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# **Social Anxiety Disorder**

Franklin Schneier, MD

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## **Overview**

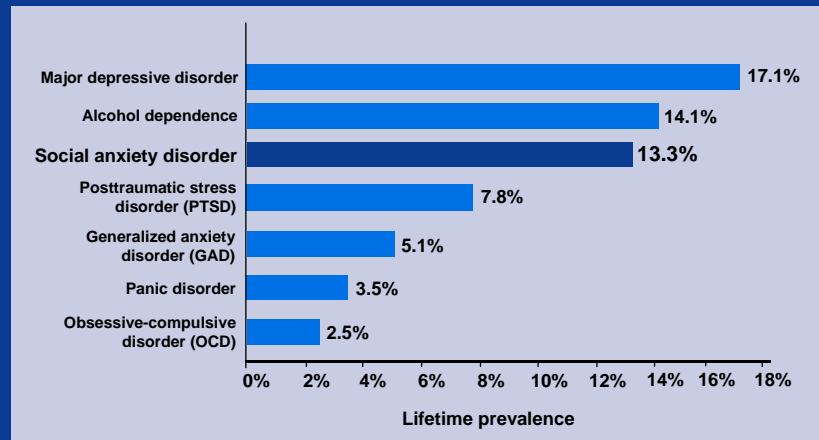
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- Diagnostic Criteria
  - Clinical Phenomenology
  - Etiologic Factors
  - Treatments
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## Clinical Importance Of Social Anxiety Disorder (Social Phobia)

- Highly prevalent, chronic
- Significant social and occupational disability
- Risk factor for depression, alcohol abuse, suicide
- Treatments available but underutilized

## Prevalence of Common Psychiatric Disorders



- Social anxiety disorder is the most common anxiety disorder

Kessler 1994; Kessler 1995; DSM-IV-TR™ 2000.

## **Social Anxiety Disorder: Prevalence in Community**

- Lifetime prevalence up to 15%
- Point prevalence about 7-8%
- About half of this represents generalized subtype

## **Features of DSM-IV Social Anxiety Disorder**

- Marked & persistent fear of embarrassment or humiliation in social or performance situations
- Exposure usually provokes anxiety
- Recognition that fear is excessive/unreasonable
- Avoids feared situations or endures with distress
- Interferes with function or causes marked distress

## Social Anxiety Disorder Subtypes

- Generalized: Anxiety in most social situations
  - Most impairment
  - Most studied
- Nongeneralized (a.k.a. Discrete, Performance)
  - Predominantly performance anxiety
  - Most commonly related to public speaking
  - Social interactions relatively spared

## Feared social situations in community

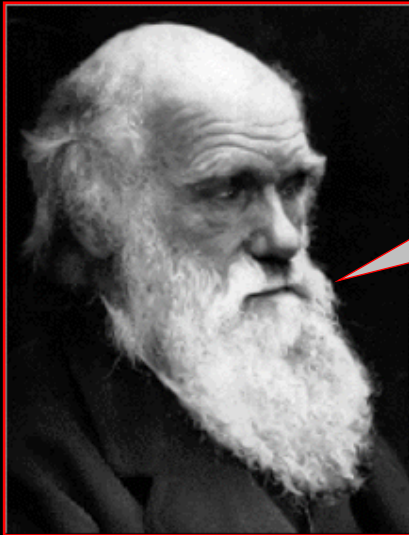
- Performing on stage (18%)
- Public speaking (13%)
- Talking with others (6%)
- Social gatherings (5%)
- Eating/drinking in public (4%)
- Also: dating, assertiveness/conflict, school

Wittchen, 1999

## Social Anxiety Disorder: Common Symptoms

- Cognitive
  - Self consciousness (appear foolish, awkward)
  - Social Inferiority (“I won’t measure up to...”)
  - Fear of negative evaluation (“She won’t like me”)
- Physiological
  - Blushing, Sweating, Tremor
  - Panic attacks may occur only social situations
- Behavioral: Avoidance, Poor Eye Contact, Passive

