Generalized Anxiety Disorder

R. Bruce Lydiard PhD, MD

Clinical Professor of Psychiatry
University of South Carolina
Columbia, SC
and
Director, Southeast Health Consultants
Charleston SC

Pre-Lecture Exam Question 1

1. **Epidemiological studies indicate that the lifetime prevalance of generalized anxiety disorder is:**

A. 17.1%

B. 0.7%

C. 5.1%

D. 24.9%

E. 13.3%

Question 2

2. **Which of the following symptoms is most frequently present in patients with generalized anxiety disorder?**

A. Panic attacks

B. Feeling a detachment and estrangement from others.

C. Markedly diminished interest in significant activities

D. Disturbed sleep

E. Fear of being home alone

Question 3

3. **In contrast to patients with generalized anxiety disorder, subjects with hyperthyroidism:**

A. Experience fatigue

B. May have tachycardia

C. May complain of heat intolerance

D. Present with irritability

E. Always present with goiter

Question 4

4. **Which one of the following statements is true about comorbidity in generalized anxiety disorder?**

A. Panic disorder is the most common coexisting psychiatric disorder.

B. Approximately 25% of patients have a comorbid psychiatric disorder.

C. Major depression rarely co-occurs with generalized anxiety disorder.

D. Borderline personality disorder is the most prevalent Axis II disorder in these patients.

E. Social phobia is the most prevalent coexisting comorbid psychiatric disorder.

Question 5

5. **Which of the following statements about childhood presentation of generalized anxiety disorder is true?**

A. The disorder is uncommon in children and adolescents.

B. 10% of children with overanxious anxiety disorder have a comorbid psychiatric disorder.

C. They often appear overcompliant and perfectionistic.

D. They often experience significant separation anxiety.

E. They respond well to treatment with propranolol.

Question 6

6. **Which of the following compounds have demonstrated efficacy in the treatment of generalized anxiety disorder?**

A. Lithium
B. Tranylcypromine
C. Trazodone
D. Bupropion
E. Pimozide

Question 7

7. **Which of the following statements is true regarding the use of buspirone for generalized anxiety disorder?**

A. The onset of action is immediate, often as rapid as that of alprazolam.

B. Buspirone may be administered once a day.

C. Patients frequently report drowsiness and sedation.

D. Buspirone carries no risk of dependence or withdrawal symptoms.

E. Optimal response is usually achieved at a dose of 15 mg per day.

Question 8

8. **Which of the following is true regarding generalized anxiety disorder in the elderly?**

A. The prevalence of generalized anxiety disorder in the elderly is low.

B. The long acting benzodiazepine diazepam is the preferable medication in these patients.

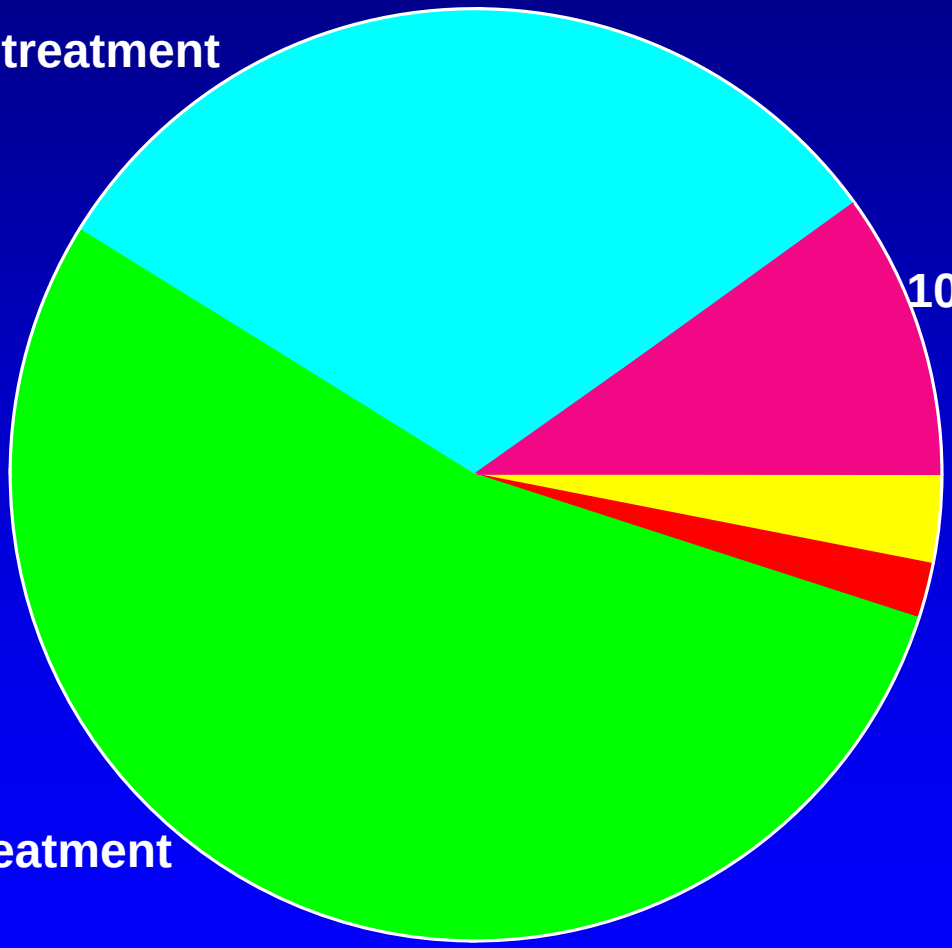
C. Hepatic clearance of anxiolytic medications is decreased in the elderly.

D. The use of TCA's is contraindicated in the elderly.

E. Elderly patients require higher doses of buspirone in order to achieve therapeutic effect.

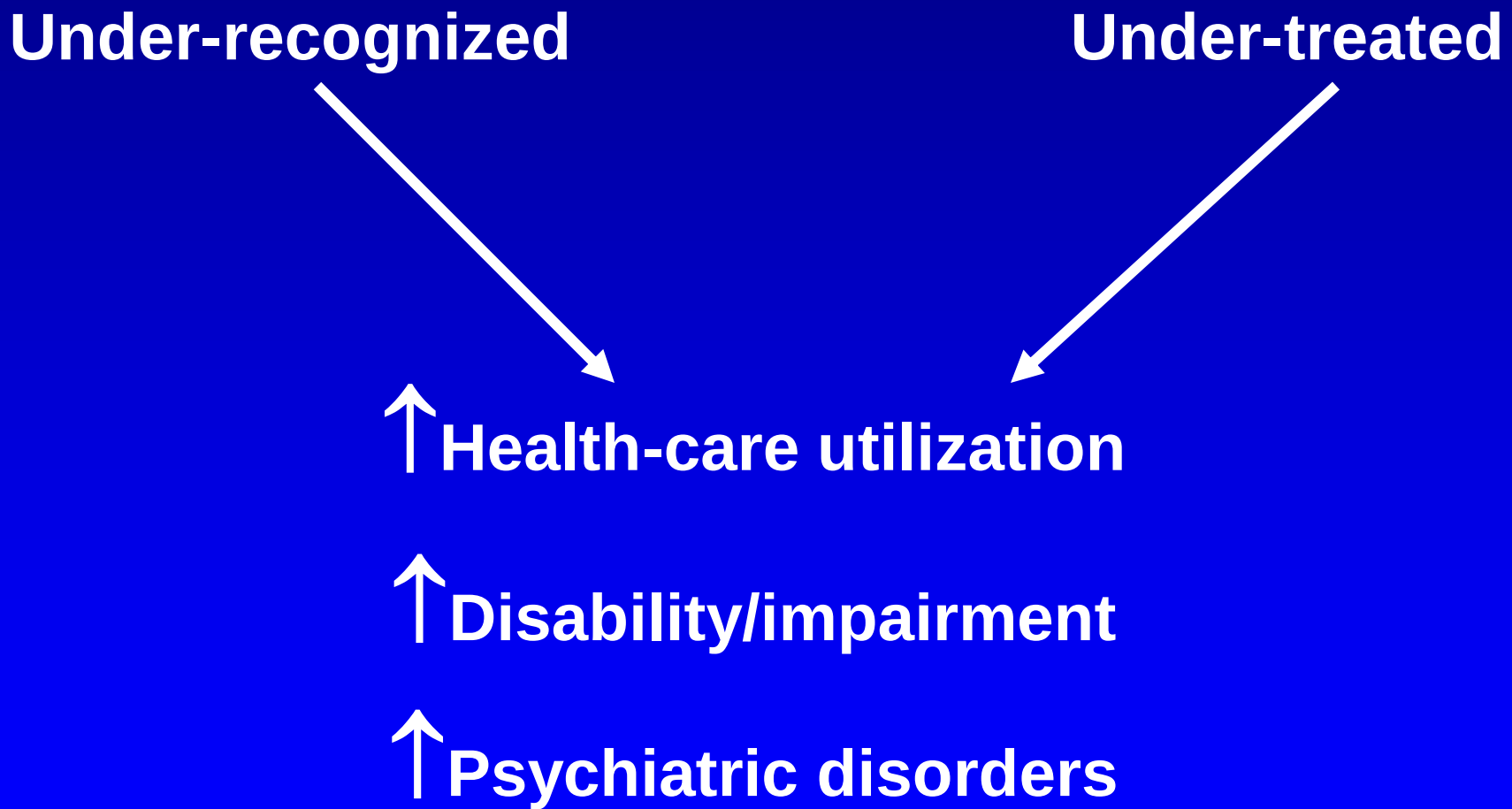
Economic Burden of Anxiety Disorders

Total costs $42.3 billion in 1990



Greenberg PE, et al. J Clin Psychiatry. 1999;60:427-435.

Generalized Anxiety Disorder (GAD)



Generalized Anxiety Disorder (GAD)

Nosology

- In early versions of DSM was a residual anxiety category
- Emphasis has changed from somatic to psychic manifestations
- Increased duration of symptoms to 6 months
- Virtually a new disorder as currently defined
- Perceptions of psychiatrists and PCPs differ

Generalized Anxiety Disorder (GAD)

- Excessive anxiety and worry about a number of events for the majority of days over 6 months
- Difficulty in controlling the worry
- Associated physical and psychological symptoms
- Causes significant distress or impairment
- Not due to a substance or a general medical condition

DSM IV-TR. Washington, DC: American Psychiatric Association. 2000.

GAD Symptoms

- Psychic symptoms
  - worry
  - insomnia
  - fatigue
  - irritability
  - feeling “on edge”
  - poor concentration
- Somatic symptoms
  - muscle tension
  - nausea or diarrhea
  - sweating
  - urinary frequency
  - palpitations

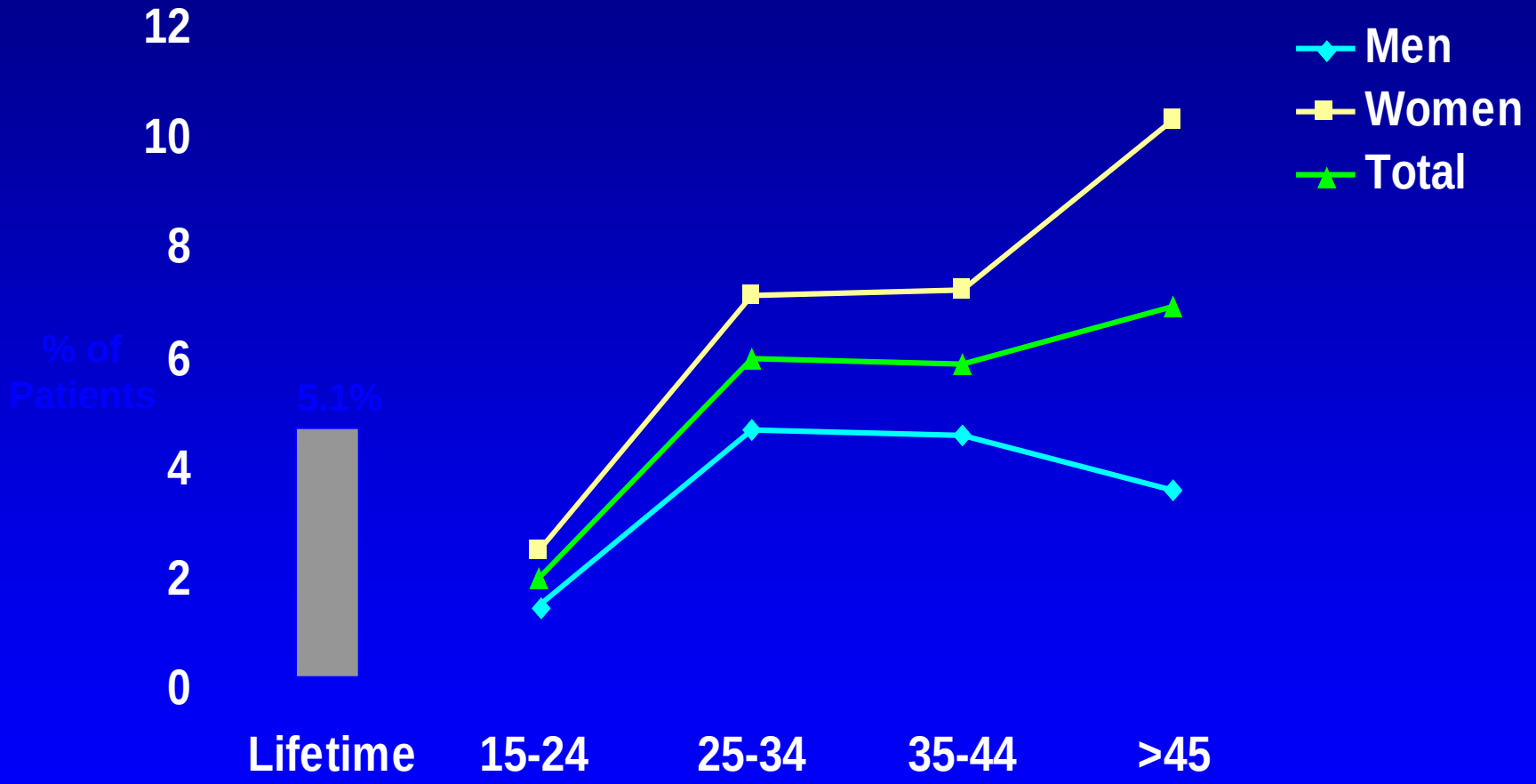
Epidemiology of GAD

- Lifetime prevalence 5.1 %
- Women outnumber men 2:1
- Modal age of onset is early 20s
- High comorbidity in clinical cases; 1/3 “Pure” in community samples
- Chronic (mean > 20 yrs) with low rate of spontaneous remission (25% @ 2 yrs)

Epidemiology of GAD

- 2nd most common psychiatric disorder after depression in primary care[1]
- 8% point prevalence in primary care[2]

