving social behaviours with negative consequences.[15,16]

Behavioural inhibition has been associated with elevated amygdala reacti-

vity.[5,17,18] The growth of social judgment and confidence in children is thought to involve the development of prefrontal and cortical control.[12] If the amygdala is overactive, sufficient inhibitory control may take longer to develop, and may lead to negative bias against social encounters. Social learning may also be affected by problems with attention or with synaptic mechanisms of learning.[19,20]

Memory is also involved in determining how we view our place in the world, and providing attentive and flexible learning systems to adapt and change as needed.[12] Unexpected situations activate the OMPFC and the amygdala, which determine their emotional significance. The OMPFC and the amygdala have projections to the acetylcholine, norepinephrine, and dopamine systems.[21] These cognitive neurotransmitters project back to the prefrontal cortex to increase attention and enhance working memory, and to the hippocampus to strengthen the early consolidation of memory.[22,23] Projections from the amygdala also motivate avoidance responses, which could become habitual and be positively reinforced by the reduction of anxiety. The activation of neurotransmitters that strengthen hippocampal encoding of memories would repeatedly ensure that the negative aspects of social encounters become registered by the hippocampus, increasing the likelihood of subsequent consolidation into long-term memory. In addition, the individual's genetics and environment may play a modulating role on the various aspects of the anxiety system.

The symptoms of social anxiety disorder may reflect, for example, disturbances of various neurotransmitter systems including the serotonergic, noradrenergic, dopaminergic, corticotropin-releasing factor, and g-aminobutyric acid (GABA) systems.[24] These systems influence the focus and intensity of attention. During social anxiety, patients focus on bodily symptoms that arise from autonomic arousal, like jitteriness, and on emotionally relevant external stimuli, like critical facial expressions. Intense fear-related activation of these neurotransmitters might mediate excessively focused attention.[12] In addition, although moderate activation of these transmitters can improve working memory, their over activation by social anxiety impairs it.[12]

Serotonin

Increased serotonin is associated with dominant social status and affiliated behaviour in animal models.[25] When hierarchical relationships are uncertain, serotonergic mechanisms may mediate the behaviours that permit a male to attain high dominance status. Similarly, it has been shown in humans that an increase of serotonin was associated with dominant social status and affiliate behaviour, while a decrease of serotonin was linked with subordinate status.[26] This may have parallels in human social anxiety.

Norepinephrine

Norepinephrine appears to modulate serotonergic and dopaminergic

release and arousal. Projections from noradrenergic neurons to the prefrontal cortex and the hippocampus may play a particularly important role in the symptoms of depression, but the noradrenergic system has also been implicated in the pathophysiology of anxiety.[27] Norepinephrine release is associated with orienting to novel stimuli, selective attention, vigilance, and autonomic arousal.

Dopamine

The dopaminergic system modulates approach behaviour, and dopaminergic dysfunction may be related to social anxiety disorder. Compared to case matched control subjects, patients with social anxiety disorder had markedly lower striatal dopamine-reuptake site densities.[28] Mean dopamine (D_2) receptor binding potential was significantly lower in the patients with generalized social anxiety disorder who were not receiving medication compared to control.[29]

Corticotropin-releasing factor (CRF)

Corticotropin-releasing factor (CRF) is produced by the hypothalamus in response to stress and activates the release of adrenocorticotropic hormone (ACTH) and cortisol. It is also one of the main neurotransmitter used by the amygdala to 'talk' with other structures of the brain. CRF systems in the brain have a unique role in mediating behavioural responses to diverse stressors.[30] These systems may be particularly important in situations where an organism must mobilize both the pituitary adrenal system and the central nervous system in response to environmental challenge.[30]

GABA

The GABAergic system is ubiquitous and represents an inhibitory neurotransmitter system that has diffuse and generalized anxiolytic effects.[31] The ability of alcohol to reduce anxiety and lessen social inhibition is believed to be mediated, at least in part, through GABA neurotransmission.[32] In addition, benzodiazepines, which have shown efficacy in the treatment of social anxiety disorder, facilitate GABA transmission.[33]

Genetic factors

First-degree relatives of patients with social anxiety disorder have a much greater risk of the disorder particularly relatives of patients with generalized social anxiety disorder.[34,35] Twin and adoption studies have supported genetic and environmental explanations of this familial risk.[7,34-39] However, genetic factors explain only a proportion of the risk. One genetically influenced trait that may contribute to both social anxiety and avoidance is behavioural inhibition (wariness, fears, decreased social interaction, and withdrawal in novel situations).[40] The association of social anxiety disorder with autism and fragile X syndrome also suggests a genetic link.[37,38,41,42]

Environmental factors

The early social environment may also be important in the development of social anxiety disorder. Patients with social anxiety disorder more commonly report that their parents are overprotective,[43] and or to suffer parental dysfunction and abuse.[44] Parents with anxiety disorders may be less warm, more controlling, or more critical with their children, and less likely to encourage them to take on challenges.[43] Parents with anxiety disorders tend to be more critical of inhibited children and more critical than nonanxious parents.[45] In long-term follow-up studies, although childhood behavioural inhibition predicted social anxiety disorder, not all inhibited children developed social fears, suggesting that this trait can be modified during upbringing.[7]

Self-image, social perception, and social behaviours are built up during childhood, with children being able to recognize that people have social attitudes by about 5 years of age.[46] Self-consciousness and social embarrassment normally appear for the first time at this age.[47] Inappropriate or exaggerated negative perceptions, may lead the child to believe that others are displeased or threatening, and thus negatively affect the development of self-image. This may lead to extra efforts to avoid criticism and to obtain positive responses, which might contribute to the development of perfectionism. It has been shown that early experiences in life could modify the neuro-architecture of the HPA axis. It could be hypothesized that those changes may lead to anxious prone expressions. For example, separation at an early age seems to produce significant changes of CRF, GABA and cortisol modulation.[48]

Psychological factors

Cognitive theories suggest that in a social situation a person forms an internal representation of the setting and participants. They then generate an image of how they appear to others, which is based on prior knowledge of their general appearance with adjustments for temporary circumstances (i.e., how they are dressed and their mental state).

Patients with social anxiety disorder seem to experience multiple distortions in this process.[12,49]

- Attend much more to their self-perception than to the situation
- Focus strongly on perceived negative aspects of their appearance
- Exaggerate the perceived negative effects of their mental state on their appearance
- Attend selectively to feedback, focus on negative cues and ignore positive ones
- Perceive feedback more negatively than it actually is
- May subtly try to control their appearance or avoid feedback (e.g., avoiding eye contact)

Patients develop schemas – sets of implicit rules underlying behaviour –

that are negatively biased. Schemas include the belief that they will be disliked and be judged as incompetent or stupid if they do not perform to an extremely high standard, or that they are indeed incompetent or stupid. They then relate their perceived performance to the standard they expect of themselves, which is influenced by their schemas. Executive functions may be consumed by patients with social anxiety disorder monitoring their own performance, trying to avoid showing anxiety and trying to perform perfectly and thus prevent them from processing information that counters their negative schemas.[12] Changing schemas, or deeply ingrained behaviour requires the ability to orient to monitor and actively process new information while suppressing conflicting and habitual responses.

To date, there is no single psychobiological paradigm to explain all the changes that occur in social anxiety disorder. Social anxiety disorder represents a heterogeneous syndrome, and new technologies will increase our understanding of the many biological and psychosocial facets of this syndrome.