## The Origin of Social Anxiety Research?



**“Blushing is the  
most human  
of expressions”**

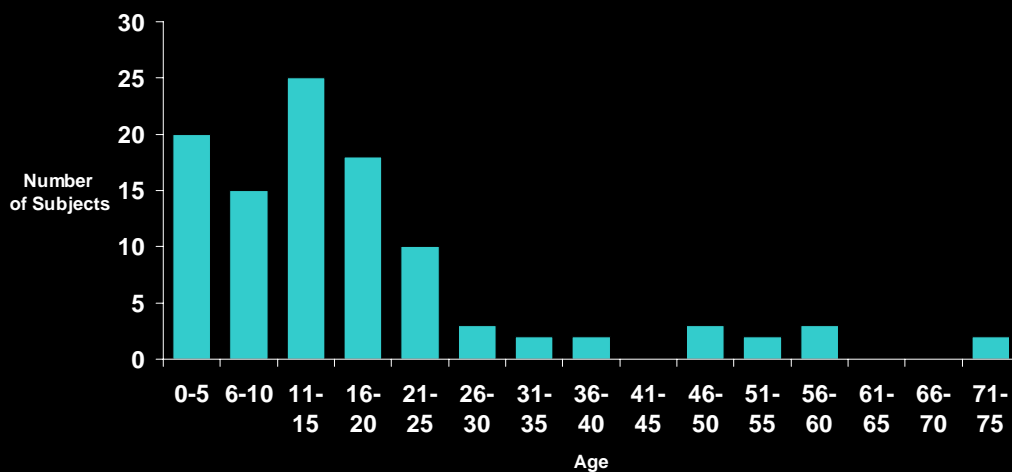
Darwin. *Expression of Emotion in Man and Animals*, 1873.

## Charles Darwin: on Blushing

- Universal, heritable
- Involuntary vasomotor response to scrutiny
- Not a sign from God that one had sinned

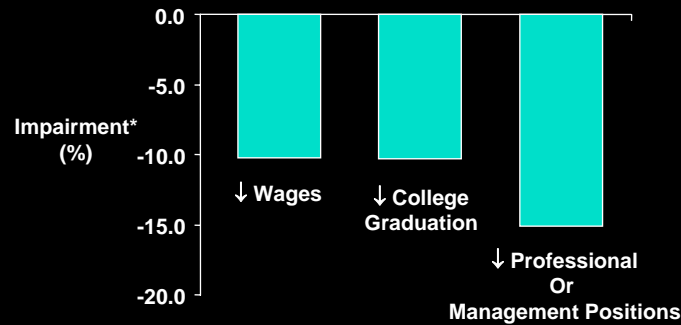
Darwin. *Expression of Emotion in Man and Animals*, 1873.

## Age of Onset of Social Anxiety Disorder



Schneier et al. *Arch Gen Psychiatry*.1992;49:262.

## Social Anxiety Disorder: Educational And Occupational Impairment



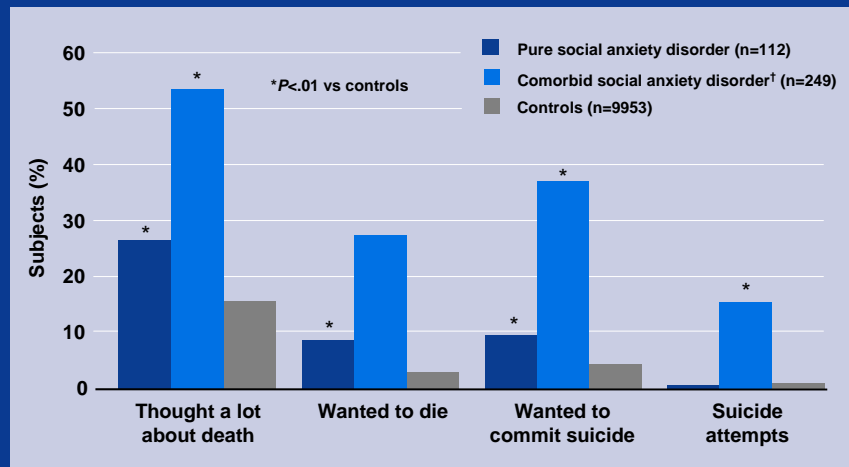
\* Impairment (%) refers to percentage change in wages and percentage point changes in probabilities of college graduation and having a technical, professional, or managerial job (controlling for age, sex, parents socioeconomic status).  
Katzelnick et al., AJP, 2001

## Complications of Social Anxiety Disorder

- Elevated rates of secondary major depression
- Elevated rates of secondary alcohol abuse

Many patients only seek treatment after developing a complication.