Lifetime Prevalence of GAD: National Comorbidity Survey



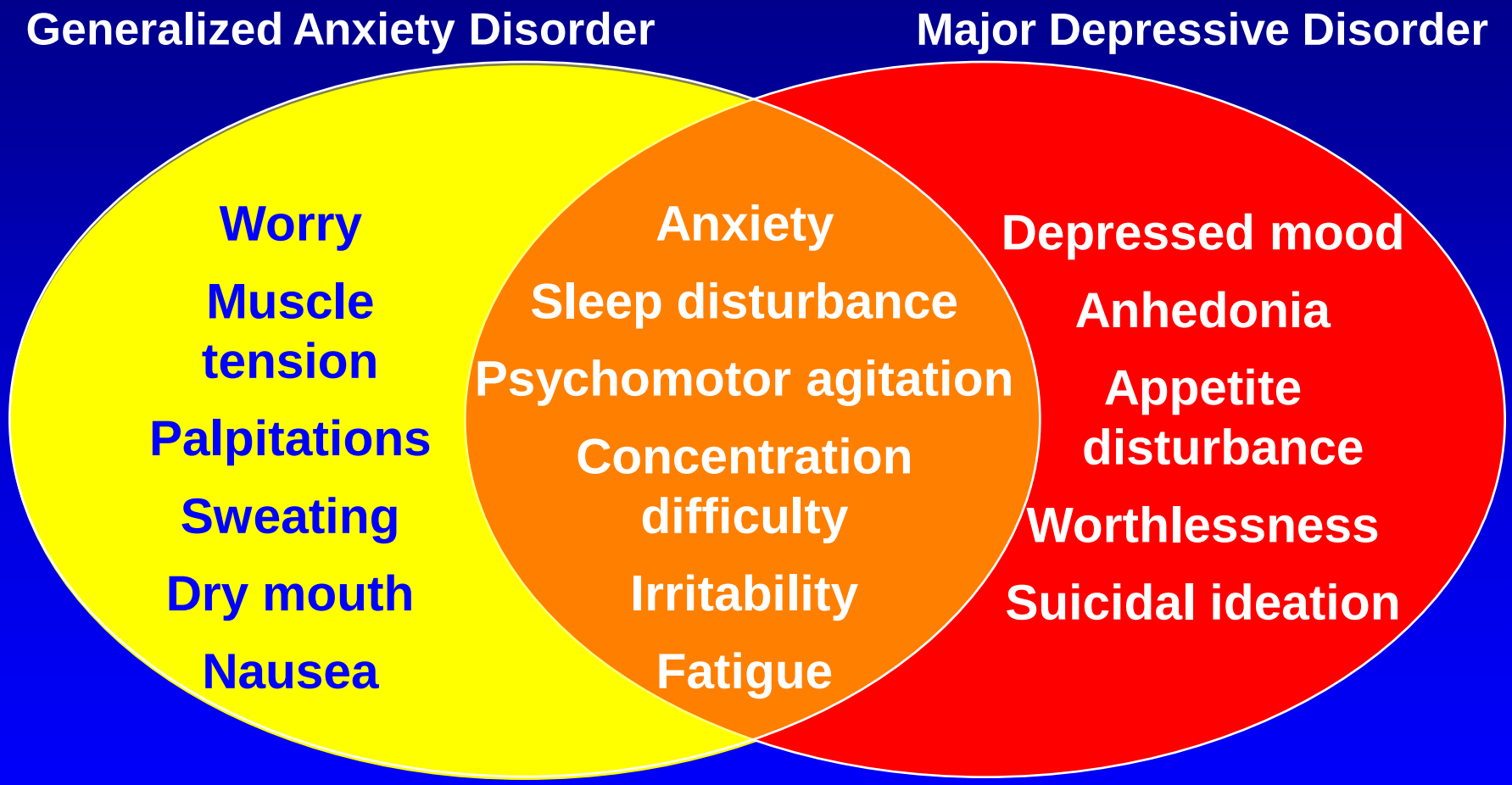
GAD Patients: Comorbidity

- 90% have another psychiatric disorder
- In patients with GAD
  - 62% have lifetime major depression
  - 40% have dysthymia
- Anxiety disorders predict greatest risk of secondary MDD
- 58% of patients with lifetime MDD have anxiety disorder

Primary Psychiatric Disorders
Differential Diagnosis

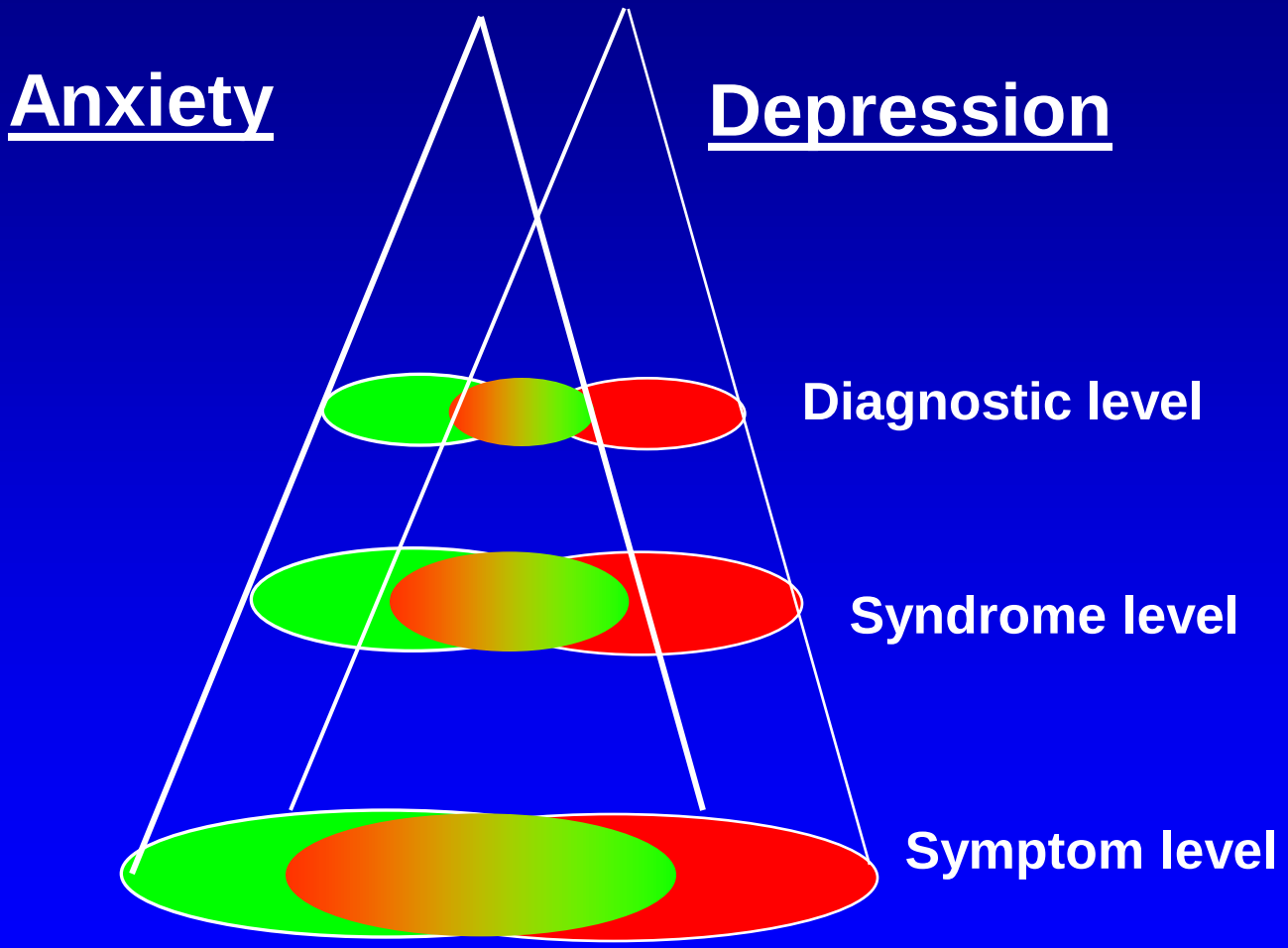
- **Adjustment disorders**
  - With anxiety
  - With depression
  - With mixed symptoms
- **Anxiety disorders**
  - Generalized anxiety disorder (GAD)
  - Panic disorder
  - Phobias
  - Post-traumatic stress disorder (PTSD)
  - Obsessive-compulsive disorder (OCD)

Overlapping Symptoms of Depression and GAD



DSM-IV-TR. Washington, DC: American Psychiatric Association. 2000.

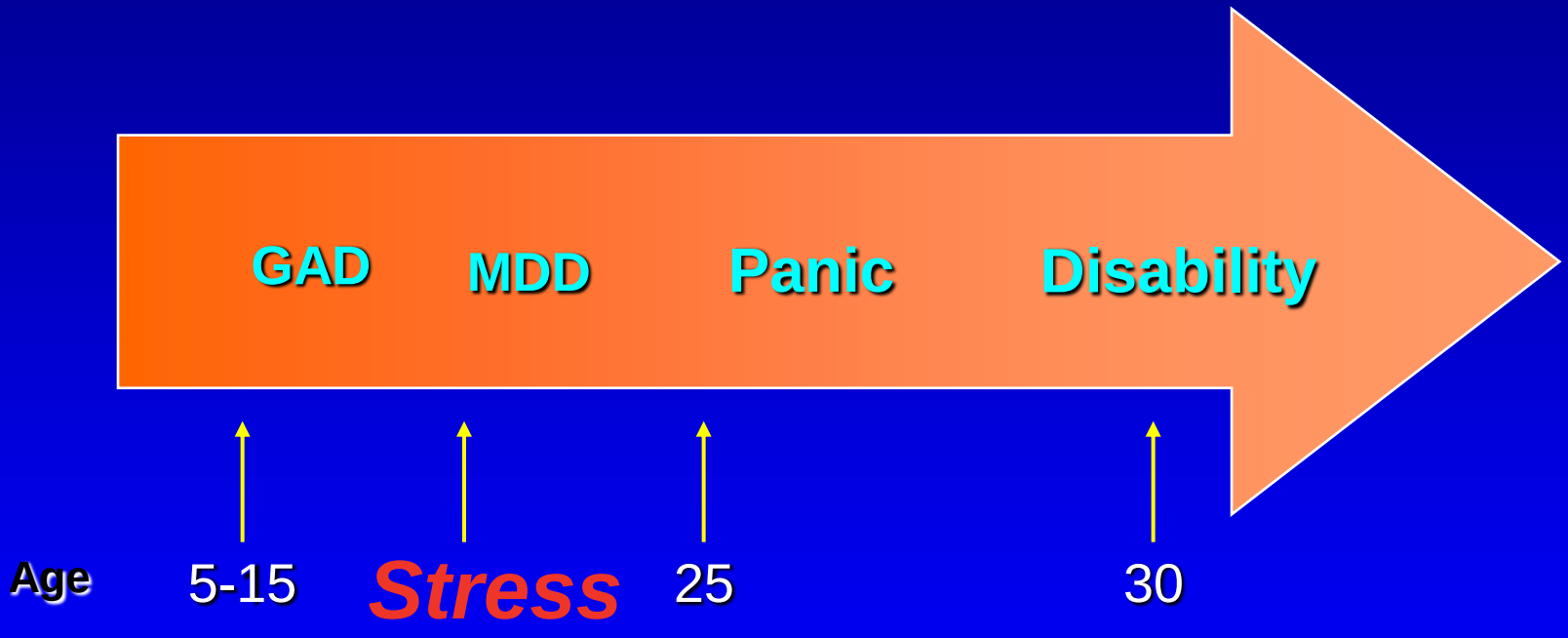
A Model for Overlap Between Anxiety and Depression



Depression and Anxiety are inextricably Linked

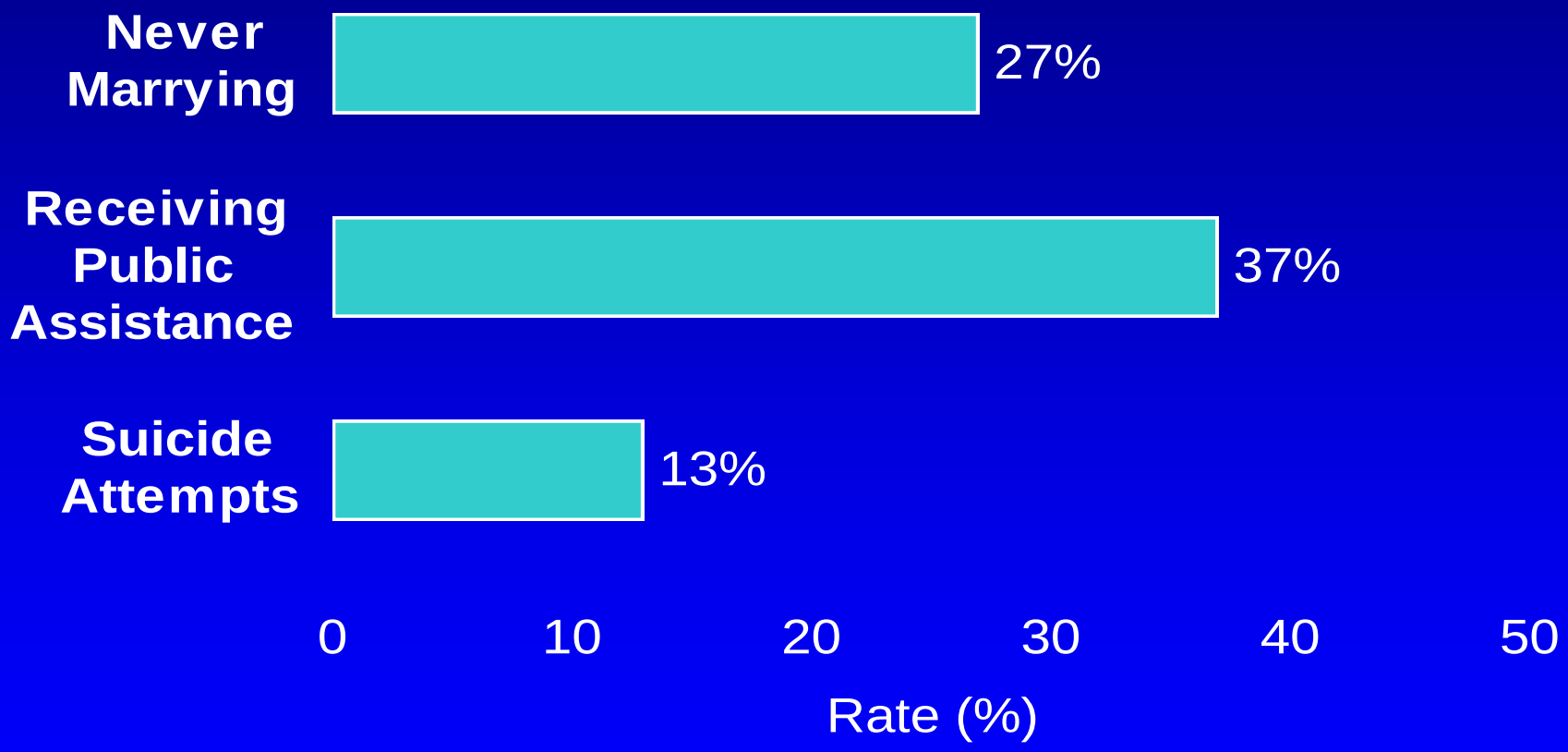
- Common neurobiological substrates
  - CRF key
- Same neural circuits
  - Redundant
  - Mutually homeostatic
- Transmitters are USUALLY co-released
- Over 100 neuromodulators and neurotransmitters identified
- Oversimplification in models unavoidable

Model Sequence
Psychiatric Comorbidity



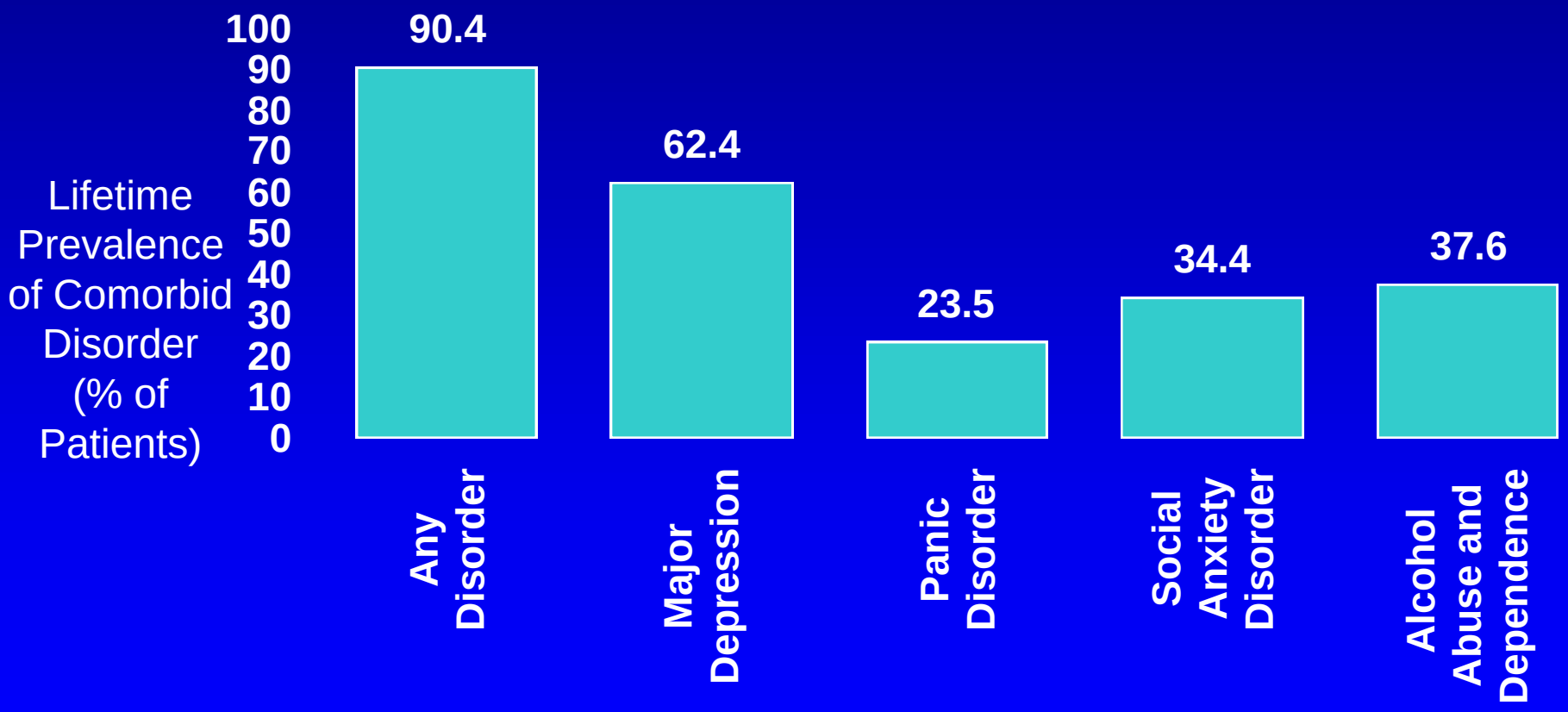
Suggests common neurobiology
Nosology necessary but imperfect