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BURDEN OF SOCIAL ANXIETY DISORDER IN CANADA

In Canada, social anxiety disorder affects 750,000 individuals aged 15 and over.[1] Health Canada estimates that mental disorders were the third highest source of direct health care costs at $4.7 billion in 1998.[1] The annual cost of anxiety disorders in the United States was estimated to be $42.3 billion, or $1542 US per sufferer in 1990.[2] Costs included psychiatric and non-psychiatric treatment, medication, workplace costs, and mortality. The majority of workplace costs (88%) were due to lost productivity rather than absenteeism.[2]

Burden of social anxiety disorder

- Social anxiety disorder has a substantial impact:[3]
  - Educational underachievement
  - Increased financial dependency
  - Decreased work productivity
  - Social impairment
  - Poorer quality of life
- The young age of onset means that social anxiety disorder typically affects individuals at a time in their lives when social, educational, and career development are of particular importance.[4]
- The presence of comorbid conditions dramatically increases the impairment and disability related to social anxiety disorder [5]
- In the National Comorbidity Survey (NCS) 39% of responders with lifetime social anxiety disorder reported at least one major impairment[6]

Impairments due to lifetime social anxiety disorder in the National Comorbidity Survey (n=8,098)[6]

Impairment Indicator	Non generalized social anxiety disorder, %	Generalized social anxiety disorder, %
Social anxiety disorder interfered a lot with life or activities	13.8*	33.9*
Sought treatment from a medical doctor	12.7*	23.1*
Sought treatment from any other professional	4.5*	15.7*
Took medication more than once	0.8*	9.5*
Any impairment	23.8*	47.7*

**Significant difference between total group with pure speaking fears and total group with other social fears ($p \leq 0.05$).*

Quality of life

- Social anxiety disorder significantly impairs quality of life, especially in social and emotional domains[7-10]
  - Almost 50% of patients with social anxiety disorder have severe or marked impairment versus less than 5% of controls without mental disorders[9]
- Patients with social anxiety disorder often underestimate the impairment they are experiencing when first diagnosed, and family members can play an important role in determining impairment[7]
- Greatest impairment is reported in: [9]
  - Partner and family relationships
  - Education and career development
  - Household or work management

Occupational functioning

Social anxiety disorder has a significant impact on occupational functioning.[9] It may limit occupational choices, career advancement and negatively affect the ability to seek and maintain employment.[11]

- 3 times higher rate of unemployment versus controls without mental disorders (11% versus 3%)
- Reduced productivity[9]
  - 8% reported taking time off due to social anxiety disorder (average 12 hours/week)[9]
  - 23-43% reported significant impairments in work performance[5,9]
  - 12% reduction in work productivity
- More absenteeism
  - Twice as many sick days in the past 90 days versus normal controls (6.9 versus 3.1).[11]
  - 1 out of 5 adolescents reported that social anxiety disorder symptoms prevented them from going to school or work for more than 2 days in the past month[5]

Health care utilization

Although individuals with social anxiety disorder frequently do not seek professional help,[1] they do appear to consult a physician more often than those without mental disorders.[9,12,13] Patients with social anxiety disorder have a poorer view of their own health and physical functioning than normal controls.[14,15]

- In the Epidemiological Catchment Area (ECA) study, individuals with social anxiety disorder had more medical visits over a 6-month period than controls with no psychiatric disorder (mean 3.12 vs. 1.69)[12]

Financial dependency

- ECA data suggests that 22% of individuals with social anxiety disorder received welfare or disability payments versus 11% of those with no mental disorder[12]
- More than 70% of individual with social anxiety disorder were in the lowest 2 quartiles of socioeconomic status[12]

Educational attainment

- In the ECA study individuals with social anxiety disorder had poorer grades, and a higher probability of being expelled from school and running away from home[11,16]
  - More than half of persons with social anxiety disorder do not complete high school[12]
- Generalized social anxiety disorder appears to have greater impact on educational attainment than nongeneralized social anxiety disorder [17]

Marital status

- Social anxiety disorder is associated with an increased risk of marital problems and of never being married.[9]
- Data from the NCS found that individuals with social anxiety disorder were:[18]
  - 1.5 times more likely to be separated or divorced
  - 2 times as likely to never be married

Social anxiety disorder is a chronic, impairing anxiety disorder, and has a long-term negative impact on work performance and social relationships[9]. It is an enormously important condition from a health economic and public health perspective.[9,16,19]

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DIAGNOSIS OF SOCIAL ANXIETY DISORDER

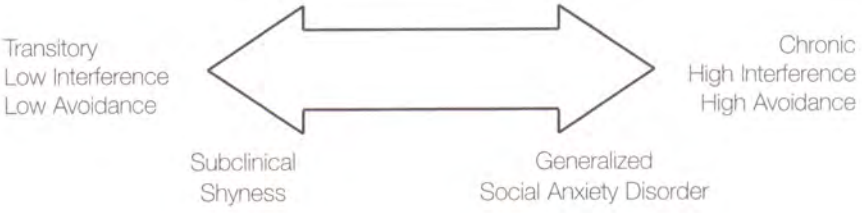
Social anxiety disorder is characterized by excessive fear of scrutiny by others, accompanied by anxiety symptoms such as tremulousness, blushing, palpitations, and diaphoresis.[1] This fear may lead to avoidance of social situations and causes marked distress and interference with the person's daily life.[1]

Social anxiety disorder may represent the severe end of a continuum of shyness[2,3]

Although the dividing line between social anxiety disorder and shyness is not always clear, social anxiety disorder causes marked distress and interferes with relationships and functioning, while shyness is less disruptive.[1] Shyness commonly occurs in childhood and may resolve over time. It does not necessarily lead to the development of social anxiety disorder.

- Differentiation of shyness and generalized social anxiety disorder lies in severity

The spectrum of generalized social discomfort[2]



Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) diagnosis of social anxiety disorder (social phobia)

Key diagnostic features of social anxiety disorder[1]

- Significant and persistent fear of social situations in which embarrassment or humiliation may occur
- Immediate anxiety-driven, physical reactions to feared social situations (situational panic attack, e.g., flushing, sweating, tremulousness)
- Realization that the fear is excessive or unreasonable
- Avoidance of feared situation or endurance with distress
- Avoidance or fear causes social or occupational problems
- Fear or avoidance is not due to another medical or mental disorder

Diagnostic subtypes of social anxiety disorder[1,4,5]

Social anxiety disorder can be generalized or specific, depending on the breadth of social situations feared.

Generalized
• Anxiety precipitated by "most" social situations for example: - Public performances and/or social interactions (with those other than close friends and family), e.g., making conversation, dating, being watched or looked at, attending parties • Most severe form of social anxiety disorder, greater functional impairment than non-generalized (specific) subtype
Non generalized
• Limited to a specific social situation • Usually performance related, e.g., public speaking

Differential diagnosis

Other conditions may present with fears of social situations and differential diagnosis is important for management.[2,4] Differentiating social anxiety disorder from other anxiety disorders is a matter of determining the main focus of the patient's apprehension.

Differential diagnosis for social anxiety disorder[1,4,6]

Condition	Diagnostic features
Normal shyness	No or minimal interference with social, occupational, or family functioning
Panic disorder	Unexpected panic attacks, not limited to socially mediated anxiety
Agoraphobia	Fearful avoidance of situations in which panic attacks may occur, not limited to social situations.
Avoidant personality disorder	Main features overlap extensively with social anxiety disorder. This may be best explained by understanding that avoidant person ality disorder may be more severe form of generalized social anxiety disorder
Generalized anxiety disorder	Focus of worry not limited to embarrassment in social situations. Individual has uncontrolled worries about multiple issues such as work performance, money, health, safety. Their worries are often focused both on their own condition and that of their loved ones.
Major depression or atypical depression	Social withdrawal temporally related to mood disturbance, not to fear of humiliation or embarrassment; atypical depression with rejection sensitivity associated with other symptoms (e.g., increased appetite or weight gain, hypersomnia, leaden paralysis)
Body dysmorphic disorder	Avoidance of social situations limited to a concern over a specific perceived defect in appearance e.g., a mole, size of one's nose or breasts, quality of one's skin
Schizotypal/schizoid personality disorders	Avoidance of social situations is preferred and is not due to fear of embarrassment or humiliation
Posttraumatic stress disorder	Follows traumatic event; Avoidance of situations or people who arouse recollections of event
Comorbid medical conditions	Avoidance of social situation due to potentially embarrassing symptoms (e.g., Parkinson's disease, benign essential tremor, stuttering, obesity, burns, or other disfiguring or socially stigmatizing conditions)