## Potential for Suicidal Ideation in Social Anxiety Disorder



†With any DSM-III major disorder.

Based on a subset of persons in the ECA study, which assessed rates and risks for psychiatric disorders based on a probability sample of more than 18,000 adults aged 18 years and over.

Schneier 1992.

## Screening for Social Anxiety Disorder

- Do you worry about embarrassment or feeling self-conscious around others?

Due to early onset and chronicity, patients may not self-recognize social anxiety disorder as a treatable condition.



## Assessing Social Anxiety Disorder

- If yes to screen question:
  - What situations are uncomfortable? Offer list...
  - What do you fear in those situations?
  - Do you experience physical symptoms?
  - Do you avoid situations?
  - What situations are comfortable for you?
  - What would you be doing if you didn't have this?

## Social Anxiety Disorder Patients in the Doctor's Office

- May avoid doctors due to anxiety
- May appear anxious (fearful of authority figure)
- May be self conscious of body, physical contact of examination, revealing anxiety
- “White coat hypertension” may be more prevalent
- May appear agreeable, eager to please (but may avoid suggestions rather than voice disagreement)

## Relationship to Shyness

- 90% of population reports some “shyness”
- Normal social anxiety:
  - Increases arousal & attention to social interactions
  - Inhibits aggressive/inappropriate social behavior
  - Helps motivate preparation for social performance
- Social Anxiety Disorder is more severe, persistent, pervasive, impairing

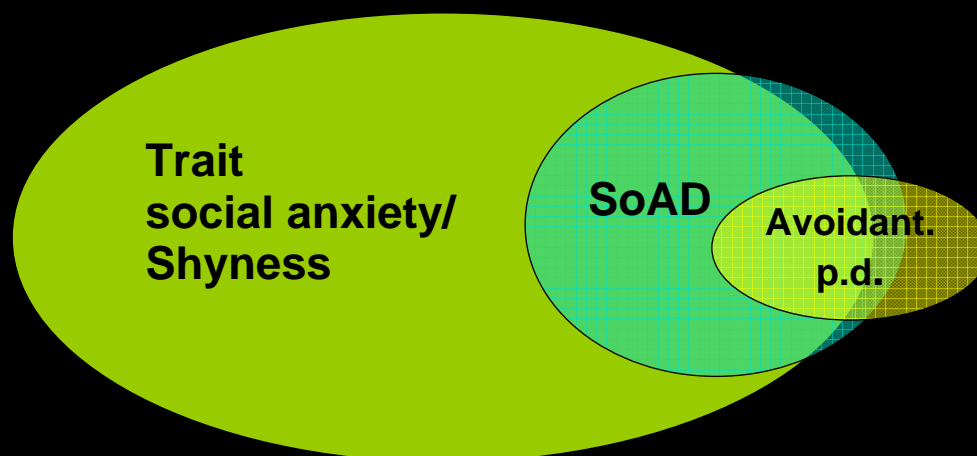
## Relationship with Avoidant Personality Disorder

- High rates of overlap between generalized Social Anxiety Disorder and Avoidant Personality Disorder
- Little evidence for qualitative differences

## Trait Qualities of Social Anxiety Disorder

- On continuum with normal shyness, avoidant p.d.
- Often ego-syntonic to some extent
- Early onset
- Highly chronic

## Social Anxiety Disorder Overlap with Traits, Personality Disorders



## **Social Anxiety Disorder: Comorbidity and Differential Diagnosis**

- Panic Disorder – unexpected panic attacks
- Agoraphobia – fear crowds due to fear of panic
- GAD – social fears are only part of broader worries
- Depression – loss of interest in social activities
- Psychosis – social avoidance due to fear of harm

## **Embarrassing Medical Conditions & Social Anxiety Disorder**

- Social anxiety common in essential tremor, stuttering, parkinson's, disfigurement, obesity, etc.
- Technically not diagnosed as social anxiety disorder if due to primary medical condition
- Stress-Diathesis Model relevant
- Social anxiety disorder treatments may be useful