GAD: *Complications*



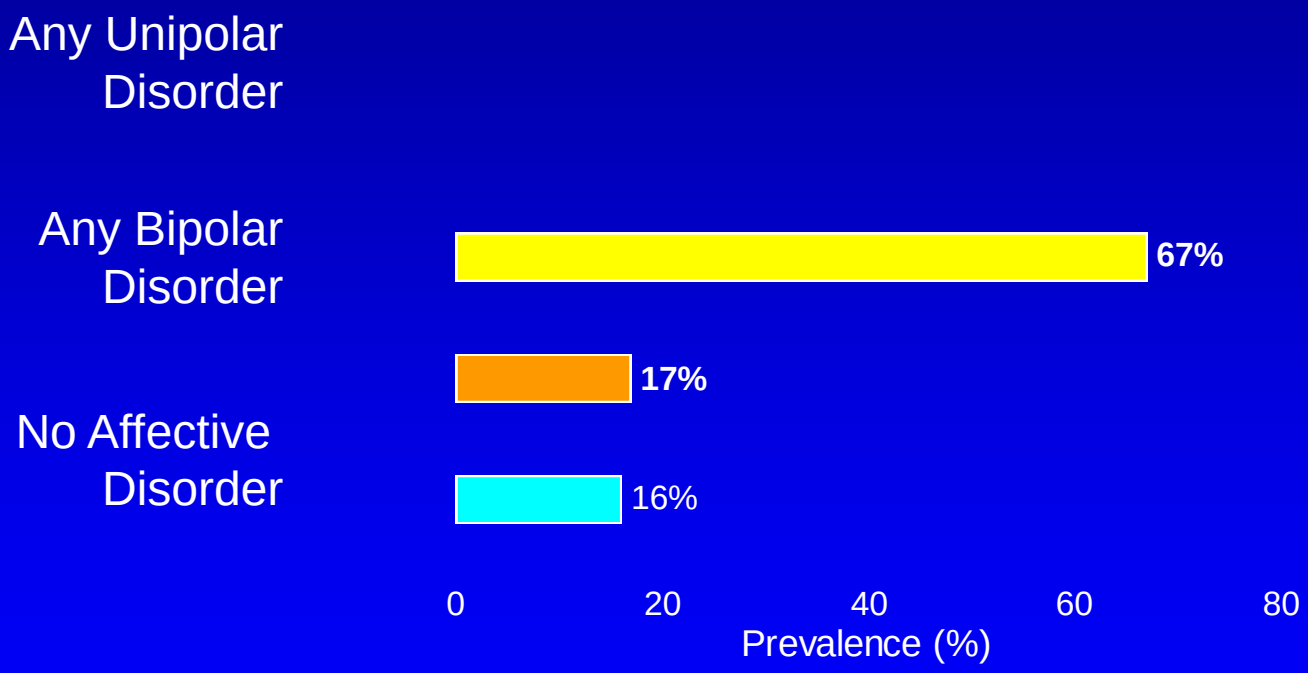
Massion AO et al. *Am J Psychiatry*. 1993;150:600-607.

Lifetime Prevalence of Comorbid Disorders in Patients with GAD



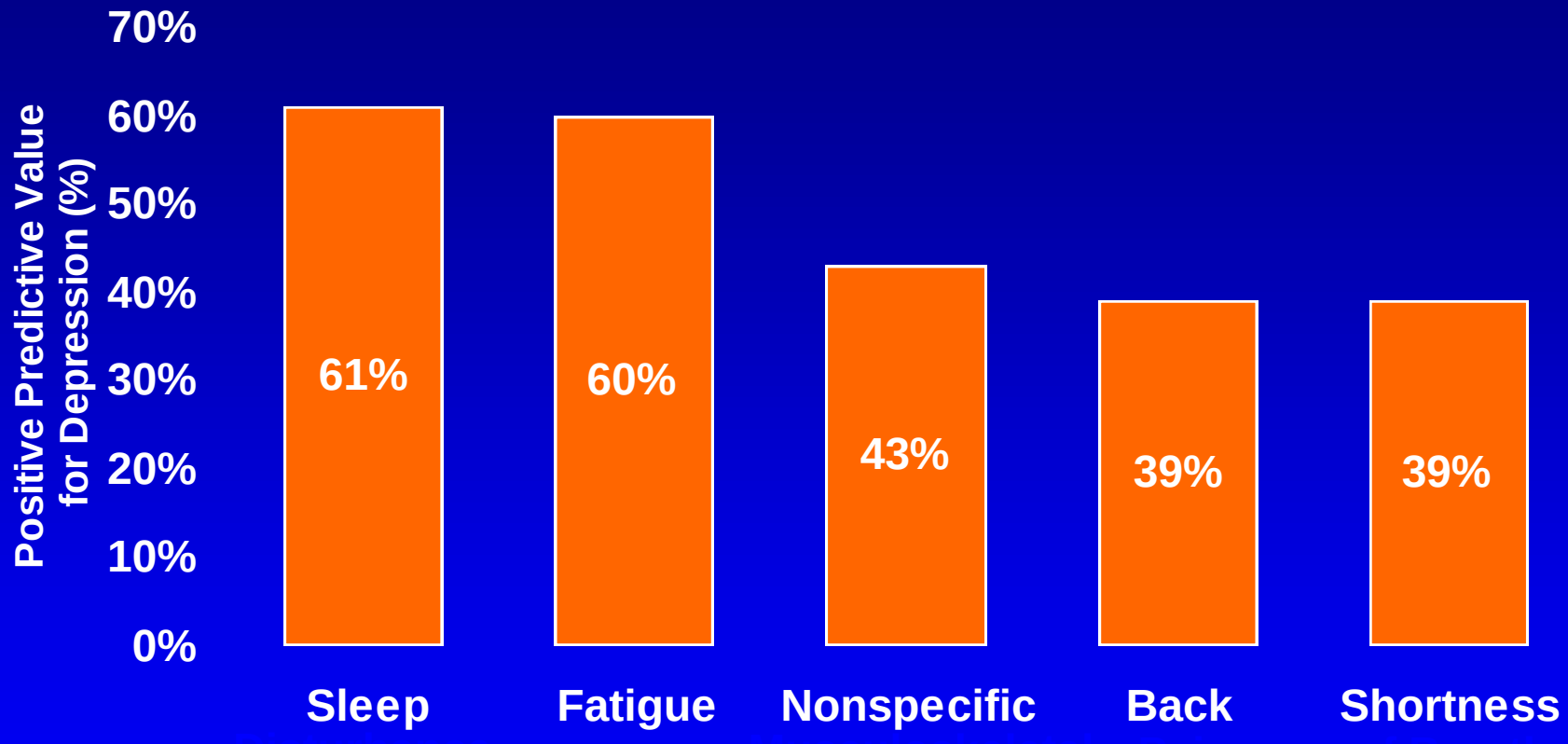
Wittchen HU et al. *Arch Gen Psychiatry*. 1994;51:355-364.

Prevalence of Mood Disorders Comorbid with Lifetime GAD

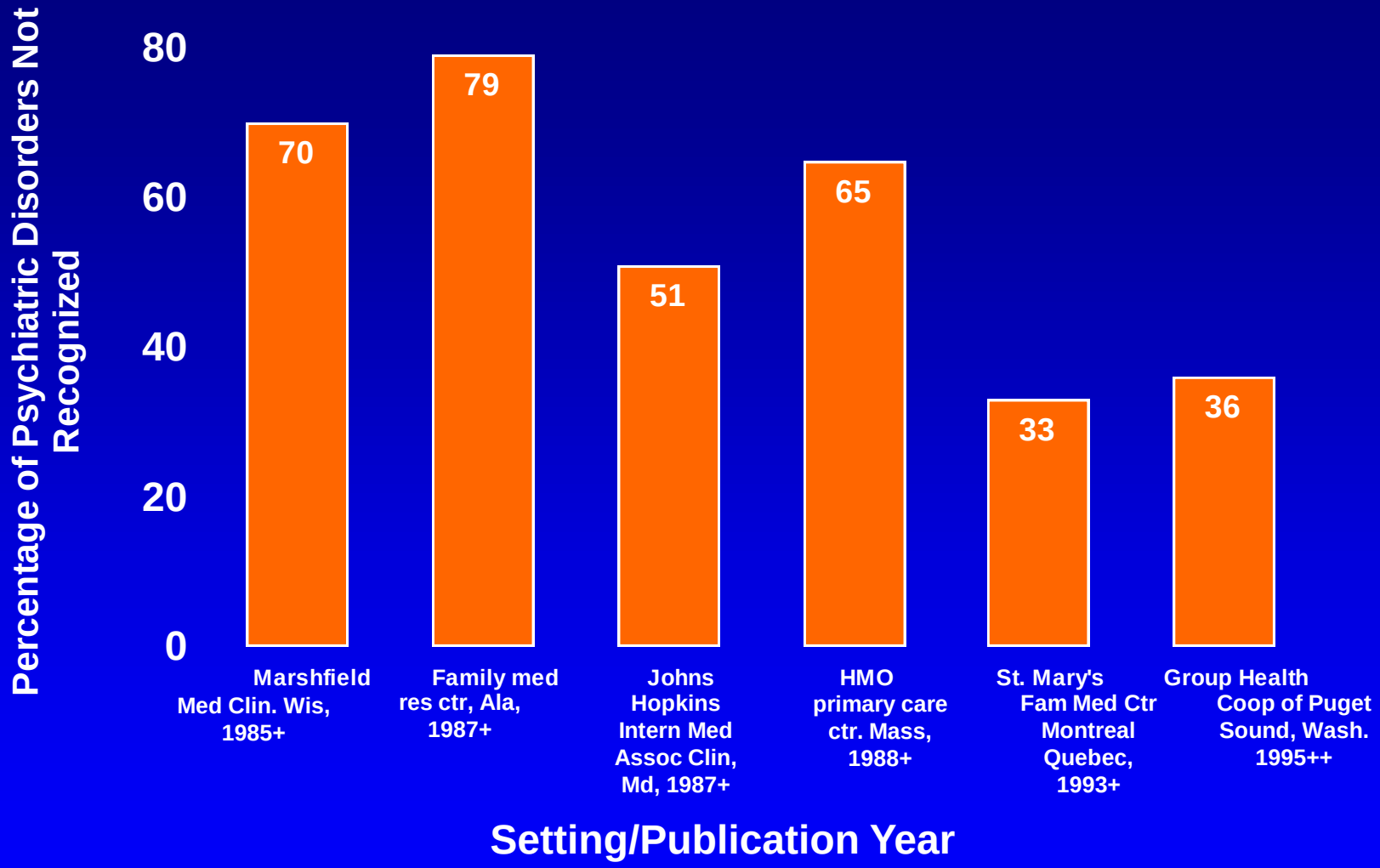


Weighted n = 418.
Results from NCS respondents.
Judd LL et al. *Acta Psychiatr Scand*. 1998;98(suppl 393):6-11.

Somatic Symptoms: Potential Markers for Depression (n=1042)



Psychiatric Disorders Often Go Undiagnosed in Primary Care

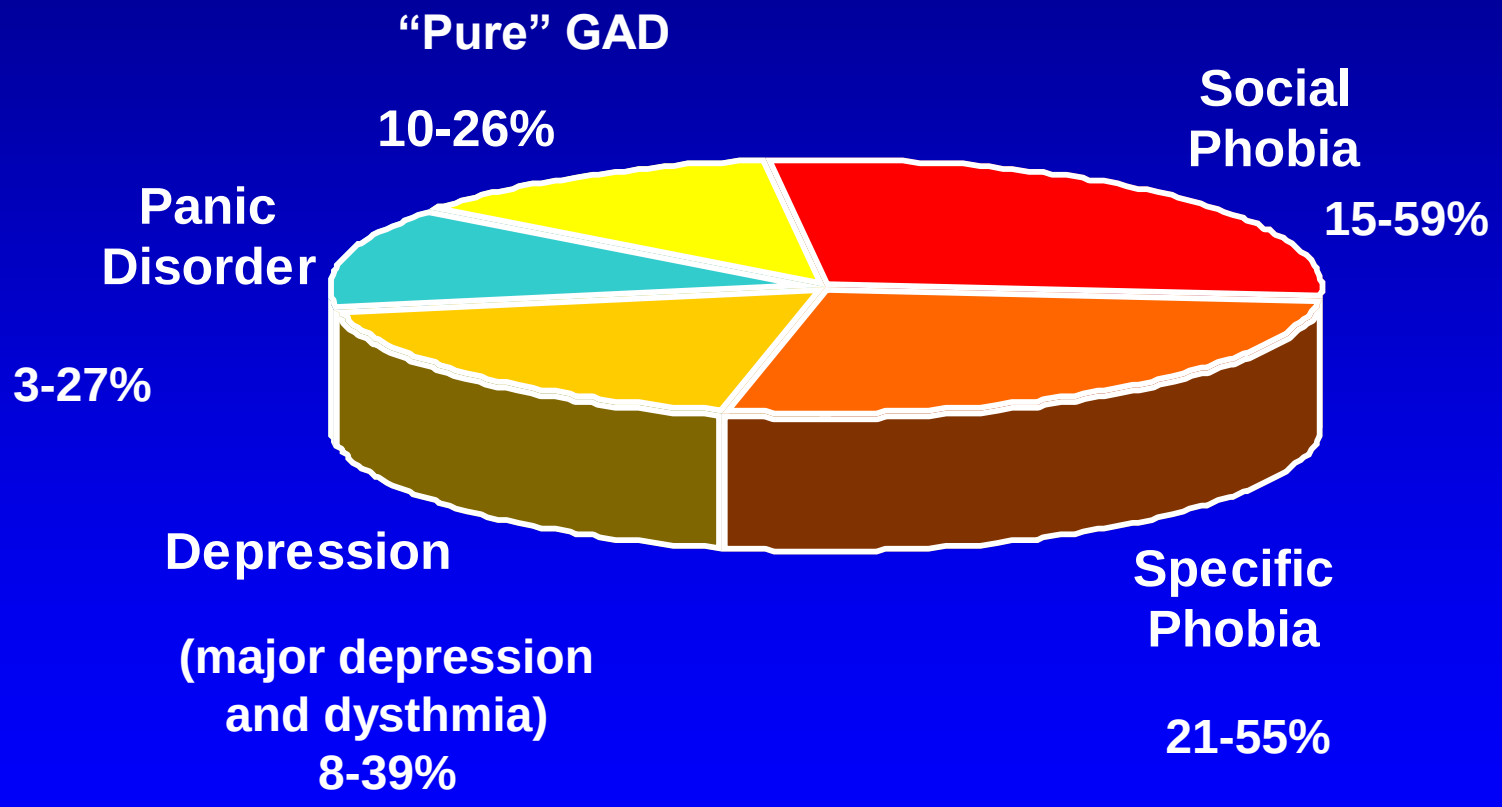


* Unrecognized major depression

+ Adapted from Higgins ES. A review of unrecognized mental illness in primary care, prevalence, natural history, and efforts to change the course. *Arch Fam Med* 1994;3:908-907