Patient assessment

The symptoms of social anxiety disorder fall into three major categories.[2] When assessing patients for social anxiety disorder consider the following aspects:

Cognitive (what they think)	Negative evaluation of one's own performance and prediction of criticism by others
Physiologic (how they feel)	Symptoms when anticipating or encountering feared social situations: blushing, increased heart rate, "butterflies", trembling
Behavioural (what they do)	Avoidance of social situations where scrutiny would be possible

The Liebowitz Social Anxiety Scale (LSAS) self-rating scale

The clinician administered version of the Liebowitz Social Anxiety Scale (LSAS) is a commonly used assessment device for the evaluation of social anxiety disorder and has been shown to have strong psychometric characteristics.[7] Because of its apparently straightforward rating format and potential savings in time and effort, interest in the use of the LSAS as a self-report measure has increased, and it has been used in a number of studies. Recently, the psychometric properties of the self report version of LSAS were established with little difference found between the two versions of the LSAS on any scale or subscale score.[8,9] In fact recently, it has been suggested as a screening tool in the primary care setting.[10] A total cutoff score for the LSAS of 30 has been suggested for the diagnosis of social anxiety disorder.[10]

The self-report form of the LSAS itself is made up of 24 social anxiety provoking situations, each rated from 0 (none) to 3 (usually) both in terms of their levels of fear or anxiety and how much they avoid it.

Liebowitz Social Anxiety Scale (LSAS-SR)[11]

Fill out the following questionaire with the most suitable answer listed below. Base your answers on your experience in the past week and, if you have completed the scale previously, be as consistent as possible in your perception of the situation described. Be sure to answer all items.

Fear or Anxiety	Avoidance
0 = None	0 = Never (0%)
1 = Mild	1 = Occasionally (1%-33% of the time)
2 = Moderate	2 = Often (34%-66% of the time)
3 = Severe	3 = Usually (67%-100% of the time)

	Fear or Anxiety	Avoidance
1. Telephoning in public - speaking on the telephone in a public place		
2. Participating in small groups - having a discussion with a few others		
3. Eating in public places - do you tremble or feel awkward handling food?		
4. Drinking with others in public places - refers to any beverage including alcohol		
5. Talking to people in authority - for example, a boss or teacher		
6. Acting, performing, or giving a talk in front of an audience - refers to a large audience		
7. Going to a party - an average party to which you may be invited; assume you know some but not all people at the party		
8. Working while being observed - any type of work you might do, including school work or housework		
9. Writing while being observed - for example, signing a check in a bank		
10. Calling someone you don't know very well		
11. Talking with people you don't know very well		
12. Meeting strangers - assume others are of average importance to you		
13. Urinating in a public bathroom - assume that others are sometimes present, as might normally be expected		
14. Entering a room when others are already seated - refers to a small group, and nobody has to move seats for you		
15. Being the center of attention - telling a story to a group of people		
16. Speaking up at a meeting - speaking from your seat in a small meeting, or standing up in place in a large meeting		
17. Taking a written test		
18. Expressing appropriate disagreement or disapproval to people you don't know very well		
19. Looking at people you don't know very well in the eyes - refers to appropriate eye contact		
20. Giving a report to a group - refers to an oral report to a small group		
21. Trying to pick up someone - refers to a single person attempting to initiate a relationship with a stranger		
22. Returning goods to a store where returns are normally accepted		
23. Giving an average party		
24. Resisting a high pressure sales person - avoidance refers to listening to the salesperson for too long		

Scoring social anxiety disorder: 55-65=moderate, 65-80=marked, 80-95=severe, >95=very severe

Social Phobia Inventory (SPIN) self-rating scale

The Social Phobia Inventory (SPIN) self-rating scale is a series of 17 questions that have demonstrated good diagnostic reliability.[12,13] The scale is responsive to change in symptoms over time.[12] The MINI-SPIN, which is made up of the first 3 questions, is a practical screening tool for clinical practice.[14] A score of 19 (6 on the MINI-SPIN) distinguishes with a fairly, high level of accuracy (80%-90%) between people with and without social anxiety disorder.[12-14]

Please choose the answer that best describes how much the following problems have bothered you during the past week.	Not at all 0	A little bit 1	Somewhat 2	Very much 3	Extremely 4
1. Fear of embarrassment causes me to avoid doing things or speaking to people.					
2. I avoid activities in which I am the center of attention					
3. Being embarrassed or looking stupid are among my worse fears					
4. I am afraid of people in authority.					
5. I am bothered by blushing in front of people.					
6. Parties and social events scare me.					
7. I avoid talking to people I don't know.					
8. Being criticized scares me a lot.					
9. Sweating in front of people causes me distress.					
10. I avoid going to parties.					
11. Talking to strangers scares me.					
12. I avoid having to give speeches.					
13. I would do anything to avoid being criticized.					
14. Heart palpitations bother me when I am around people.					
15. I am afraid of doing things when people might be watching.					
16. I avoid speaking to anyone in authority.					
17. Trembling or shaking in front of others is distressing to me.					

Important Observations for the Primary Care Physician

Patients seeking care from the primary care physician rarely do so complaining readily of symptoms related to social anxiety. There is a greater chance that they will ask help for the highly prevalent comorbid conditions such as alcohol abuse, other anxiety disorders, and depression. Screening for social anxiety with these patients is thus highly advisable and could include the SPIN or MINI-SPIN.

In addition to the patient's verbal report, it can be very useful to look for nonverbal cues suggesting the presence of social anxiety such as an uneasy or inhibited manner, poor eye contact, a quiet voice, shakiness, wearing a ball cap to hide one's face, and substantial deference. While not diagnostic in and of themselves, such interpersonal inhibition can often accompany social anxiety and might serve as a cue to be explored further for the presence of social anxiety.

Social anxiety disorder commonly occurs with other conditions, both medical and psychiatric, and this can complicate diagnosis. Taking a careful medical history, probing for early onset of symptoms, and questioning all patients regarding the presence of social fears, will improve rates of recognition.[2,4]

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PATIENT PROFILE #3

At 19 years old, Robert had begun seeking help for an increasingly embarrassing problem for him. In a group situation, he blushed intensely as well as sweating on his forehead and hands. He assumed that these symptoms were readily observable to others. He was very concerned and embarrassed that this reaction was obvious and he believed this would result in further scrutiny and embarrassment. As a result he wondered whether he would be able to attend college, since he would have to make presentations in small groups. He also reported that he is quite concerned about his ability to attend a Christmas celebration with his girlfriend's family. In fact, he noticed being anxious when even thinking about it.

In order to cope, he chose to dampen his symptoms by drinking a few beers before going out with friends or before going to class. Nevertheless, he was aware that he was developing a dependency on alcohol. A prescription for clonazepam, even at a high dose, only reduced his anxiety somewhat, so that he still feels he needs alcohol. The treatment plan was then modified; the benzodiazepine was replaced by cognitive behavioural therapy and an antidepressant.

After treatment, Robert successfully graduated from college. He is currently involved in a satisfying relationship and is successful in his career.