## **Social Anxiety Disorder: Possible Underlying Features**

- Submissive Behavior
- Behavioral Inhibition
- Cognitive Traits (e.g. distorted assessment of social threat & consequences of negative evaluation)



## **Evolved Submissive Behaviors may share diathesis with Social Anxiety Dz**

- Group-living species: social anxiety has survival value
  - Subordinates must recognize dominants and show submissive behavior
- Subordinates & persons w/ Social Anxiety Dz show:
  - Anxious Arousal
  - Vigilance re. Social Comparison
  - Submissive and Inhibited Behavior

Ohman 1985, Gilbert 2001

## **Behaviorally Inhibited Temperament is specifically associated with Social Anxiety Disorder**

- 15% of young children respond to unfamiliar lab situation with extreme physiologic reactivity and behavioral inhibition
- Increased Social Anxiety Disorder in families (17.5% vs. 0%)
- Increased generalized social anxiety at age 13 (61% vs. 27%)
- Significant heritability

## Family and Twin Studies of Soc Anxiety

- Increased risk of SoAD in 1<sup>st</sup> degree relatives, 10-fold increased risk within generalized subtype

Mannuzza et al, 1995, Stein et al, 1998

- 30-40% genetic influence in twin studies

Kendler et al, 1992, Nelson et al, 2000

## Biological Findings in Social Anxiety Disorder and Related Traits

- Increased sympathetic NS activity in nongeneralized Social Anxiety Disorder
- Some evidence for low CNS Dopamine, Serotonin
- Increased amygdala activation to social stimuli
- Subcortical activation and cortical deactivation during social anxiety state

## fMRI Study of Direct Gaze and Submissive Behavior

- Direct gaze is salient and potent stimulus
- Response is automatic, nonverbal
- We assess differences in response to direct vs. indirect gaze
  - Regional brain activation with fMRI
  - Gaze aversion with eye tracking device

### Eyes Neutral





**Eyes Up**



**Compared to...**

## Eyes Neutral



## Eyes Direct



## **Psychosocial Risk Factors in the Development of Social Anxiety Disorder**

- Parental modeling of socially avoidant behavior
- Hypercritical parenting
- Overprotective parenting

Socially anxious children may benefit from expectations that they participate in social activities and praise for their attempts.

## **Treatments for Social Anxiety Disorder**

- Cognitive-Behavioral Therapy (Typically 12-16 weekly sessions, collaborative approach)
  - Characterize problem situations and cognitions in detail
  - Learn and practice techniques to develop adaptive cognitions and goals
  - Practice exposure through roleplaying and homework

## Rationale for CBT in Social Anxiety Disorder

Disorder is maintained by:

- Phobic Avoidance
  - ⊖ Limits chance to disprove fears, gain skills
  - ⊖ Reinforces fears, increases symptoms
- Negative Cognitions
  - ⊖ Biased, unhelpful, “automatic”
  - ⊖ Increase symptoms, avoidance
  - ⊖ Block extinction, even if exposure occurs

## From automatic negative thoughts → useful rational responses

- **Everyone will notice I'm sweating** → → →  
Even if I'm sweating I can still... (e.g. give the talk)
- **I'll probably be rejected** → → →  
I'll feel good I had the guts to... (e.g. ask her out)