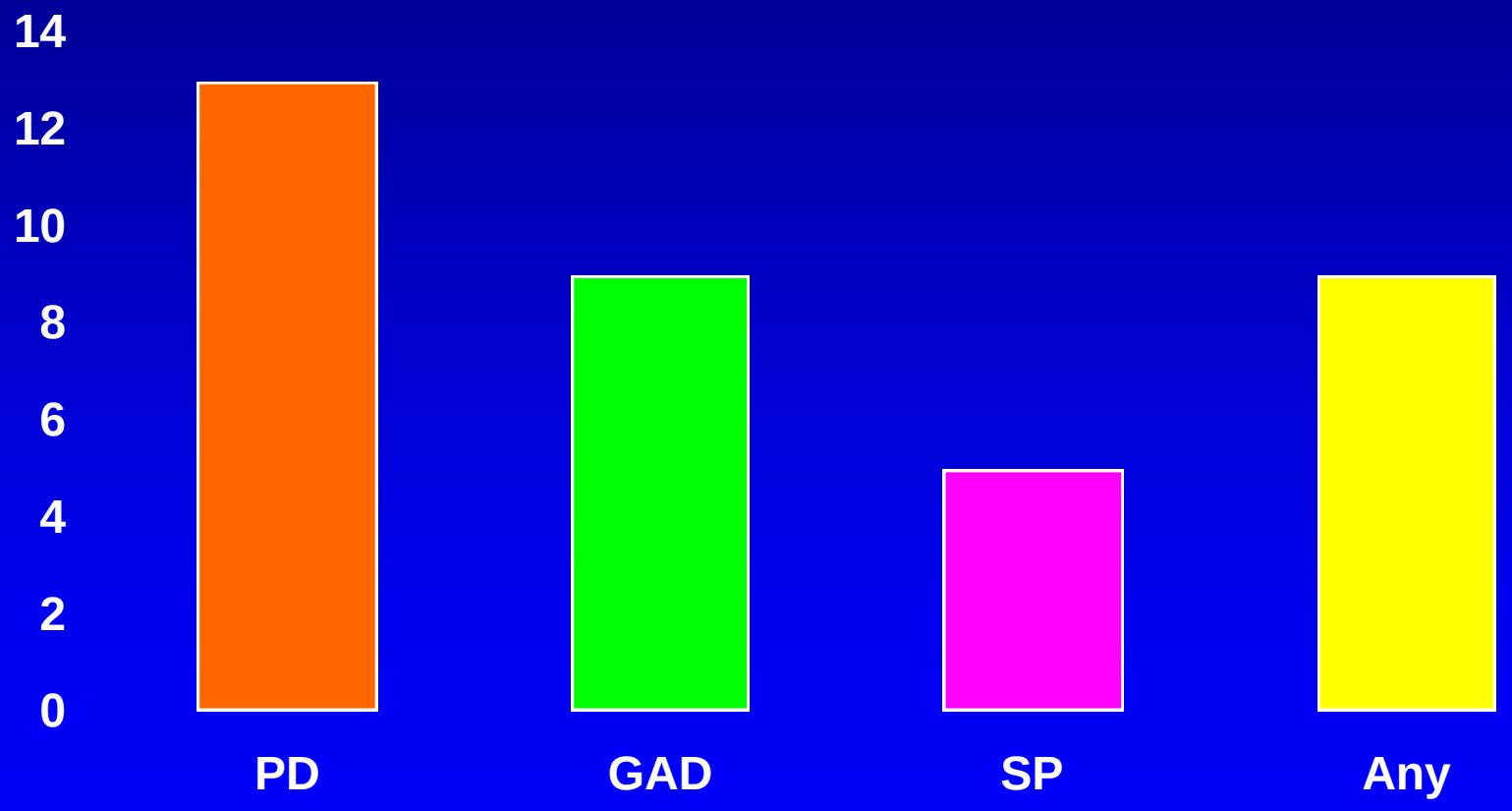
++Adapted from Simon GE et al. Recognition, management, and outcomes of depression in primary care. *Arch Fam Med*; 4:99-105

Psychiatric Comorbidity in Generalized Anxiety Disorder*



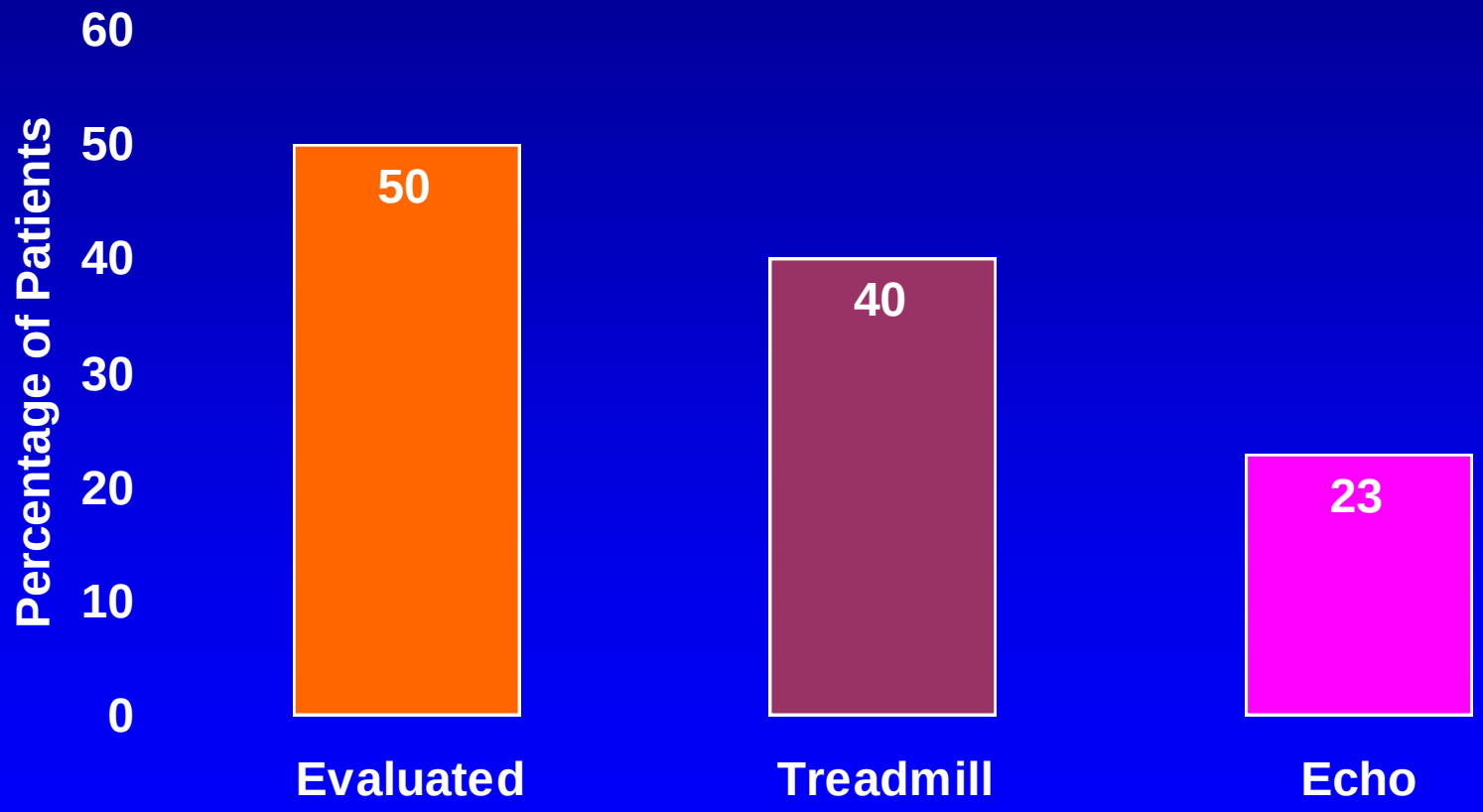
*Current comorbid psychiatric diagnosis

Lifetime Risk of MDE in Anxiety Disorder (O.R.)



GAD in Cardiology

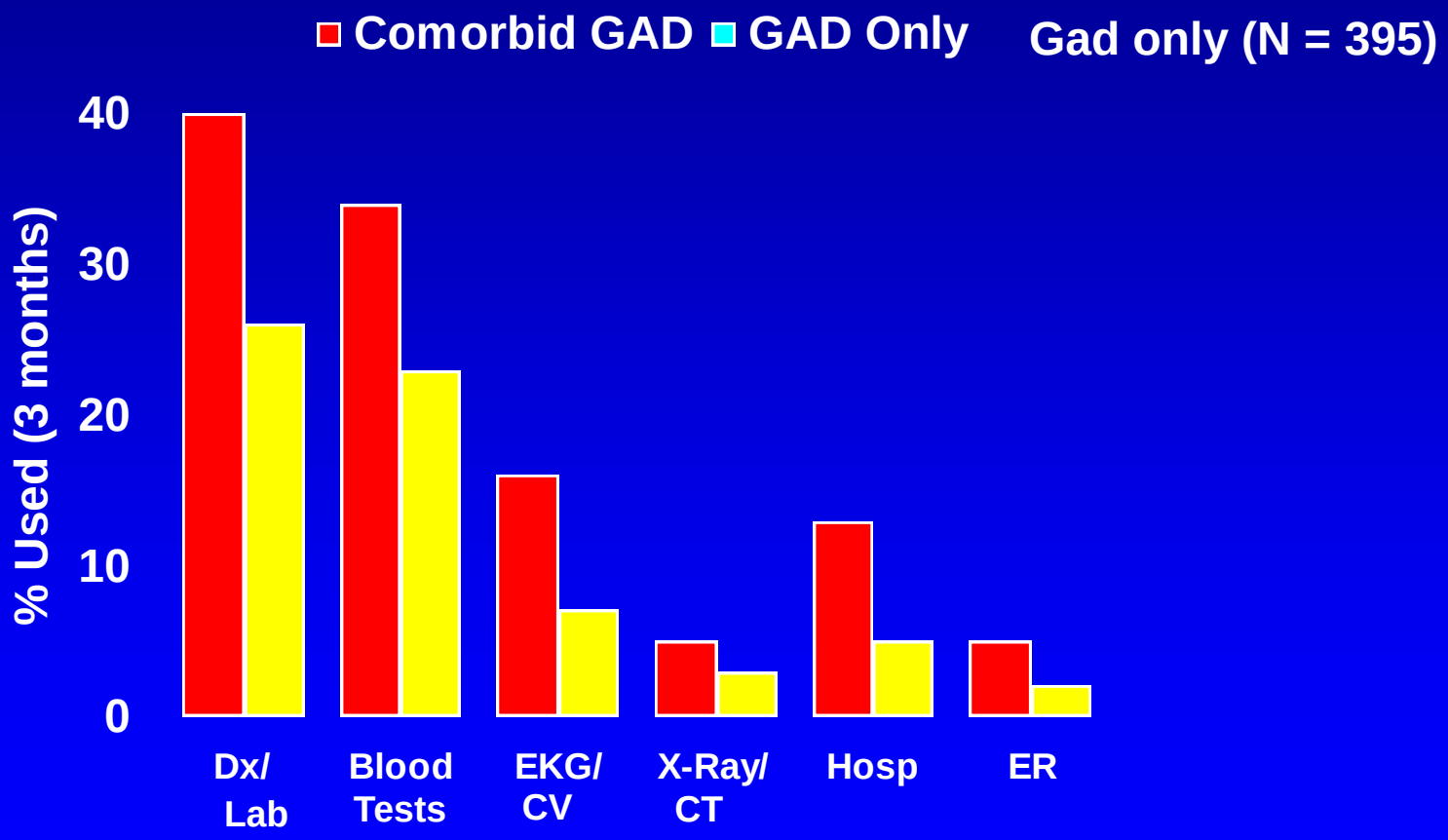
Cardiovascular Evaluation Sought by GAD Patients



Logue et al, *Psychiatr Res* 1993;27:55

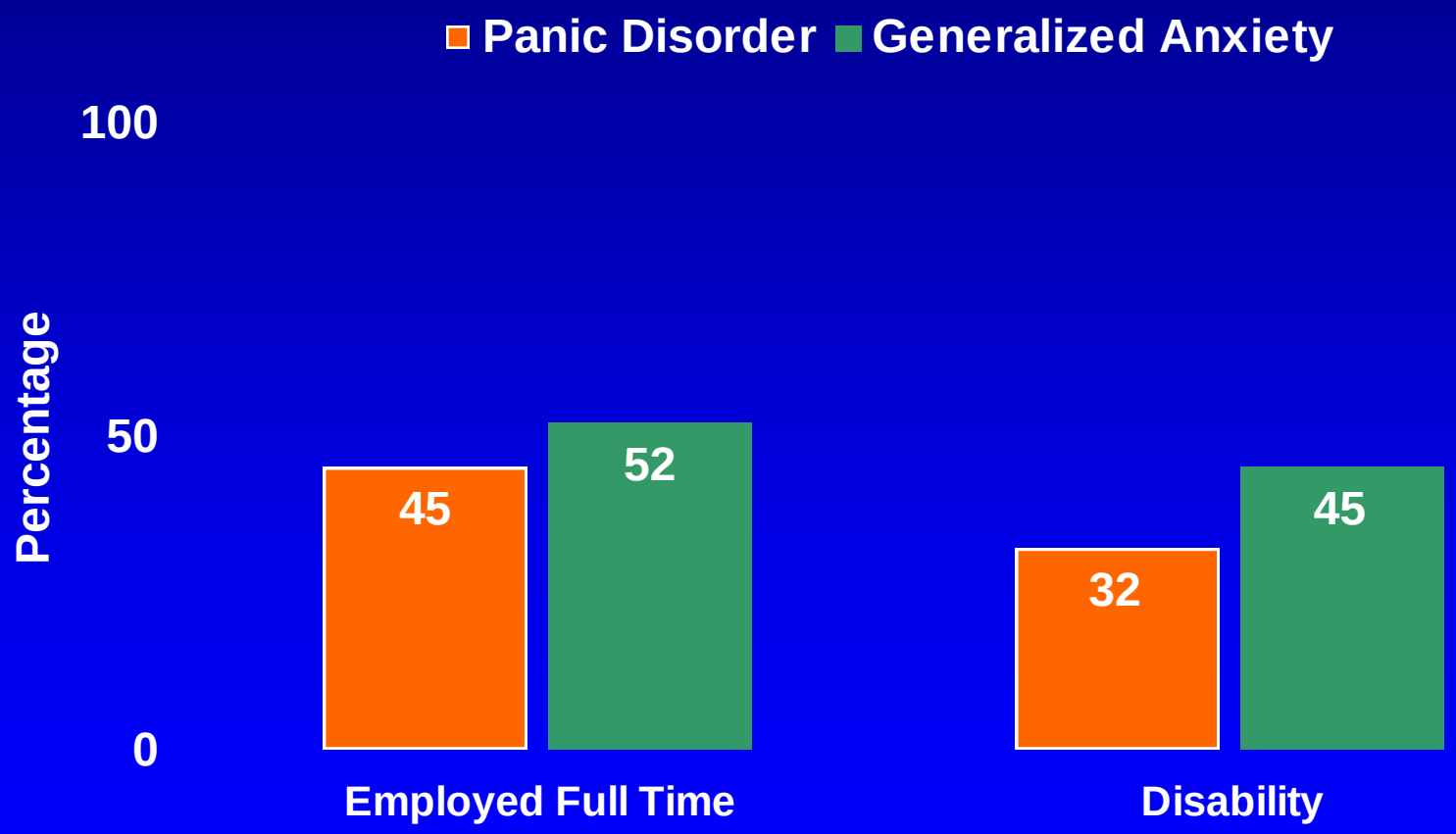
Generalized Anxiety Disorder

Services Utilization and Comorbidity



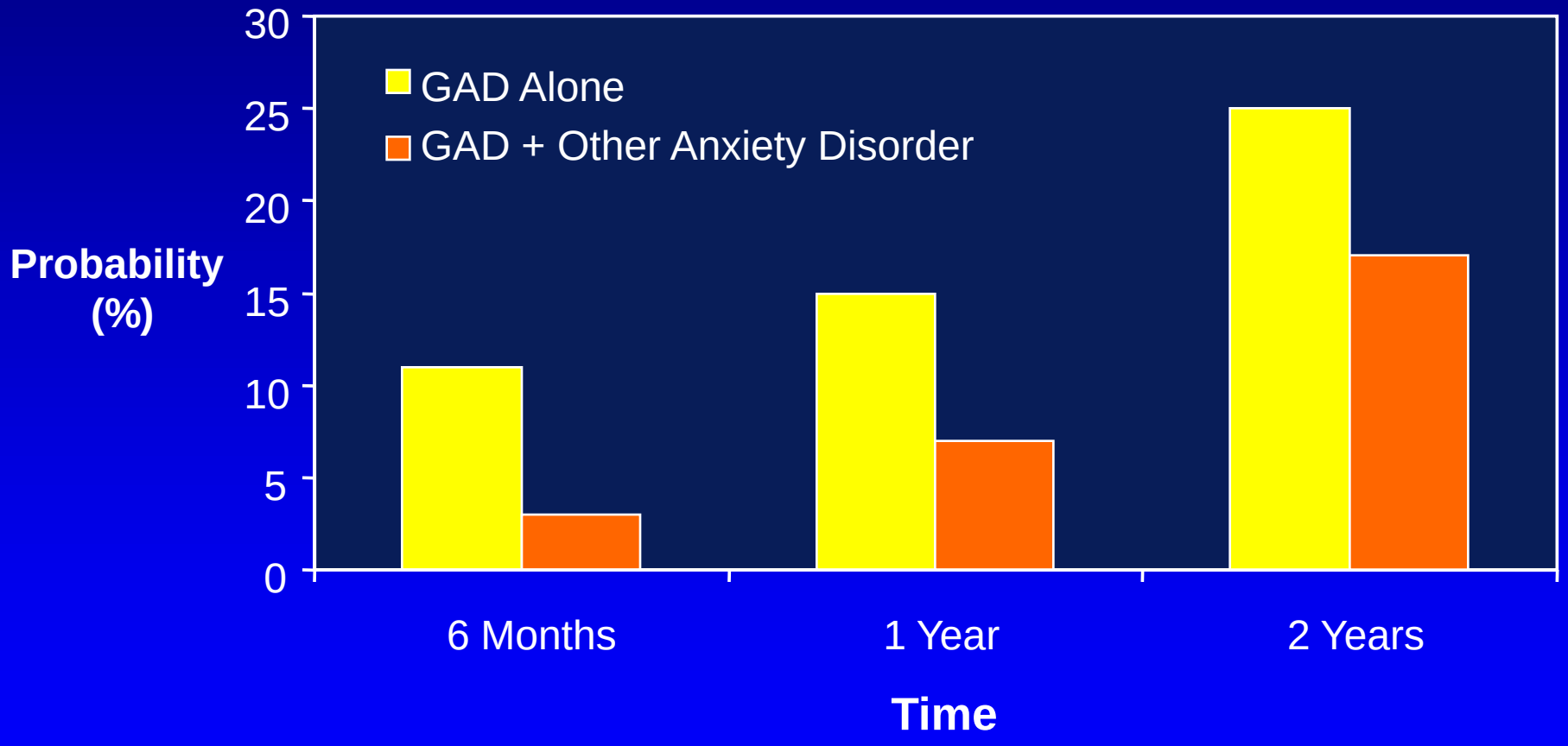
Souetre et al, *J Psychosom Res* 1994;151