COMORBIDITY AND SOCIAL ANXIETY DISORDER

Comorbid conditions complicate the clinical picture for many individuals with social anxiety disorder. Comorbidity with other psychiatric disorders is much more common than having social anxiety disorder alone[1-3] Both the Epidemiological Catchment Area (ECA) Study and the National Comorbidity Survey (NCS) found that the lifetime rates of psychiatric comorbidity among individuals with social anxiety disorder were extremely high, ranging from 69% to 81%.[2-4] Individuals with social anxiety disorder also had higher rates of chronic medical disorders than those without social anxiety disorder.[5]

- The onset of social anxiety disorder generally precedes the onset of other comorbid conditions[2,3,6,7]
- The incidence of comorbidity was higher in patients with generalized compared to non-generalized social anxiety disorder.[8]
- In the NCS, 81% of individuals with social anxiety disorder have at least one comorbid diagnosis[3]
  - The presence of multiple lifetime comorbid diagnoses is common
  - 19% of individuals had 1 comorbidity
  - 14% of individuals had 2 comorbidities
  - 48% of individuals had 3 or more comorbidities[3]
- The most common comorbid diagnoses are mood disorders, other anxiety disorders, and substance abuse
- Comorbidity is associated with greater functional impairment[3,4]

Lifetime rates of comorbid mood, anxiety, and substance use disorders in individuals with social anxiety disorder in the ECA and NCS studies[2,3]

Comorbid Condition	ECA Rate (%)	Odds ratio	NCS Rate (%)	Odds ratio
Major depression	16.6%	4.41	37.2%	3.65
Dysthymia	12.5%	4.30	14.6%	3.15
Bipolar disorder	4.7%	4.09	5.1%	4.60
Simple phobia	59.0%	9.17	37.6%	7.75
Agoraphobia	44.9%	11.81	23.3%	7.06
Obsessive-compulsive disorder	11.1%	4.36	NR	NR
PTSD	NR	NR	15.8%	2.69
GAD	NR	NR	13.3%	3.77
Panic disorder	4.7%	3.24	10.9%	4.83
Alcohol abuse	18.8%	2.20	23.9%	2.17
Drug abuse	13.0%	2.85	14.8%	2.56
Somatization disorder	1.9%	8.02	NR	NR

Odds ratio is the odds of an event or outcome, >1 increased odds of the event or outcome,<1 decreased odds event or, =1 no effect

High prevalence of comorbid affective disorders

- Surveys show that the odds of having a mood disorder are 2 to 4 times higher for those with social anxiety disorder compared to those without social anxiety disorder.[7]
- Comorbid depression is reported in 17 to 58% of patients with social anxiety disorder[1-3,7]
- Almost 27% of patients presenting with major depression will also have social anxiety disorder, and the diagnosis should be actively investigated in patients with depression.[6,9]
- The onset of social anxiety disorder precedes the onset of the depressive disorder in over 70% of cases.[2,7]
- Comorbid social anxiety disorder in patients with major depressive disorder increases the severity of depression.[7]
  - Patients with comorbid depression are 80% more likely to suffer impairment[7]
    - 20% more likely to suffer interference with life activities
    - 60% more likely to suffer work impairment
    - 60% more likely to be hospitalized for depression[7]

High prevalence of comorbid anxiety disorders

- In the NCS 56.9% of individuals with social anxiety disorder had a lifetime comorbid anxiety disorder.[3]
  - The most common were: simple phobias (37.6%), agoraphobia (23.3%), PTSD (15.8%), and GAD (13.3%).[3]

High prevalence of comorbid medical illness

- ECA data suggests that individuals with social anxiety disorder have higher rates of chronic medical disorders than those without social anxiety disorder (mean 1.27 versus 0.87)[5]
  - An increased incidence peptic ulcer disease has been observed[10]
  - An association between social anxiety disorder and Parkinson's disease has been suggested[11]

Comorbid conditions have substantial negative impact

Compared with individuals with "pure" social anxiety disorder, those who also have comorbid psychiatric disorders are more likely to:

- Suffer greater impairment in social functioning[3,4]
  - Work, school, household roles, leisure time activities, social contacts
- Suffer greater impairment in occupational functioning[4]
  - Increased absenteeism, decreased productivity

- Consume more health care resources[2,4,3]
  - Increased outpatient visits, emergency department visits, psychiatric hospitalizations, medication use
- Attempt suicide
  - Lifetime risk of suicide was increased 5.73-fold in individuals with social anxiety disorder and comorbid psychiatric diagnoses (15.7%) compared to those with social anxiety disorder alone (1.0%)[2]

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PATIENT PROFILE #4

At age 46, Louise is always fearful. In elementary school, she was very shy and had few friends; she did not pursue her studies very far. Still single, she has lived with her father, after her mother passed away. She has worked in a large commercial operation, where she has operated well, at least for all the years she worked in the warehouse.

Her ability to function was greatly impaired after a reorganization of the company led to her being assigned to a cashier position, in close contact with customers. As a result, she became extremely anxious, had problems sleeping and became particularly depressed. She quit her job and with great reluctance decided to see a physician. During the interview, it became quite clear that she has always felt anxious when in the presence of people whom she felt could potentially appraise her, particularly when she had to ask or answer questions.

After a few months on antidepressants, combined with cognitive behavioural therapy, she is now a different person; very much at ease with people, she no longer avoids eye contact and feels more comfortable in social situations. She feels like she is starting to live again. The thing that saddens her is the fact that she has lost part of her existence, caused by a disorder that is now treatable. Her only regret is that she should have seen her doctor sooner.

TREATMENT OF SOCIAL ANXIETY DISORDER

Introduction

Social anxiety disorder is usually treated with cognitive behavioural therapy, pharmacotherapy or a combination of both. Both therapies should be considered as first-line options. Antidepressants appear to work more quickly than cognitive behavioural therapy and may have beneficial effects in those who suffer from a comorbid condition that is also responsive to antidepressants.[1] However, when antidepressants are discontinued there is substantial rate of relapse, and cognitive behavioural therapy offers long-term advantages in this respect.[2] Even when pharmacotherapy results in improvements, an element of cognitive behavioural therapy should probably be part of therapy, particularly exposure to feared situations. Cost, patient preferences, and the availability of treatments should also be considered when choosing initial therapy.

Remission with little or no anxiety or depressive symptoms should be the goal of therapy. Remission has been defined as a score of ≤30 on the Liebowitz Social Anxiety Scale (LSAS).[3] Unfortunately, it is currently relatively uncommon for individuals with chronic generalized social anxiety disorder to experience complete remission.[1] However, with newer therapies and combination strategies it is hoped that remission will become a more common endpoint in the future.

Cognitive Behavioural Therapy

Cognitive behavioural therapy is an important element of treatment for patients with social anxiety and has been associated with significant improvements.[4-6] Specific studies comparing individual to group cognitive behavioural therapy, have shown larger effect sizes for individual cognitive behavioural therapy. This may be explained at least in part, because individual cognitive behavioural therapy allows more tailoring of the treatment to the problems experienced by that individual.[7] While there is clear evidence supporting the use of the various forms of cognitive behavioural therapy in patients with this disorder, other forms of psychotherapy have not been empirically evaluated in the treatment of social anxiety disorder.

Major Components of cognitive behavioural therapy typically used to treat social anxiety disorder[4,5]

	Description	Rationale
Exposure	Prolonged exposure to real or imagined social situation, to help patients face their fears. Typically conducted within the treatment session and as homework assignments	Based on research indicating that exposure to feared situations reduces anxiety whether or not the anxiety is a learned response. Exposure allows learning of new (nonanxious) responses in the feared situation. Contemporary models of conditioning suggest that the anxious response is not unlearned or deconditioned but rather that a new response is learned. The old response does not disappear but remains available.

Cognitive restructuring	Technique to help patients view their world in a less biased and more accurate way, helping to eliminate fear and perceived dangers	Based on research indicating that negative beliefs about the self and others are a prominent feature of social anxiety disorder. These beliefs can be changed in cognitive restructuring.
Relaxation training	Training patients to identify anxiety as soon as it occurs and to control it with brief relaxation exercises	Used to reduce the physiological arousal associated with social anxiety disorder and help patients participate in social activities. Generally relaxation training is seen as a less powerful intervention than the other aspects of cognitive behaviour therapy.
Social skills training	Assertiveness training and training in other interpersonal skills (e.g., skills for initiating and maintaining conversations)	Based on the observation that some individuals with social phobia lack social skills in some areas or have anxiety-induced inhibition of skills. Social skills practice also allows for exposure to feared social situations.