## Exposure to Feared Situations

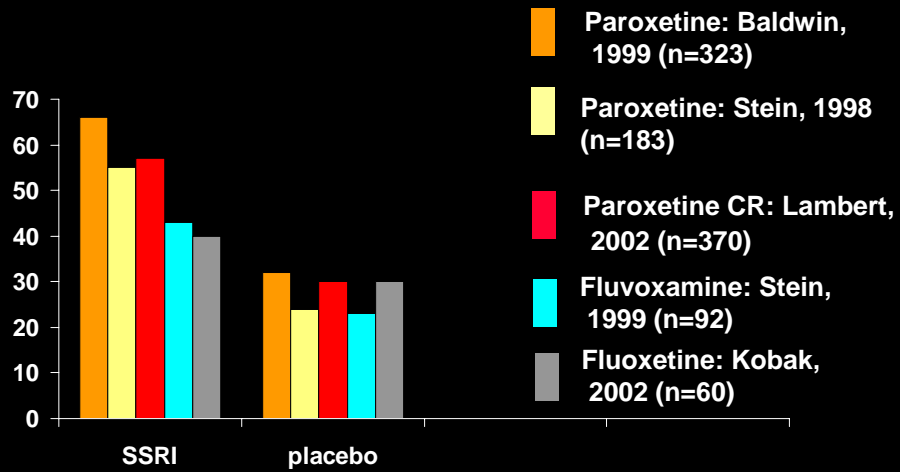
- Begin with easiest situations (e.g. conversation with an acquaintance)
- Set modest initial behavioral goal (e.g. ask three questions in conversation)
- Use a rational response (e.g. I'd like to get to know him better.)

## Psychopharmacology of Social Anxiety Disorder: Efficacy in R<sub>z</sub>'d Clinical Trials

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- SSRIs/SNRI
    - paroxetine, sertraline, venlafaxine, fluvoxamine, escitalopram
  - Benzodiazepines
    - clonazepam
  - MAOIs
    - Phenzelzine
  - Gabapentin
  - Beta-blockers
    - Propranolol (for performance anxiety only)
-

## SSRI Response Rates (%)



## Sertraline—Overview of Clinical Trials in Social Anxiety Disorder

- Two flexible-dose trials
  - 12 weeks (N=415)
  - 20 weeks (N=204)
- Long-term maintenance of response (N=65)
  - 44-week total treatment time (24-week continuation trial in sertraline responders to an initial 20-week trial)

Data on file. Pfizer Inc.; Liebowitz 2002; Van Ameringen 2001; Walker 2000.

## Sertraline—12-Week Trial Baseline Characteristics

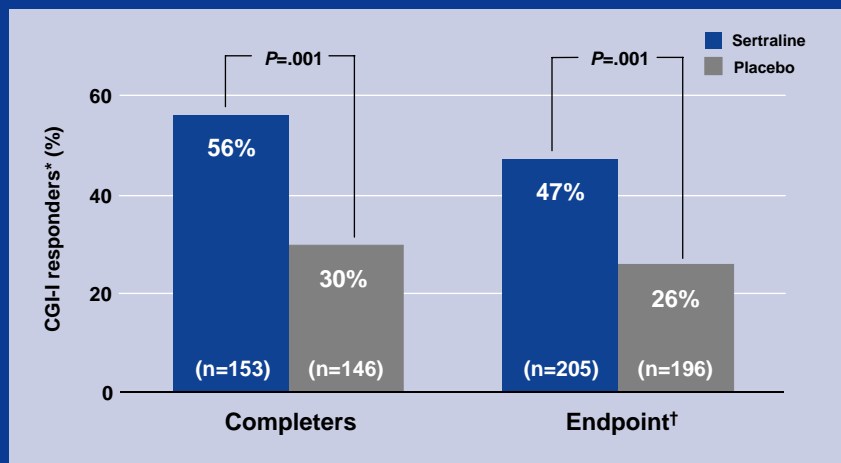
	Sertraline (n=211)	Placebo (n=204)
No. subjects ITT*	205	196
% male†	60	59
% white†	67	77
Mean age (yr)†	35	35
Mean duration of illness (yr)†	21	22
Age at social anxiety onset (yr)†	13	13
Mean LSAS score	91	93

\*ITT=Intent-to-treat efficacy sample (ie, all randomized patients who took  $\geq 1$  dose and had  $\geq 1$  postrandomization efficacy evaluation).

†All randomized subjects.

Data on file. Pfizer Inc.; Liebowitz 2002.