Harvard-Providence Research Project (HARP)



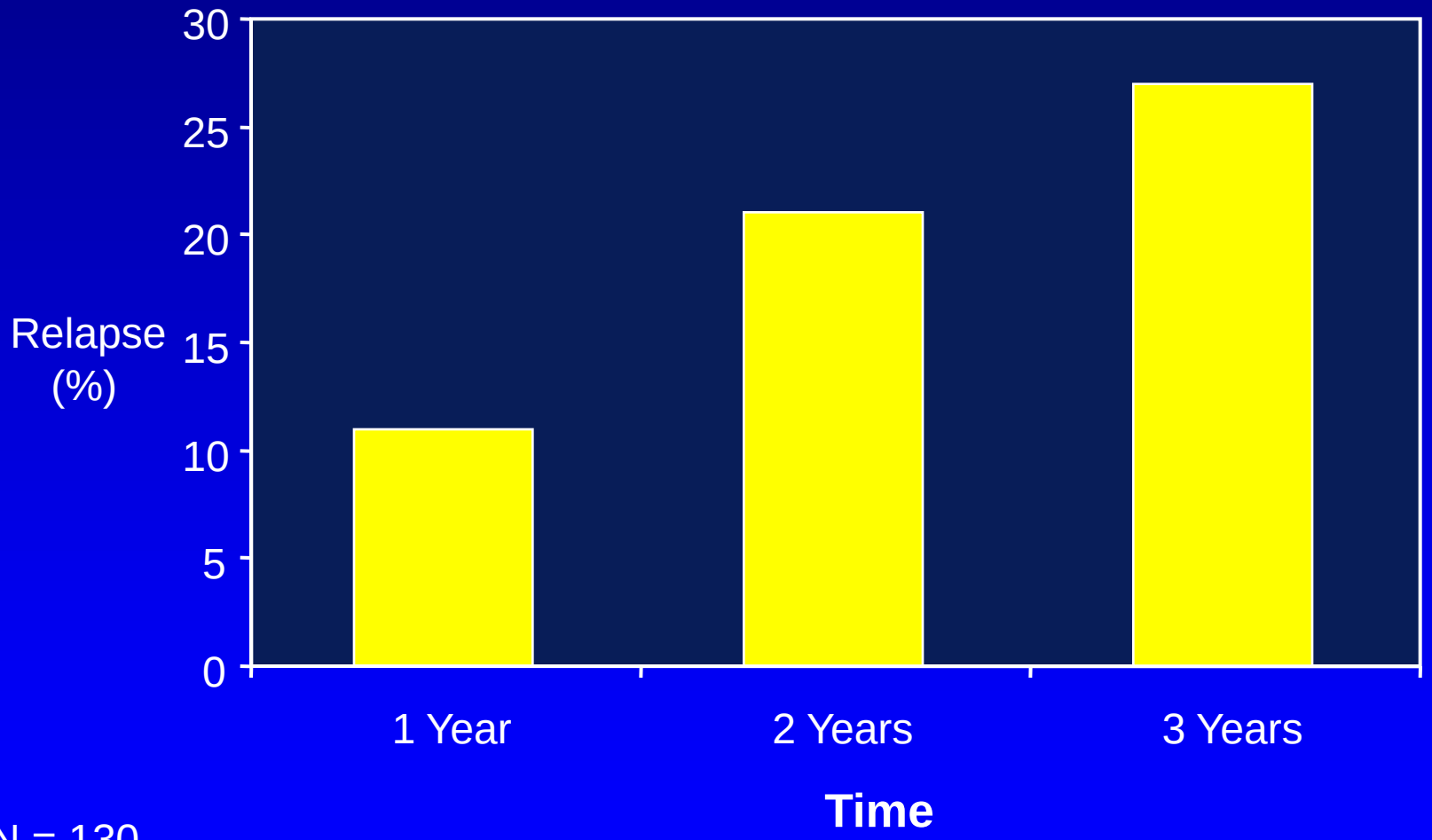
Massion et al, *Arch Gen Psychiatry* 1993;150-600

Low Probability of Remission in GAD*



Yonkers KA et al. *Br J Psychiatry*. 1996;168:308-313.

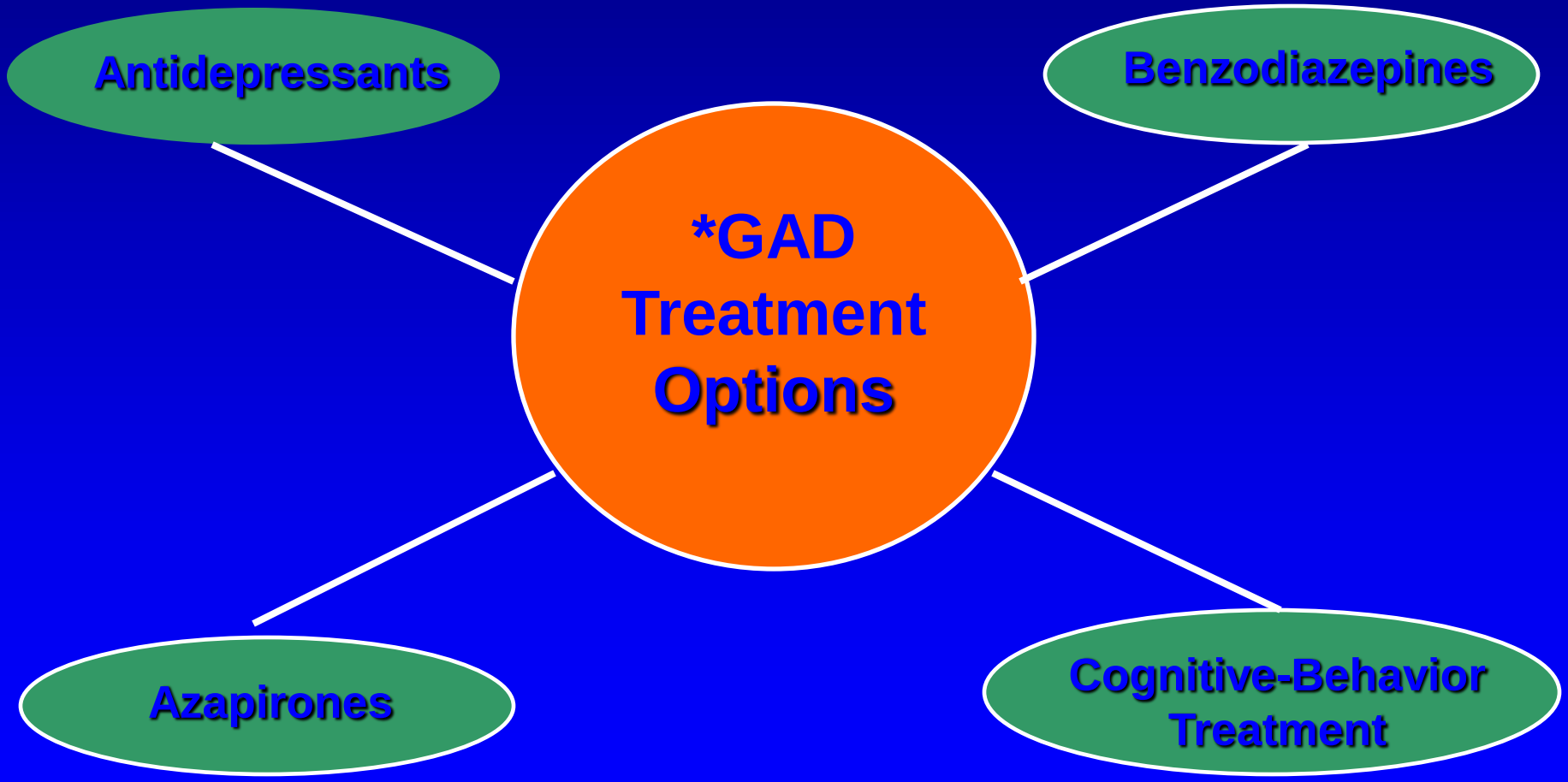
Relapse Rates in GAD After Full Remission



N = 130.

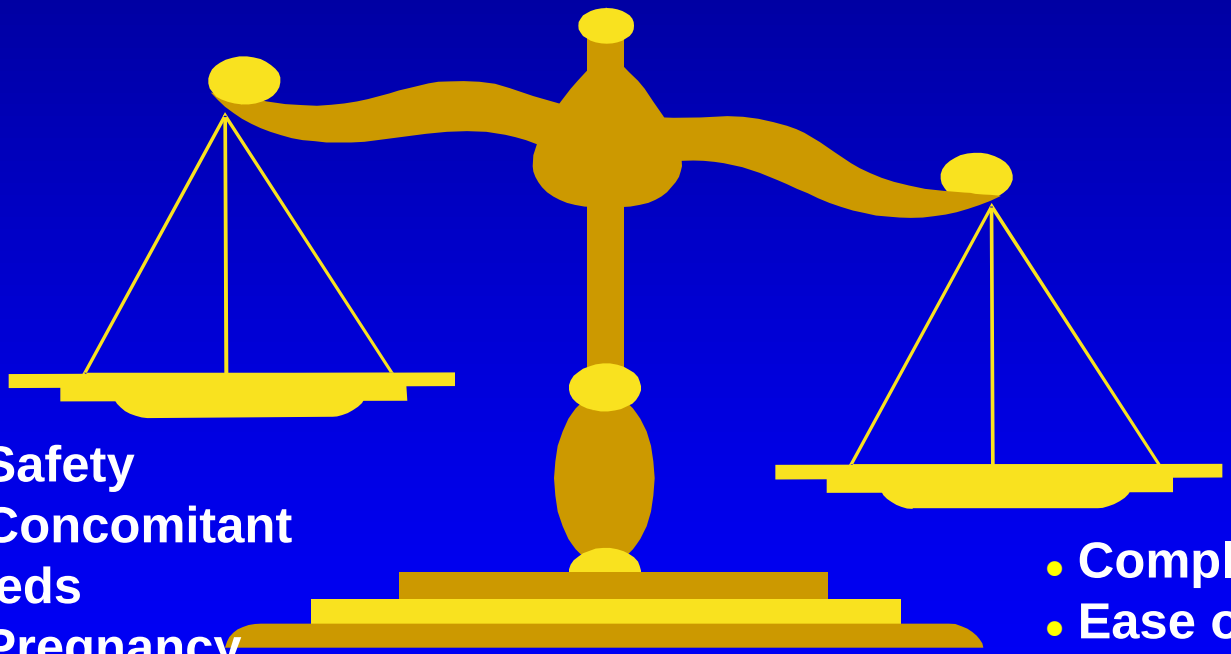
Yonkers KA et al. *Br J Psychiatry*. 2000;176:544-549.

“Pure” GAD: Treatment Options



Initiating therapy: treatment considerations

Ease of management



- Safety
- Concomitant meds
- Pregnancy
- Age
- Washout

- Compliance
- Ease of switching
- Ease of discontinuation

Patient Assessment

- Establish Diagnosis
- Comorbid diagnosis present?
  - Current or past depression
- Natural History of Illness
- Treatment History
- Family History
- Medical History and exam
  - Review medications, *including herbal medicine*

Differential Diagnosis

Medications Which Can Cause Anxiety Symptoms

– Stimulants (caffeine)

– Thyroid supplementation

– Antidepressants

– Corticosteroids

– Oral contraceptives

– Bronchodilators

– Decongestants

– Abrupt withdrawal of CNS depressants

- Alcohol
- Barbiturates
- Benzodiazepines

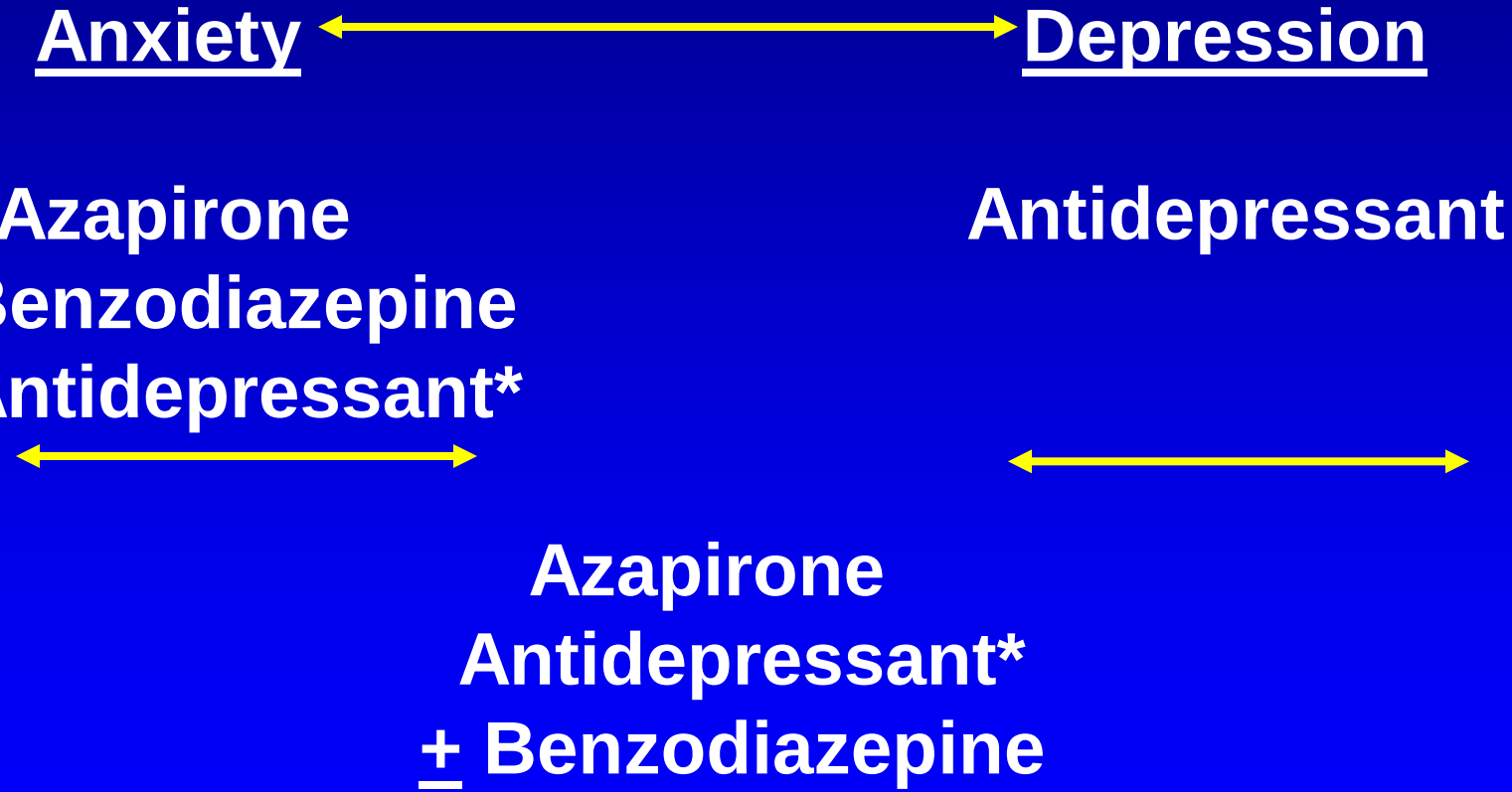
Fernandez et al. J Clin Psychiatry. 1995;56(suppl 2):20–29.
Kirkwood et al. Anxiety disorders. In: DiPiro et al, eds. Pharmacotherapy: A Pathophysiologic
Approach. 3rd ed. 1997:1443–1462.