A meta-analysis of 108 trials of psychological and pharmacological treatments for social anxiety disorder suggests that a number of pharmacological treatments and cognitive behavioural treatments are effective treatments for social anxiety disorder.[5] Comparisons of their individual efficacy (cognitive behavioural therapy vs. pharmacotherapy) have been fraught with controversy and at present, there is no clear answer in the literature to suggest that one treatment modality is consistently more effective in acute treatment.[5,8]

Practical tips for using cognitive behavioural therapy for social anxiety disorder

Exposure	1. Patient and therapist develop a list, in order of severity, of anxiety-provoking situations 2. Patient begins working on least fearful situation, gradually moving to more difficult situations 3. Situations are confronted through imagined scenes, role-playing, and confronting the situation outside of the therapy session 4. Scenario continues until the patient's anxiety begins to subside Note: Counterproductive patient behaviours include attempts to distract themselves, focusing inward on negative thoughts, or engaging in "safety behaviours" (e.g., not making eye contact, only entering a social situation with a friend rather than alone, over-rehearsal prior to entering the situation)
Cognitive restructuring	1. Help patient identify negative thoughts that occur during anxiety-provoking situations 2. Evaluate the accuracy of the thoughts compared to "what actually happens" in social situations 3. Develop rationale alternative thoughts Note: Questioning and exposure are used to collect information to help patients revise their judgments regarding the repercussion of their perceived social inadequacies (e.g., what is the true response to spilling a drink at a party?)
Relaxation training	1. Teach patients to relax using exercises of different muscles. Exercises are practiced with therapist and at home until the patient can relax muscle tension quickly 2. Apply the relaxation by relaxing quickly during everyday activities 3. Apply the relaxation while in anxiety-provoking situations Note: Relaxation strategies have not been shown to have added to the efficacy of other techniques used in Cognitive Behavioural Therapy.

Social skills training	1. Techniques include therapist modeling, behavioural rehearsal, corrective feedback, social reinforcement, and homework assignments 2. Training may be combined with the other techniques Note: Patients may benefit whether they have perceived or real deficits in social behaviour

Adapted from reference[4]

Pharmacotherapy

Pharmacotherapy offers an important and robust treatment for patients suffering from social anxiety disorder. Nevertheless, antidepressants as standalone treatments may unfortunately be accompanied by side effects (which are similar to those seen in the treatment of depression), as well as concerns about relapse when discontinuing treatment.

Principles of treatment of social anxiety disorder with antidepressants

- Dosage appears similar to the standard doses used for depression (see table)[1]
- Response usually seen by the 4th week of treatment, but can take up to 8 weeks or more[1]
  - Reasonable to switch medications if no benefit is seen during a 6-8 week initial trial.
  - Patients should be started at very low doses, and dose should be increased slowly, in order to maintain maximal adherence to the drug regimen
  - Consider dosage increase or augmentation in order to achieve maximal response with the aim of achieving remission/full recovery (although full remission may not be always possible)
  - Improvement may continue to accrue over a period of months
- Highly avoidant patients will require formal exposure instructions to maximize the benefits of drug therapy

Treatment guidelines for generalized social anxiety disorder

Place in Therapy	Medication	Starting Dose	Recommended Dose	Usual Maximum Dose Range*
First Line (Level 1 or 2)	Fluvoxamine	25 mg OD	100-300 mg OD	150-300 mg OD
	Gabapentin	300 mg HS	600-3600 mg divided BID-QID	600-3600 mg divided BID-QID
	Moclobemide	75 mg BID	300 mg BID	300-450 mg BID#
	Paroxetine	10 mg OD	20-50 mg OD	20-60 mg OD
	Paroxetine CR	12.5 mg OD	12.5-37.5 mg OD	12.5-75 mg OD
	Sertraline	25 mg OD	100-200 mg OD	100-200 mg OD
	Venlafaxine XR	37.5 mg OD	75-225 mg OD	150-375 mg OD

Second Line (Level 3)	Buspirone	10-15 mg/day	30-60 mg/day	30-60 mg/day
	Citalopram	10 mg OD	20-40 mg OD	40-60 mg OD
	Fluoxetine	10 mg OD	20-60mg OD	40-80 mg OD
	Mirtazapine	30 mg HS	30-60 mg HS	30-60 mg HS
	Olanzapine	2.5-5 mg OD	2.5-20 mg OD	5-20 mg OD
	Valproate	250 mg BID	500 -2500 mg/Day	500-2500 mg/Day
Third Line (Level 4 or clinical issues)	Phenelzine	7.5-15 mg BID	15-45mg BID	15-45mg BID
	Clonazepam+	0.5 mg BID	0.5-2 mg BID	0.5-2 mg BID
	Alprazolam+	0.25-1mg TID	0.25-3 mg BID	3 mg BID

** Based on Clinical Experiences and a review of the literature.*

 # Recommended daily dose of Moclobemide is up to 600 mg. However, usage of higher doses has been reported, and in these cases dietary management as if on an MAOI is required.

+ While Benzodiazepines may be effective anxiolytic, the potential risk of abuse and suggests use of these adjunctive treatments only. The risk of addiction may be lessened by prescribing them on a regular dose and not using a PRN or as needed basis.

See table at the end of the chapter for definitions of levels of evidence.

Anxiolytics - benzodiazepines (BZD) and beta-blockers and buspirone[9]

On the whole, the use of benzodiazepines as first line agents should be avoided because of their risk of abuse, withdrawal and the potential for negative cognitive effects (eg. anterograde amnesia) as well possibly interfering with exposure based treatments. However, they should not be excluded as a treatment option (usually adjunctively) for those patients with only a partial treatment response to antidepressants. As well on occasion, antidepressants are not tolerable and barring any significant concerns about substance abuse for the individual, benzodiazepine monotherapy may effectively treat generalized social anxiety disorder.

- Rapid action makes BZDs useful as a short-term adjunct to antidepressant treatment, while the anxiolytic effect of the antidepressant develops over 4-12 weeks.
- When used, benzodiazepines should be prescribed on a regularly scheduled basis, avoiding a PRN (as needed basis) prescribing schedule as this type of administration schedule has been shown to interfere with exposure based treatment gains as well as potentially reinforcing addictive behaviour.[10,11]
- The risks of BZDs can outweigh their benefits
  - Especially in the elderly, increased falls, impaired ability to drive, cognitive impairment.
  - Addiction (usually in substance abusers), withdrawal issues.
  - May interfere with response to psychotherapy and the ability to deal with underlying issues (state dependant learning).
- Benzodiazepines and/or beta-blockers (should be avoided in patients with asthma or heart failure) such as propranolol (10-40 mg) have also been used prn as monotherapy, 45-60 minutes before performances (public speaking, musicians) in nongeneralized social anxiety disorder.[76]
- Buspirone had good results in two open trials, but two controlled trials failed to confirm its efficacy.[12-15] As well, buspirone 30-60 mg divided BID-TID can be used as augmentation for a partial response to an optimized trial of an SSRI or SNRI.

SSRIs

The SSRIs have established efficacy in social anxiety disorder, a relatively low risk of adverse events, and a low potential for abuse.[1] Two recent meta-analyses of trials of SSRIs in the treatment of social anxiety disorder, reported effect sizes for the different SSRIs ranging from 0.3 to 1.8 (Level 1).[5,16] SSRI treatment, primarily paroxetine, sertraline, and fluvoxamine, was effective in reducing total levels of social anxiety and in improving overall clinical condition.[5,16] The odds of responding were 3 times higher with SSRIs compared to placebo.[16] More recent, randomized controlled trials, confirm the benefits of SSRIs for generalized social anxiety disorder (Level 1).[17-24] Acute therapy with SSRIs, fluvoxamine, sertraline and paroxetine, demonstrated response rates in the range of 40 to 65%, and were generally twice as high as those seen with placebo.