## Sertraline—Effective for Acute Treatment

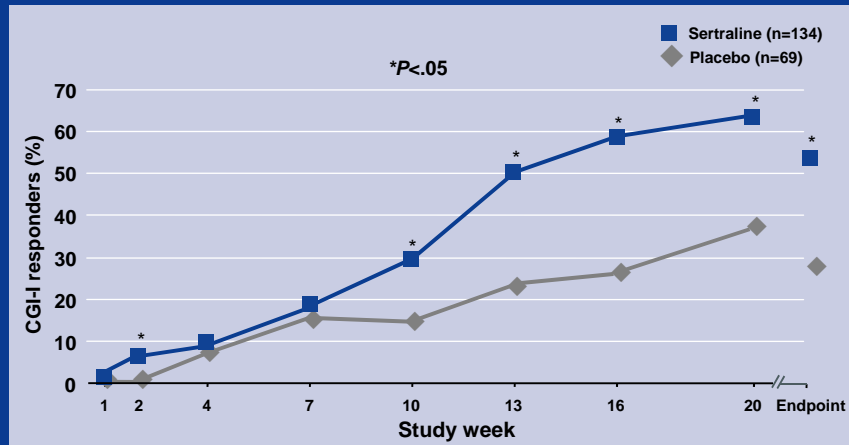


\*Responder: CGI-I  $\leq 2$ .

†Last observation carried forward (LOCF) for all randomized patients who took  $\geq 1$  dose and had  $\geq 1$  postrandomization efficacy evaluation.

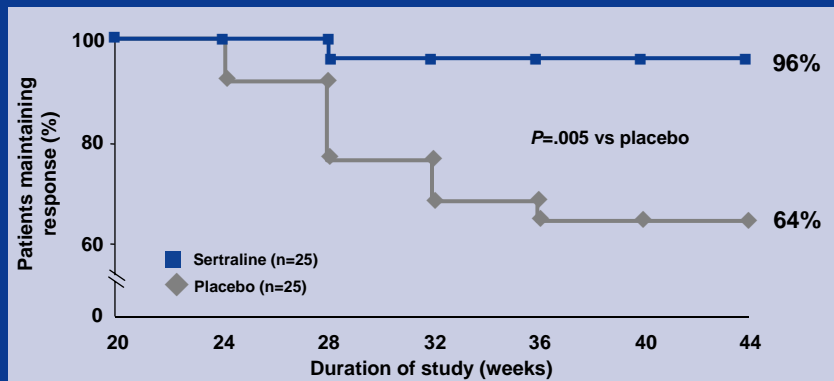
Data on file. Pfizer Inc.; Adapted from Liebowitz 2002.

## Sertraline—Significantly Greater Response Rate vs Placebo



Data on file. Pfizer Inc.; Adapted from Van Ameringen 2001.

## Sertraline—96% Maintained Response in a Longer Term Continuation Trial



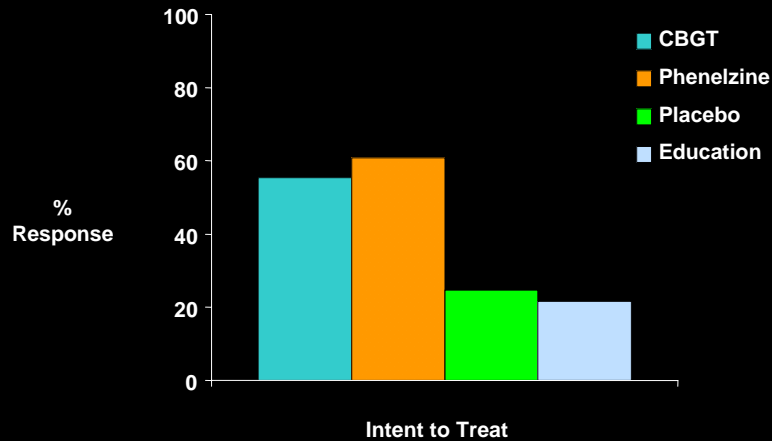
In a rerandomized, 24-week continuation trial of responders to an initial 20-week trial (total treatment time=44 weeks).

In patients receiving ZOLOFT for extended periods, its usefulness should be evaluated periodically.

Data on file. Pfizer Inc.; Adapted from Walker 2000.



## Cognitive-Behavioral Therapy (CBGT) vs. Phenelzine Study



Heimberg et al. *Arch Gen Psychiatry*. 1998;55:1133.

## Social Anxiety Disorder Research at P.I.

- Clinical trials of medication and CBT
- PET studies (e.g dopamine function)
- fMRI studies (response to direct gaze)
- Studies of submissive behavior, ethological models
- Decision making
- Cross-cultural studies