Differential Diagnosis

Medical Conditions with Secondary Anxiety Symptoms

- Endocrine disorders
  - Thyroid disease
  - Parathyroid diseases
  - Hypoglycemia
  - Cushings Disease
- Cardio-respiratory disorders
  - Angina
  - Pulmonary embolism
- Autoimmune disorders
- Neurological
  - Seizure disorder
- Substance-related dependence/ withdrawal
  - Nicotine
  - Alcohol
  - Benzodiazepines
  - Opioids

Treatment Considerations for Anxiety-Depression Spectrum



*Antidepressant of choice may vary by diagnostic category, side effects profile, and anxiolytic profile

GAD Treatments
Newer Antidepressants
Venlafaxine and SSRIs

Advantages

- **Effective**
- **Benign side-effect profile**
- **Safety**
- **No dependence issues**
- **Once a day dosing**

Disadvantages

- **Delayed onset of action**
- **Early anxiogenic effect**
- **Sexual side-effects**
- **Usually requires dose titration**

***Nefazodone , bupropion, mirtazepine -insufficient information**

The Evolution of Antidepressants

**Broad-Spectrum Of Efficacy*

Imipramine (1957)

Clomipramine
Nortriptyline
Amitriptyline
Desipramine

Phenelzine
Isocarboxazid
Tranylcypromine

Maprotiline
Amoxapine

Bupropion

Fluoxetine*
Sertraline*
Paroxetine*
Fluvoxamine*
Citalopram*
Escialopram*

Nefazodone
Mirtazapine

Venlafaxine*

Kaplan HI, Sadock BJ. In: *Synopsis of Psychiatry: Behavioral Sciences, Clinical Psychiatry.* 8th ed. 1998:932-933. *Adapted by RB Lydiard*

GAD Treatments
Tricyclic antidepressants (TCAs)

Advantages

- **Single daily dose**
- **Antidepressant effects**
- **No abuse potential**
- **Well studied**
- **Effective**
- **Generics available**

Disadvantages

- **Delayed onset**
- **Anticholinergic side-effects**
- **Postural hypotension**
- **Weight gain**
- **Sexual side-effects**
- **Initial stimulation**
- **Dangerous in overdose**

Antidepressant Dosing for GAD

AGENT	Dosage Range (mg)
Atypical Antidepressants	
Venlafaxine**	75-225
Trazodone*	150-600
Nefazodone*	100-450
TCAs	
Imipramine*	100-300
Chlorimipramine*	50-150
SSRIS	
Fluoxetine	20-60
Sertraline*	100-200
Paroxetine*	20-40
Fluvoxamine	100-300
Citalopram*	20-40
Escitalopram*	10-20

*Controlled data , **FDA approved

GAD Treatment
Benzodiazepines

Advantages

- **Rapid onset**
- **Effective**
- **Well-tolerated**
- **General anti-anxiety effects**
- **Safe in overdose**
- **Generics available**

Disadvantages

- **Withdrawal reactions**
- **Sedation**
- **Multiple daily dosing often required**
- **Abuse potential in patients w/ Hx abusing**
- **Poor antidepressant effect**

GAD Treatment
Benzodiazepines

Agent	Daily Dosage Range (mg)
Benzodiazepines	
Alprazolam	2-6
Clonazepam*	1-3
Lorazepam	4-10
Diazepam*	15-20

*Slow elimination, longer to steady-state

Benzodiazepine Approximate Clinical Equivalents

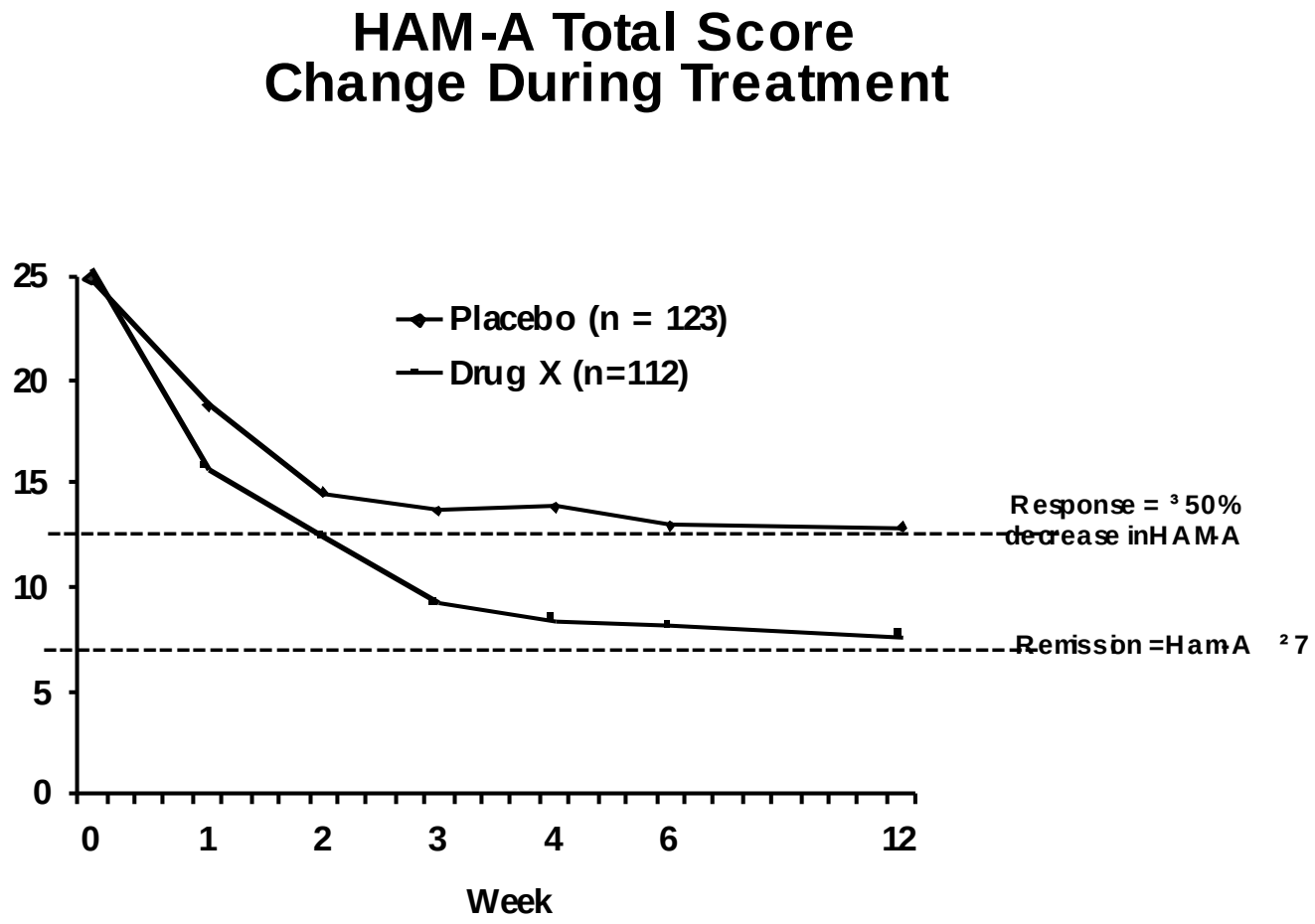
- Clonazepam 0.5
- Alprazolam 1 mg
- Lorazepam 1.5 mg
- Diazepam 10 mg

Guidelines for Remission of GAD

Subjective Goal	Objective Goal	Time Course
Minimize anxiety	HAM-A score ≤ 7-10 or 70% improvement on patient-rated scale	8-12 wk
Eliminate depression	HAM-D score ≤ 7 or 70% improvement on patient-rated scale	3-6 mo
Prevent recurrence of depression	HAM-D score ≤ 7 or 70% improvement on patient-rated scale	3-12 mo
Resolve functional impairments	Sheehan score ≤ 1 (mildly disabled)	3-12 mo

Ballenger JC. *J Clin Psychiatry.* 1999;60(suppl 22):29-34.

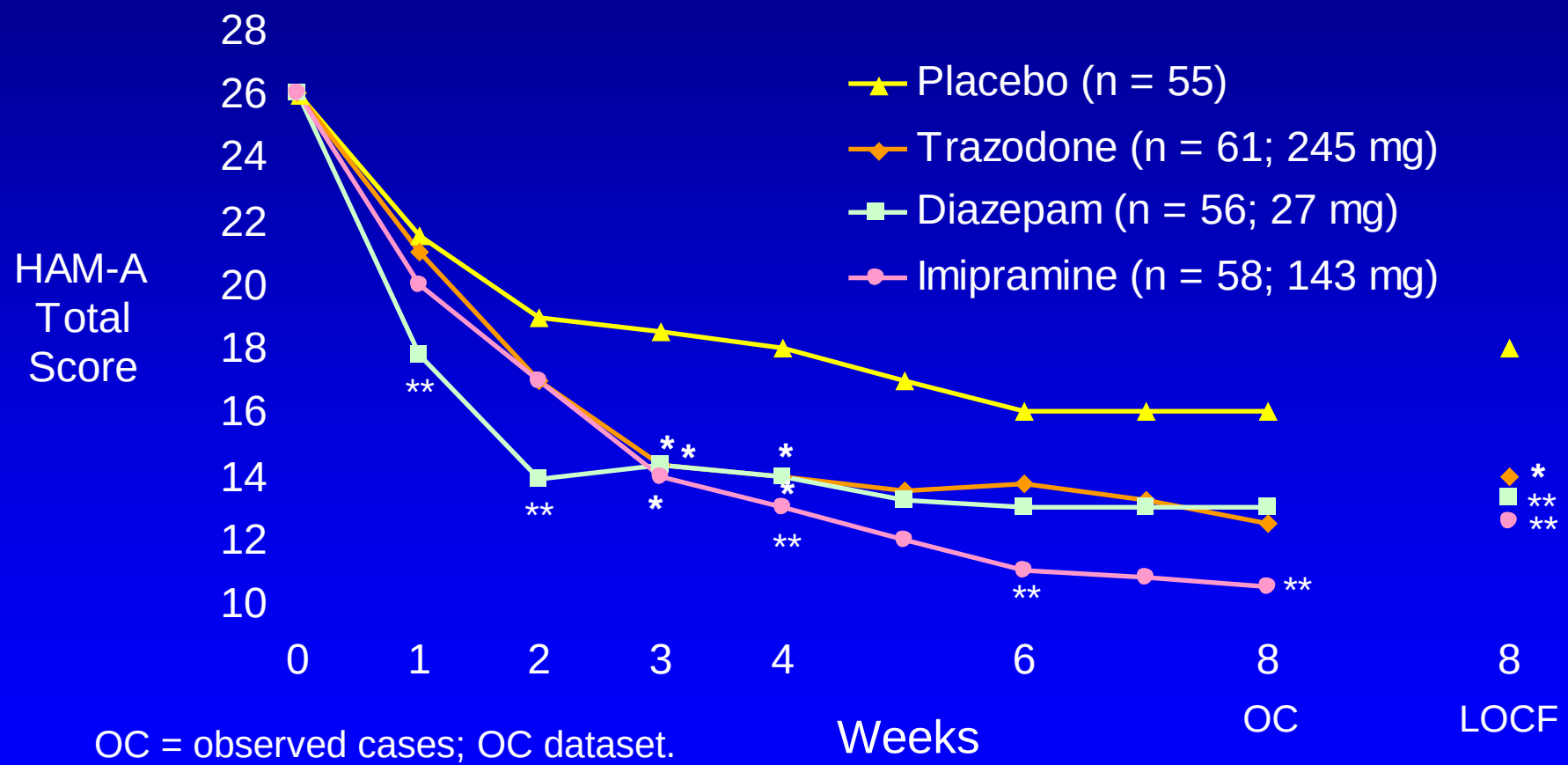
Response vs Remission



Outcomes Assessment in GAD

- Hamilton Anxiety Rating Scale
  - Traditionally used in clinical trials
- Hospital and Anxiety Rating Scale
  - Patient rated 14 items
    - 7 items for anxiety
    - 7 items for depression
    - Sensitive to change
    - Equivalence to Hamilton Anxiety Scale shown in large patient sample

Imipramine, Diazepam, and Trazodone Treatment of GAD



OC = observed cases; OC dataset.

*$P < .05$.

**$P < .01$.

Rickels K et al. *Arch Gen Psychiatry*. 1993;50:884-895.