- Fluoxetine was not significantly superior to placebo in a 14-week trial,[25] but was effective in social anxiety disorder in three open trials (Level 3).[26-28]
- Citalopram has demonstrated efficacy in open trials (Level 3).[29,30] In an 8-week, randomized, open-label trial, citalopram was as effective as moclobemide (responders: 75% and 74.3%, respectively).[29]
- Frequent side effects with SSRIs include nausea, headaches, short-term agitation (1 to 3 weeks), insomnia, asthenia, weight gain and sexual dysfunction (long-term).
- SSRIs provide additional benefits for the treatment of comorbid depression and substance abuse.
- Recently, Paroxetine CR has been shown to be an effective treatment in social anxiety disorder.[77]

SNRI - venlafaxine XR

Venlafaxine XR has demonstrated efficacy for generalized social anxiety disorder in two large, 12-week, placebo-controlled comparisons with paroxetine (Level 1).[24,31,32] Response rates significantly higher with venlafaxine XR (63-68%) and paroxetine (58-65%) compared to placebo (33-35%).[24,31,32]

- Onset of symptomatic improvement seen as early as week 2[33]
- Significant improvements in work, family, and social functioning[33]
- Long-term efficacy with improvements continuing out to 6 months[34]

MAOI - phenelzine

The efficacy of the monoamine oxidase inhibitor (MAIO), phenelzine has been established in 4 double-blind, placebo-controlled studies (Level 1).[6,35-37] However, these agents are not preferred for several reasons.

- Dietary restrictions to avoid hypertensive crisis
- Avoid high tyramine-containing foods (e.g., cheese, salami, beer, wine)
- Need to avoid other antidepressants and sympathomimetic medications
- E.g., Cold, cough and sinus medications, asthma inhalers, allergy medications
- High rate of adverse effects
- E.g., Postural hypotension, sedation, sexual dysfunction, weight gain

RIMA - moclobemide

Results of controlled trial with the reversible inhibitor of monoamine oxidase (RIMA), moclobemide have been equivocal. Some trials have demonstrated response rate that are significantly higher than those seen with placebo, while others have not (Level 2).[36,38-40]

Other antidepressants

- Tricyclic antidepressants do not appear to be useful in social anxiety disorder (Level 3).[9,41]
- Nefazodone had good response rates in case series,[42,43] and a 12-week, open trial (Level 3).[44]
  - Nefazodone is no longer available in Canada because of concerns of hepatotoxicity.
- Mirtazapine was effective in two open trials (Level 3).[45,46]
  - In one trial, mirtazapine plus cognitive behavioural therapy was more effective than cognitive behavioural therapy alone in patients with comorbid social anxiety disorder and alcohol abuse.[46]
- Bupropion has only been shown to be effective in case reports (Level 4),[47] but was non-effective in controlled studies.[42]
- Brofaramine showed promising results in treating social anxiety disorder, but is not yet available on the Canadian market.[43,45]

Gabapentin

- Gabapentin was significantly more effective than placebo in a double-blind, randomized trial in 69 patients with social anxiety disorder (Level 2).[48]

Atypical antipsychotic – olanzapine

- In a small double blind, study in 12 patients, olanzapine (initial dose 5 mg/day, titrated to maximum 20 mg/day) yielded greater improvement than placebo on measures of social anxiety (Level 2).[49]

Valproic acid

- In a small 12-week open label trial in 17 participants, treatment with valproic acid (500-2500 mg) resulted in significant improvement (mean reduction in LSAS -21.3), with 41.1% achieving responder status.[50]

Strategies for non-responders – switching or augmenting

- Case series have shown a good response to venlafaxine in patients non responsive to SSRI therapy.[51,52]
- In a double-blind cross-over study pindolol was not significantly superior to placebo for augmenting the effects of paroxetine in 14 patients with social anxiety disorder.[53]
- Buspirone augmentation in 10 patients with a partial response to SSRI therapy was associated with modest improvements (Level 4).[54]
- A washout period is required when switching from an SSRI to a MAOI to avoid serotonin syndrome (at least five weeks with fluoxetine).

Summary of randomized controlled trials in social anxiety disorder

Study (no. patients)	Drug	Active drug response rate, % of patients	Placebo response rate, % of patients
Gelernter et al. 1991[37] (n=65)	Phenelzine CBT	69, p=0.09 24	20
Liebowitz et al. 1992[55] (n=74)	Phenelzine Atenolol	64[1] 30	23
Versiani et al. 1992[38] (n=78)	Phenelzine Moclobemide	73, p<0.001 54, p<0.001	12
Heimberg et al. 1998[56] (n=133)	Phenelzine CBT	65 58	30

Int. Multicenter Clinical Trial Group. 1997[45] (n=578)	Moclobemide	47, p=0.002	34
Noyes et al. 1997[51] (n=506)	Moclobemide	35	33
Schneier et al. 1998[52] (n=78)	Moclobemide	17.5	13.5
Van Vliet et al. 1994[53] (n=30)	Fluvoxamine	46	7
Stein et al. 1999[54] (n=92)	Fluvoxamine	42.9, p=0.04	22.7
Van Ameringen et al. 2001[55] (n=204)	Sertraline	53, p <0.01	29
Liebowitz et al. 2003[56] n=401)	Sertraline	46.8, p <0.001	25.5
Kobak, et al. 2002[57] (n=60)	Fluoxetine	40, p=0.42	30
Stein et al. 1998[58] (n=187)	Paroxetine	55.0†	23.9
Baldwin et al.1999[59] (n=323)	Paroxetine	65.7, p <0.001	32.4
Liebowitz et al 2002 [60] (n=384)	Paroxetine 20 Paroxetine 40 Paroxetine 60	44.9 46.6, p=0.012 42.9	28.3
Stein et al. 2002[61] (n=829) Pooled 3 RCTs	Paroxetine	52.7	28.8
Leibowitz, Mangano 2002[62] (n=863) 2 RCTs	Venlafaxine Paroxetine	68† 65†	33
	Venlafaxine Paroxetine	63† 58†	35
Van der Linden et al. 2000[63] (Meta-analysis 17 RCTs)	SSRI (8 trials) RIMA (6) MAOI (2) BZD (1)	53 46 64 74	26 29 24 19
Lepola et al. 2004[64]	Paroxetine CR	57.0	30.4

†p <0.05 vs. PBO; BZD, benzodiazepine; CBT, cognitive behavioural therapy; MAOI, monoamine oxidase inhibitor; RIMA, reversible monoamine oxidase inhibitor; RCTs, randomized controlled trials; SSRI, selective serotonin reuptake inhibitor.

Combination therapy

Few studies have examined the benefits of combining cognitive behavioural therapy and pharmacotherapy for the treatment of social anxiety disorder. Clark and Agras compared the combination of cognitive-behaviour therapy and buspirone to either monotherapy and found no benefit to the addition of buspirone.[14] However, buspirone alone was not an effective treatment so this trial provides little information on the benefits of combined therapy.

Blomhoff et al. examined the efficacy of sertraline 50-150 mg or exposure therapy, administered alone or in combination for 24 weeks in 387 patients with social anxiety disorder.[56] Sertraline-treated patients were significantly more improved than non-sertraline-treated patients, while no significant difference was observed between exposure- and non-exposure-treated patients. However, the authors felt that combined treatment with sertraline and exposure therapy, conducted by the general practitioner, may enhance treatment efficacy in primary care. A long-term follow-up 28 weeks after cessation of therapy found that patients treated with exposure therapy alone improved further, whereas those treated with exposure therapy combined with sertraline or sertraline alone showed a tendency towards deterioration.[57]

Recently, Clarke et al. compared the efficacy of cognitive therapy, fluoxetine plus self-exposure, and placebo plus self-exposure in 60 patients meeting criteria for generalized social anxiety disorder.[8] Significant improvements were observed on most measures in all 3 treatments. However, with specific measures of social anxiety disorder, cognitive therapy was superior to fluoxetine plus self-exposure, and placebo plus self-exposure at midtreatment and at post-treatment, with no difference between the medication and placebo groups. As well, cognitive therapy remained superior to fluoxetine plus self-exposure at the end of the booster period and at 12-month follow-up.[8]

Still, more data are needed to determine whether medication and cognitive behavioural therapy will act together, or if medication will detract from the benefits of cognitive behavioural therapy.