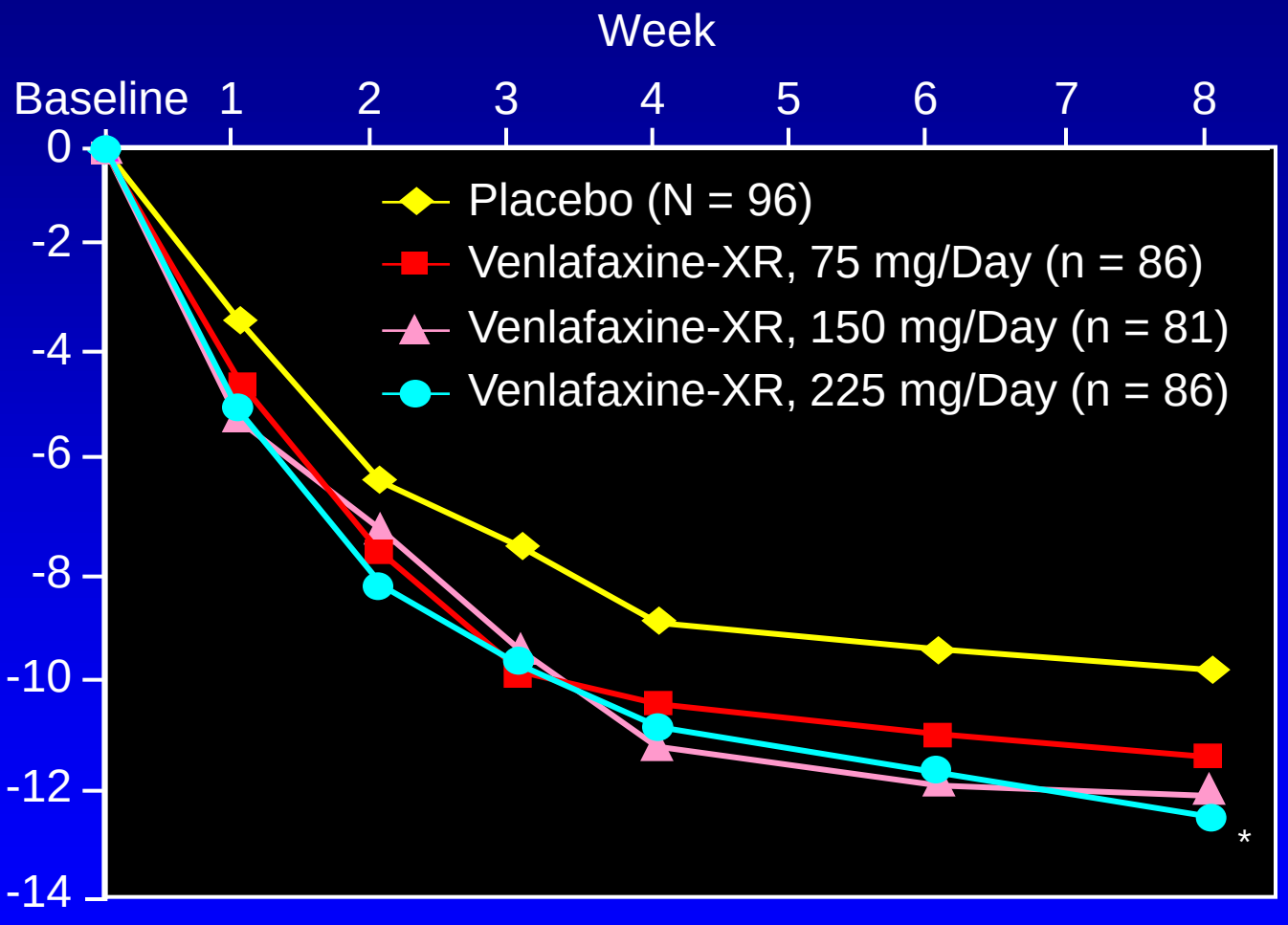
GAD -Anxiolytics

Azapirones

Buspirone	**30-60**

Venlafaxine Treatment of GAD

HAM-A Total Score



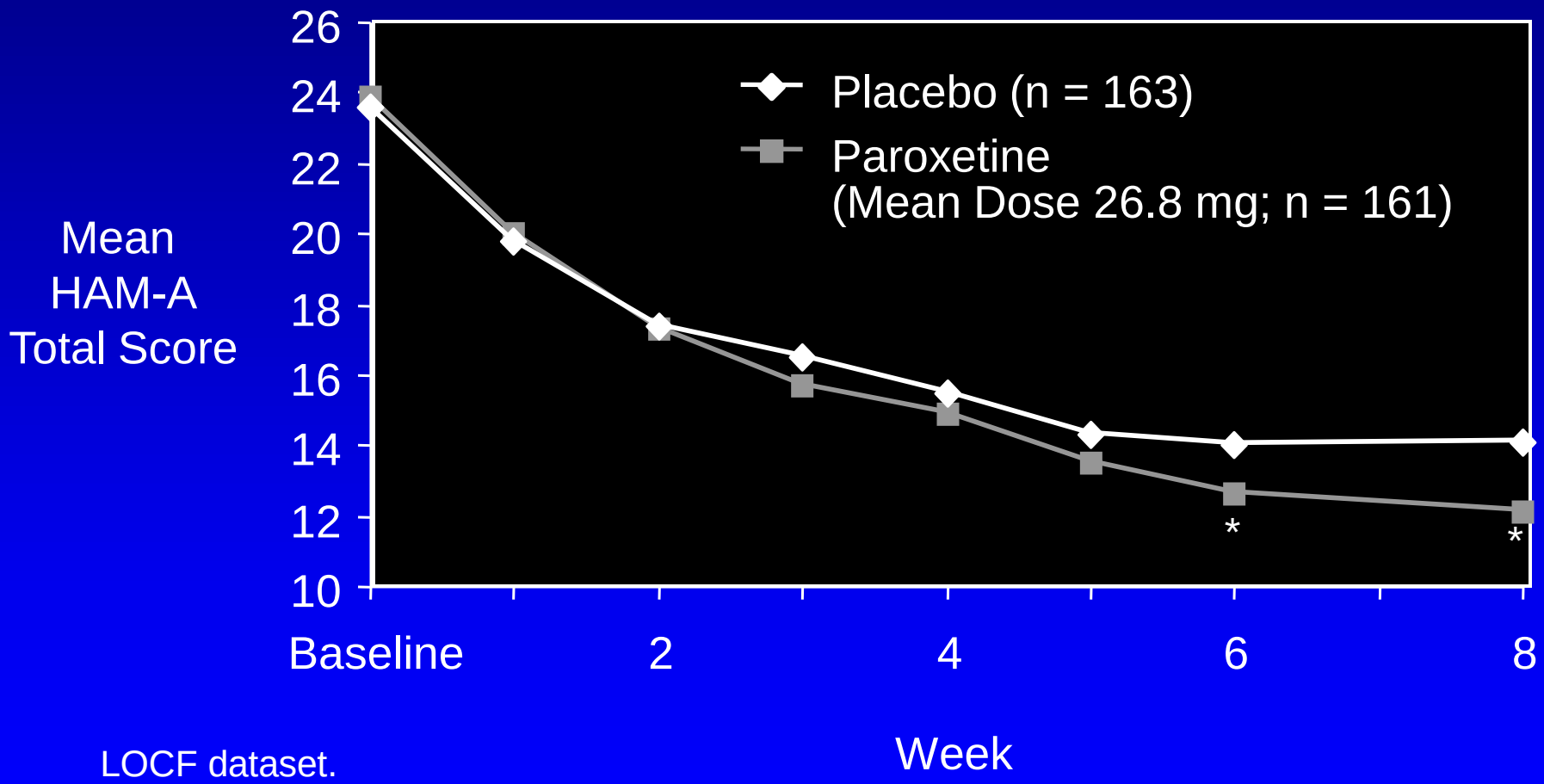
HAM-A Total Score (Mean Change from Baseline)

*P = .03.

Rickels K et al. *Am J Psychiatry.* 2000;157:968-974.

Paroxetine GAD Study

HAM-A Total Score



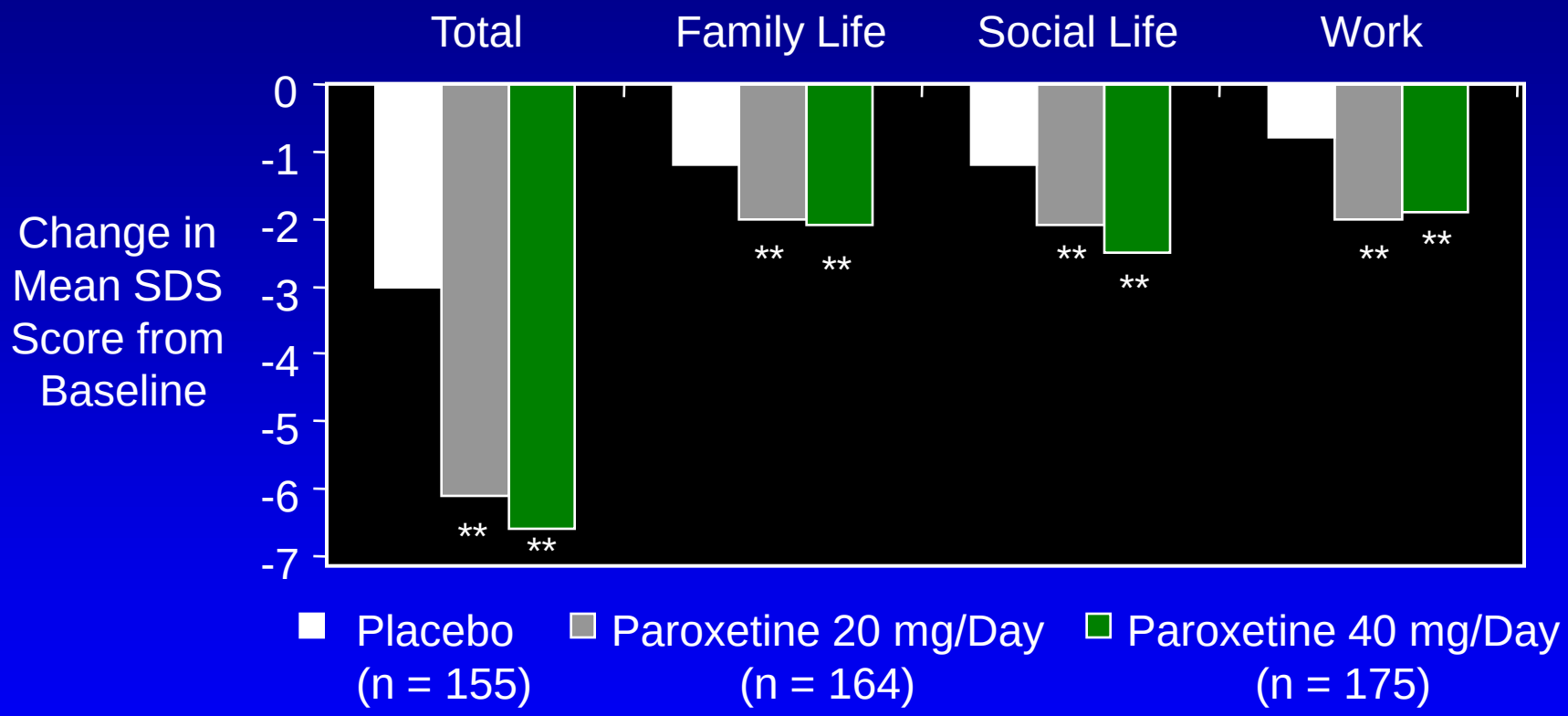
LOCF dataset.

*$P < .05$ vs placebo.

Pollack MH et al. *J Clin Psychiatry.* 2001;62:350-357.

Paroxetine Fixed-Dose GAD Study

Improvement in Disability



LOCF population.

SDS = Sheehan Disability Scale; reduction in score indicates clinical improvement.

**$P \leq .01$ vs placebo.

Bellew JG et al. Presented at: 153rd Annual Meeting of the APA; May 13-18, 2000; Chicago, Ill.

Benzodiazepines for GAD

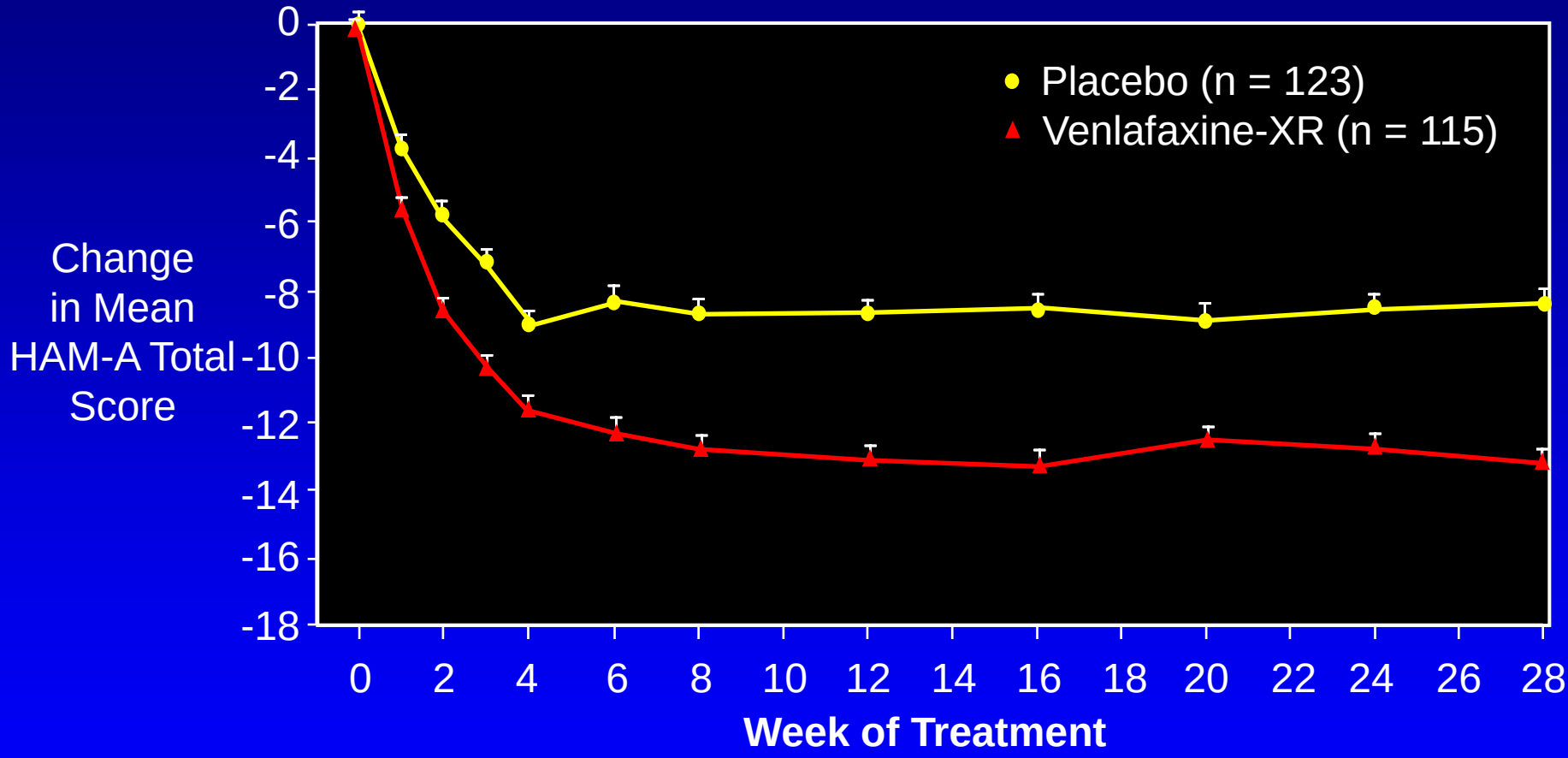
- GAD
  - Highly comorbid with depression
  - Often requires long-term therapy
- Benzodiazepines
  - Not effective for depression
  - Not considered ideal as *monotherapy* treatment
  - Useful as adjunctive medication for many patients

Long-Term Treatment of GAD

- **Need to treat for long term**
- **Full relapse in approximately 25% of patients 1 month after stopping treatment**
- **60%-80% relapse within 1st year after stopping treatment**

Hales RE et al. *J Clin Psychiatry*. 1997;58(suppl 3):76-80.
Rickels K, Schweizer E. *J Clin Psychopharmacol*. 1990;10(3 suppl):101S-110S.

Effect of Venlafaxine on Total HAM-A Scores

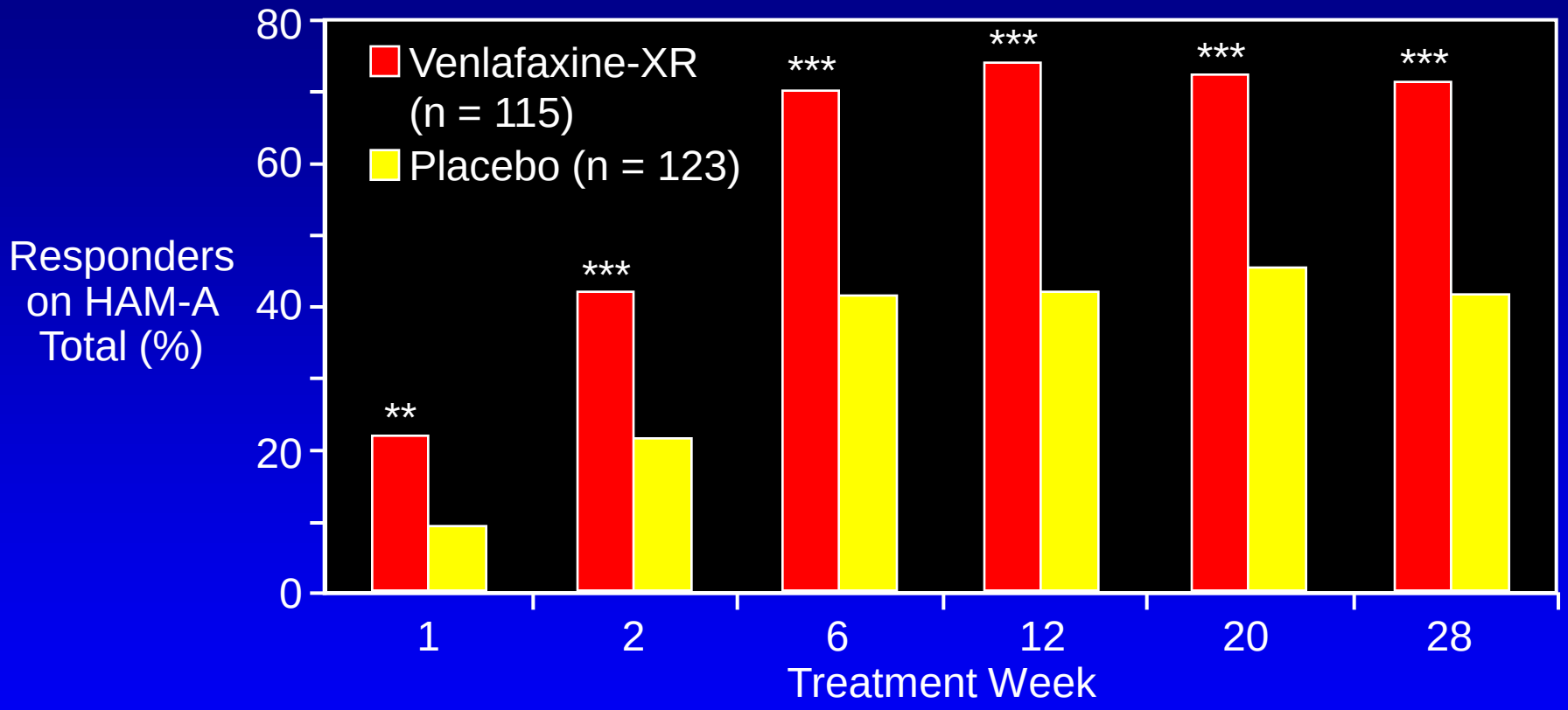


P < .001 for venlafaxine-XR vs placebo for all study weeks except week 1 (.003), week 4 (.002), and week 20 (.007).

Venlafaxine-XR doses: 75 to 225 mg/day.

Gelenberg , Lydiard et al. *JAMA*. 2000;283:3082-3088.