Maintenance therapy

Many patients with social anxiety disorder may require long-term therapy. In one study, 88% of responders who completed 2 years of pharmacotherapy, deteriorated after discontinuation of therapy.[58] After 4 years of therapy, 63% were asymptomatic or had only mild symptoms, but only 16% were off all treatment. There is no way to predict which patients will do well when medication is discontinued, or which patients will require long-term treatment.[1] Several trials have suggested that gains achieved with cognitive behavioural therapy may persist longer than gains achieved with pharmacotherapy after treatment discontinuation.[2,57]

Benefits of maintenance therapy

- Continued improvement
  - Therapy with venlafaxine XR,[34] paroxetine,[59] or sertraline[18] has been associated with continued improvements over 5-6 months
- Prevention of relapse
  - Paroxetine and sertraline have both demonstrated significant reductions in relapse rates in separate 24-week, placebo-controlled maintenance trials (Level 2).[59,60]
  - Relapse rates were: sertraline 4% and placebo 36%[60]
  - Relapse rates were: paroxetine 14% and placebo 39%[59]

Treatment of Social Anxiety Disorder in Children and Adolescents

The concept of shyness in young children is not new; however, only recently has it been recognized that childhood social anxiety disorder is a prevalent and severe disorder, with both immediate and long-term implications for severe lifetime impairment in academic, social, and emotional functioning.[61] Research into effective treatments for childhood anxiety disorders is limited. The benefits of cognitive behavioural therapy have been demonstrated. However, few controlled trials of pharmacotherapy have been conducted.

Most available pharmacotherapy trials have been done in children and adolescents who had failed cognitive behavioural therapy.[62-65]

Special issues in the management of social anxiety disorder in children[66]

- Consider family history and family environment in management strategy
- Engage the child in the therapeutic process
  - Use small rewards for coming to appointments and participating in the sessions
- Involve the child's parents in the treatment process
  - Ensure they understand the disorder and that they are an integral part of therapy
- Maintain motivation and cooperation of the family throughout treatment.
- Assess parental child-management skills and parental social anxiety disorder
  - May impact ability of parents to participate in treatment
  - Parent unlikely to provide social opportunities for child
  - Advise parent to seek treatment for social anxiety disorder
- Assess child for comorbid conditions, especially depression and substance abuse

Cognitive Behavioural Therapy

Randomized controlled trials have demonstrated the efficacy of group or individual cognitive behavioural therapy, in children and adolescents with social anxiety disorder.[67-72]

- Both individual and group cognitive behavioural therapies are effective[67-69,71,72]
  - Response rates (no longer fulfilled diagnostic criteria): cognitive behavioural therapy 65-70% vs. 5-26% waitlist or non-specific intervention[69-71]
- Individual therapy may be more effective than group therapy[67]
- Including the family was associated with greater benefit[68-70]
  - Response rates at 12 months: cognitive behavioural therapy 65-70%, cognitive behavioural therapy + family management 85-96%[69,70]
- Majority of studies show that benefits are maintained at one-year[68-70]

Pharmacotherapy

- In a randomized, double blind trial, fluvoxamine (max 300 mg/day) demonstrated significantly higher response rates (76% vs. 29%) than placebo in children with social anxiety disorder, generalized anxiety disorder and separation anxiety ($p<0.001$) (Level 2).[62]

- Discontinuation for side effects was low: fluvoxamine 8%, and placebo 2%
- An open label 6 month extension, suggests that an initial fluvoxamine response is likely to be maintained with treatment.[63]

- Fluoxetine was effective in open label studies in mixed populations of children and adolescents with social anxiety disorder, separation anxiety disorder, and generalized anxiety disorder (Level 3).[63-65] Fluoxetine resulted in significant improvement in 71% of non-responders to fluvoxamine during 6 months of open treatment.[63]
- Sertraline was effective in a small open trial (n=14) in improving the symptoms of social anxiety disorder in 64% of patients (Level 3).[73]
- Paroxetine, sertraline and nefazodone were effective and well tolerated in a retrospective analysis of 7 patients treated for 7 months (Level 4).[42]

It is important to recognize the significant risk of suicide in populations that are suffering with mood and anxiety disorders. This may be particularly so in the adolescent and young adult age groups. However, recently, Health Canada has sent an advisory to all physicians that paroxetine should not be administered to children or adolescents because of concerns about the potential risk of increased suicidal ideation in these populations.

Pharmacotherapeutic treatment guidelines for generalized social anxiety disorder (children and adolescents)

Place in Therapy	Medication	Starting Dose	Usual Dose Children 6-11 years	Usual Dose Adolescents 12-18 years
First Line (Level 1 or 2)	Fluvoxamine	50 mg/day	Max. 200 mg/day	100-300 mg/day
Second Line (Level 3)	Fluoxetine	5 mg/day	20 mg/day	40 mg/day
	Sertraline	25-50 mg/day	100-150 mg/day	
Third Line (Level 4)	Paroxetine	10-20 mg/day		20-50 mg/day
	Nefazodone	50-100 mg bid		150-250 mg bid

Combination Therapy

In an open, 12-week trial that combined psychoeducational and citalopram treatment (max 40 mg/day) for youths with social anxiety disorder (n=12), 83% patients improved (Level 3).[74] Counseling sessions included parents and provided education about social anxiety, skills coaching, and behavioural exercises.

Criteria for levels of evidence and lines of treatment recommendations[75]

Level of evidence	Criteria
1	Meta analysis or replicated randomized controlled trial (RCT) that includes a placebo condition
2	At least 1 RCT with placebo or active comparison condition
3	Uncontrolled trial with 10 or more subjects
4	Anecdotal case reports

Line of Treatment	Criteria
First Line	Level 1 or Level 2 evidence plus clinical support
Second Line	Level 3 evidence or higher* plus clinical support
Third Line	Level 4 evidence or higher* plus clinical support
Not recommended	Level 1 or Level 2 evidence for lack of efficacy

*Treatments with higher levels of evidence may be listed as lower lines of treatment due to clinical issues such as side effect or safety profile.

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NATURAL PRODUCTS IN SOCIAL ANXIETY DISORDER

Herbal and dietary supplements are considered a form of complementary and alternative medicine (CAM) and are extensively used by those with anxiety and other mental health disorders.[1] The growing concerns amongst health professionals and the general public concerning the safety and efficacy (vs. claims) of such so-called 'natural products' led to the formation of Health Canada's Natural Product Directorate in 1999. Natural products include herbal remedies, homeopathic medicines, vitamins, minerals, amino acids and essential fatty acids (such as omega-3). Effective January 1, 2004, the natural products in Canadian retail outlets will be the subject of tighter regulation in manufacture and in claims made for the remedies. Health professionals and patients can find further information at www.hc-sc.gc.ca.

While no specific natural product has been shown to be of benefit in social anxiety disorder, some herbs and dietary supplements may offer therapeutic potential. The herbal with the strongest research data to support its use as an anxiolytic is kava kava.[2] Despite its potential as a helpful alternative in anxiety disorders,[3] kava has been reported to be liver toxic[4] and is no longer available in North America and most of Europe. Valerian also has some small clinical trials to support its use as an anxiolytic and a recent review suggested that the herb may be useful in mild insomnia and mild anxiety, however, the data is limited.[5] Valerian appears to have an affinity for the GABA A receptor and the valerenolic and the acetylvalerenolic acids may inhibit the breakdown of GABA which may result in reducing anxiety.[6] Despite being well-tolerated with an excellent short-term adverse event profile, the long-term safety studies are lacking.[5] Two recent controlled studies suggest that passionflower is effective in generalized anxiety disorder[7] and in treating anxiety associated with opiate withdrawal.[8] A month-long study of a combination herbal remedy which included passionflower and valerian, improved anxiety associated with adjustment disorder.[9] The anxiolytic effects of passionflower have been reported to be due to the chrysin content, a benzodiazepine receptor ligand.[10]

Experimental data suggests that other botanical medicines (German chamomile, hops, lemon balm, skullcap, gotu kola) have anxiolytic activity, but clinical studies are lacking. St. John's wort appears to hold promise in anxiety disorders,[11,12] however its effect on liver cytochrome p450 enzymes leads to the rapid elimination of a number of medications, including the birth control pill.[13] Ginkgo biloba and evening primrose oil have been suggested to help with anxiety, however this is based on limited data indicating that they may improve overall mood in dementia and premenstrual syndrome respectively.[14,15]

Recently, inositol has been used in a number of controlled studies and appears to have benefit in panic disorder,[16,17] obsessive compulsive disorder[18] and depression.[19] Inositol as a natural isomer of glucose and a precursor in the intracellular phosphatidyl-inositol second messenger cycle and as such may play a role in serotonin receptor binding.[17] Another dietary supplement with

some preliminary data in the treatment of anxiety, specifically panic disorder,[20,21] is 5-hydroxytrptophan (5-HTP), which is a precursor to serotonin. This dietary supplement is available as an OTC remedy derived from the African Griffonia seed. Claims abound for 5-HTP, but clinical data is lacking. Gastrointestinal side-effects are common among those taking 5-HTP.[21] Of serious concern is that peak X, a contaminant thought to be involved in a potentially fatal condition (eosinophilia-myalgia syndrome), has been reported in commercial, OTC, preparations of 5-HTP.[22,23]

Emerging research suggests that proper nutrition, including appropriate intake of omega-3 fatty acids, is important in mental health.[24] Canadians today consume only 130 mg of combined eicosapentaenoic and docosahexaenoic (EPA/DHA) per day,[25] 520 mg less than the 650 mg minimum recommended by the International Working Group on Essential Fatty Acids.[26] Given that 20% of the brain is made up of polyunsaturated fatty acids,[27] adequate of the omega-3 fatty acids should be prioritized. Experimental research suggests that omega-3 deficiency may contribute to anxiety,[28,29] and the clinical data on the influence of supplemental fish oil on mood continues to build.[30] The clinical data on the effect of omega-3 fatty acids in anxiety is lacking, limited only to case reports in agoraphobia[31] and one case of depression with co-morbid social anxiety disorder.[32]

According to a recent literature review, and an accompanying editorial, all North American adults should be taking a multi-vitamin.[33,34] This may be of particular importance for those with mental disorders as some nutrients are essential in neurotransmitter production. A recent double-blind placebo-controlled study with a daily multi-vitamin/mineral preparation showed significant differences in anxiety reduction, as measured by the anxiety subscale of the General Health Questionnaire and the Hospital Anxiety and Depression Scale, as well as on the Perceived Stress Scale.[35] Once again, omega-3 fatty acids represent an area of clinical research that warrants further investigation. As well, given the collateral benefits of taking a multi-vitamin, and the effects of omega-3 fatty acids on mood and cardiovascular health, clinicians should definitely be encouraged to ensure adequate nutritional intake in all psychiatric patients.

In summary, the data on natural products in the treatment of social phobia, or specifically any other anxiety disorder, is lacking. At present, no natural product can be recommended as therapeutically valuable within the bounds of evidence-based medicine. Nevertheless, encouraging results from experimental studies and small clinical trials suggest a potentially therapeutic role for some botanical medicines and nutrients. Still, much more research will be required prior to there being any way to advocate for the complementary and alternative agents in the treatment of social anxiety disorder. In addition, patients should be aware that the term "natural product" does not translate to "safe product." This has been the lesson of kava; despite some encouraging clinical trials, toxicities were uncovered only after widespread use. It should

also be understood by patients that certain herbal products such as valerian and passionflower should not be taken along with sedative medications and 5HTP should not be taken along with SSRIs or tricyclic antidepressants. Nutritional influences on mental health may currently be underestimated; further research is necessary before specific recommendations can be made.

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RESOURCES FOR INDIVIDUALS WITH SOCIAL ANXIETY DISORDER AND THEIR FAMILIES

Patients with social anxiety disorder and their family members find it helpful to obtain material explaining more about the problem and what they can do to overcome it. There are excellent resources that health care providers can recommend, including books and websites. There are two self-help books focused on social anxiety disorder by Canadian authors:

The Shyness & Social Anxiety Workbook: Proven Techniques for Overcoming Your Fears. (2000). By Martin M. Antony Ph.D., and Richard P. Swinson, M.D. Oakland, CA: New Harbinger Publications, Inc.

A highly readable self-help book with practical recommendations to help overcome shyness and social anxiety

Triumph Over Shyness: Conquering Shyness & Social Anxiety. (2001). By Murray B. Stein, M.D. and John R. Walker, Ph.D. New York: McGraw-Hill.

A self-help book describing what we know about shyness and social anxiety and how to overcome problems in these areas. Contains detailed self-help program including information on developing friendships and improving relationships.

Useful websites on social anxiety disorder

The websites of the Anxiety Disorders Association of Canada (www.anxietycanada.ca) and the U.S. equivalent (www.adaa.org) provide patient information and information about provincial associations available in some parts of the country. A website providing a self-help program for social anxiety disorder is located at www.anxieties.com.

Other social anxiety disorder websites*:

- Social Anxiety Disorder at Facts for Health, includes a copy of the SPIN and MINI- SPIN http://socialanxiety.factsforhealth.org/
- SP/SAA Social Phobia/Social Anxiety Association http://www.socialphobia.org/
- The Social Anxiety Network http://www.social-anxiety-network.com/
- Social Anxiety institute http://www.socialanxietyinstitute.org/
- The Anxiety Network International http://www.anxietynetwork.com/sphome.html
- Social Anxiety Disorder at WbMD http://aolsvc.health.webmd.aol.com/content/healthwise/59/14636.htm
- Social anxiety disorders support network www.socialphobics.tripod.com

*These sites are not endorsed by the ADAC/ACTA

CONCLUSIONS

Although one of the more common mental illnesses, social anxiety disorder is one of the least often recognized and treated mental disorders at all levels of care. People suffering with social anxiety disorder, by the very nature of their illness fear and therefore, avoid social and often clinical settings; perhaps not disclosing their anxiety to their doctor because of embarrassment or fear of stigma. Unfortunately, a lack of information about the nature and the importance of treatment of the disorder, among patients and their doctors, leads to a large number of untreated sufferers. The early onset of this psychobiological disorder, predominantly in childhood, most often results in protracted and chronic suffering with enormous personal and societal costs.

Effective treatment exists for social anxiety disorder. There is evidence in support of the efficacy of both pharmacotherapy and cognitive behavioural therapy and both are first line treatments. The combination of cognitive behaviour therapy and pharmacotherapy treatment has not been well investigated but remains another potential first line option. Despite this, for good long-term recovery, "exposure" (or entering avoided social or public situations) should always be included as part of treatment. Either a referral to a clinician for cognitive behaviour therapy or at minimum suggesting the self-help books and websites listed in the treatment section are recommended.

It is our hope that this text, including the guidelines for management of social anxiety disorder, moves in cooperation with you the reader, toward better treatment for this distressed, under-recognized, and under-treated population.