Long-Term Response* to Venlafaxine-XR in GAD

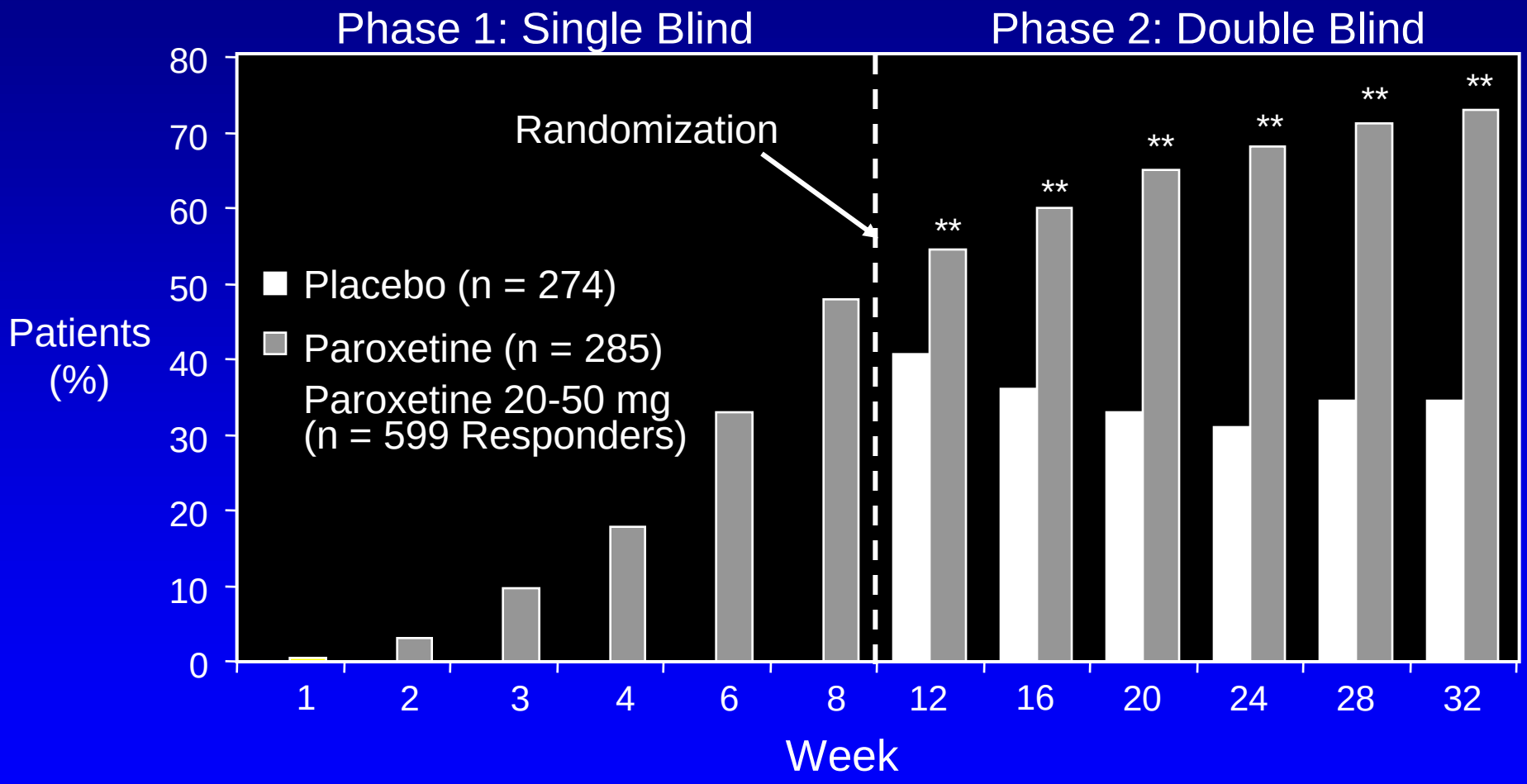


*Response defined as ≥ 40% reduction from baseline HAM-A total.
**$P < .01$ vs placebo.
***$P < .001$ vs placebo.
OC/LOCF analysis.

Gelenberg, Lydiard et al. *JAMA*. 2000;283:3082-3088.

Paroxetine Long-Term GAD Treatment

% Remission



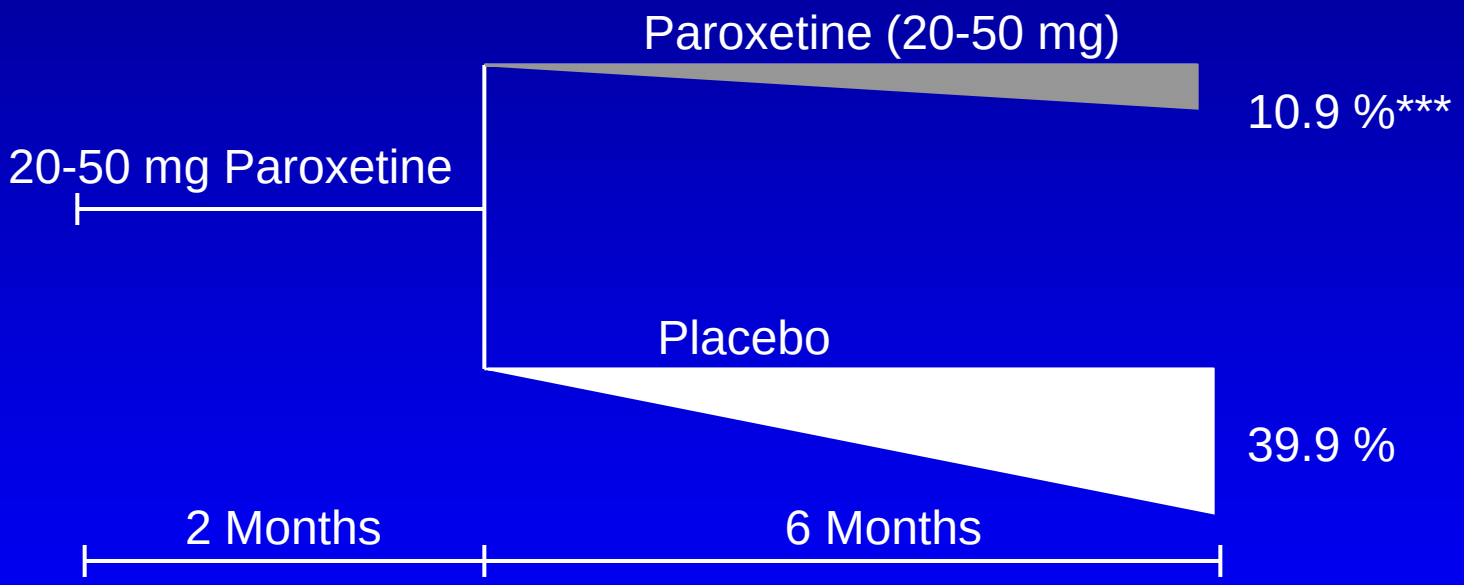
***P* < .01 vs placebo.

Remission = HAM-A ≤ 7; LOCF dataset.

Pollack, M Presented at the 154rd Annual Meeting of the APA; May 2002; Philadelphia, PA

Paroxetine Long-Term GAD Treatment

Full Relapse Rates



***$P < .001$; N = 286/274; LOCF.

Pollack, M Presented at the 154rd Annual Meeting of the APA; May 2002; Philadelphia, PA

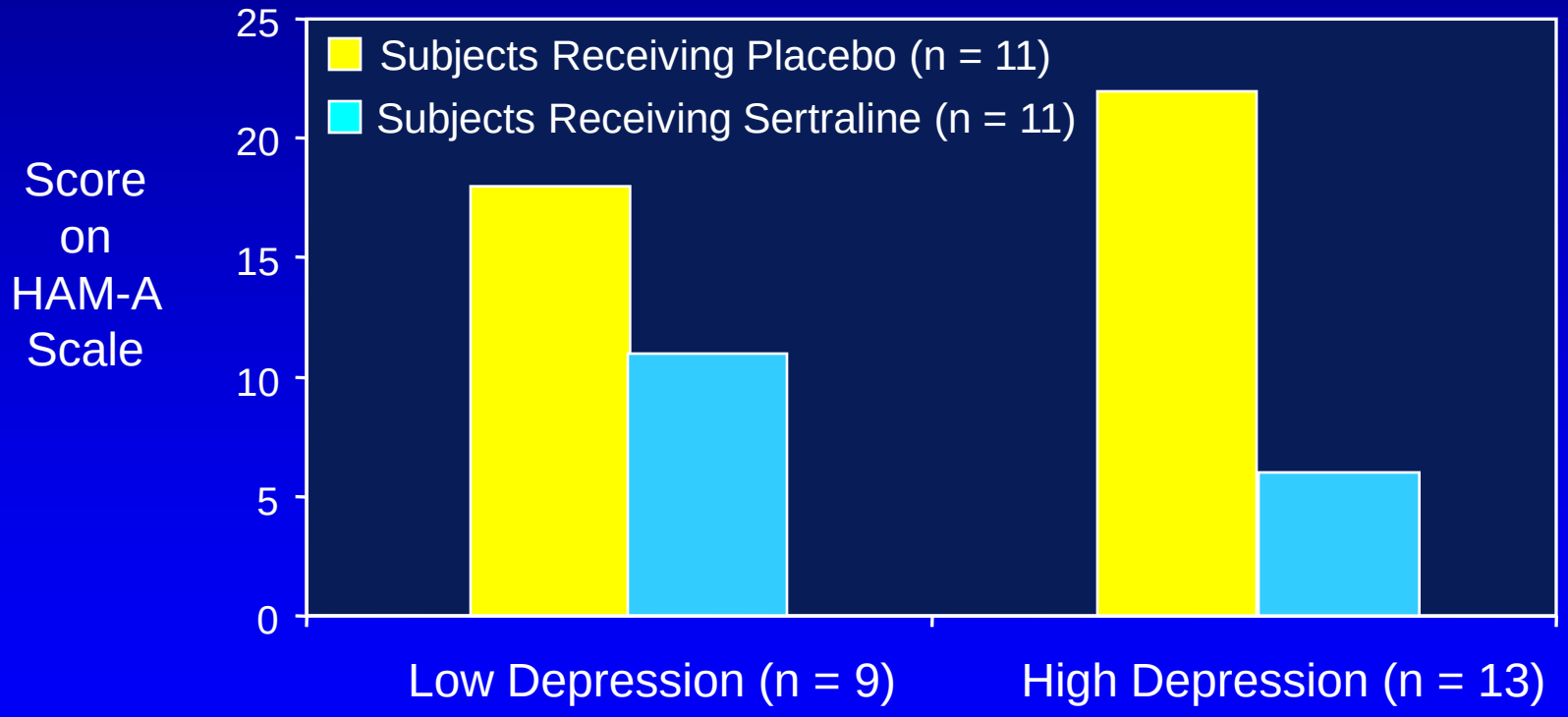
Placebo-Controlled Trial of Sertraline in the Treatment of Children with GAD

- N = 22
- 2-3 week run-in, 9 weeks of double-blind treatment with sertraline or placebo
- Primary diagnosis of GAD; excluded MDD, OCD, MR, ADD
- Ages 5-17 years (mean 11.7 ± 3.9 years)
- Sertraline dose: 25 mg/d for week 1; 50 mg/day weeks 2-9

Rynn MA et al. *Am J Psychiatry.* 2001;158:2008-2014.

Placebo-Controlled Trial of Sertraline in the Treatment of Children with GAD

*Mean Total Scores on Hamilton Anxiety Rating Scale at 9 Weeks**



*LOCF. Low and high depression severity indicated by Hamilton Depression Rating Scale scores ≤ 10 and > 10, respectively.

Rynn MA et al. *Am J Psychiatry.* 2001;158:2008-2014.

Efficacy of Antidepressants in Anxiety

Efficacy	PD	GAD	SP	OCD	PTSD	MAD
	MAOIs SSRIs TCAs Venlafaxine	Venlafaxine TCAs SSRIs Trazodone	MAOIs SSRIs Venlafaxine	SSRIs [CMI]	SSRIs	SSRIs
Some evidence	Mirtazapine Nefazodone	Mirtazapine Nefazodone		MAOIs	Venlafaxine MAOIs TCAs Bupropion Nefazodone Trazodone Mirtazapine	Mirtazapine Venlafaxine MAOIs TCAs Nefazodone Trazodone
Not effective	Trazodone Bupropion		Bupropion Nefazod TCAs	TCAs Trazodone		
No data		MAOIs Bupropion	Mirtazapine Trazodone	Venlafaxine Nefazodone Bupropion Mirtazapine		Bupropion

Anticonvulsants Potentially Useful as Adjunctive GAD Treatment

- Vigabatrin
  - Inhibits GABA transaminase
- Topiramate
  - Acts at ion-gated channels
- Tiagabine
  - Inhibits GABA reuptake
- Gabapentin
  - GABAergic anxiolytic, novel mechanism
  - Pilot study evidence of efficacy in PD, SP, EtOH withdrawal
- *Utility in anxiety disorders not known*

- Pregabalin-clearly effective for GAD but not yet available in USA

Strategies for Refractory GAD

- Evaluate treatment intensity
  - Dose and duration of antidepressant Rx?
- Switch to a second SSRI/antidepressant
- Add benzodiazepine
- Add buspirone
- Add GABAergic anticonvulsants
  - Gabapentin tiagabine, vigabitrin, topiramate,
- Add low dose atypical neuroleptics
- Review psychosocial variables for stress management
- Add CBT

Most suggestions from clinical experience
Coplan et al JCP 154 (supp) 63-74,1993

Part II-May be used separately or used with Part I

Future Strategies for Anxiety Disorders

R. Bruce Lydiard PhD, MD

Clinical Professor of Psychiatry
University of South Carolina
Columbia, SC
and
Director, Southeast Health Consultants
Charleston SC

Traditional Anxiolytics

Limitations

- **Poor tolerability (TCAs, MAOIs)**
  - ***SSRIs-Less than ideal***
- **Limited breadth of efficacy (TCAs, BZDs, MAOIs?)**
- **Lack of antidepressant efficacy (buspirone?, BZDs)**
- **Safety (TCAs, MAOIs)**

Anticonvulsants

- **Carbamazepine**
- **Valproic acid**
  - ***Both have some GABAergic action (VPA > CBZ)***
  - ***Marginal antidepressants***
  - ***Breadth of efficacy not clear***

(cont)

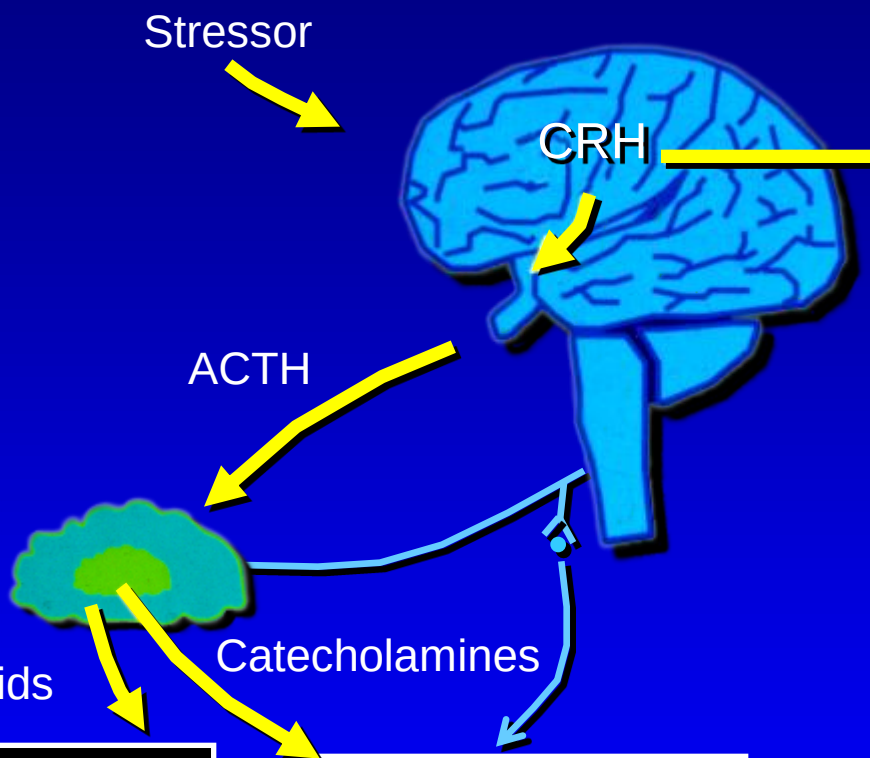
Anticonvulsants

- Vigabatrin
  - Inhibits GABA transaminase
- Topiramate
  - Acts at ion-gated channels
- Tiagabine
  - Inhibits GABA reuptake
- Gabapentin
  - GABAergic anxiolytic, novel mechanism
  - Pilot study evidence of efficacy in PD, SP, EtOH withdrawal
- *Utility in anxiety disorders not known*

Bad News Peptides

- Corticotropin-releasing factor (CRF)
- Cholecystokinin (CCK)
- Substance P

CRF and Acute Stress

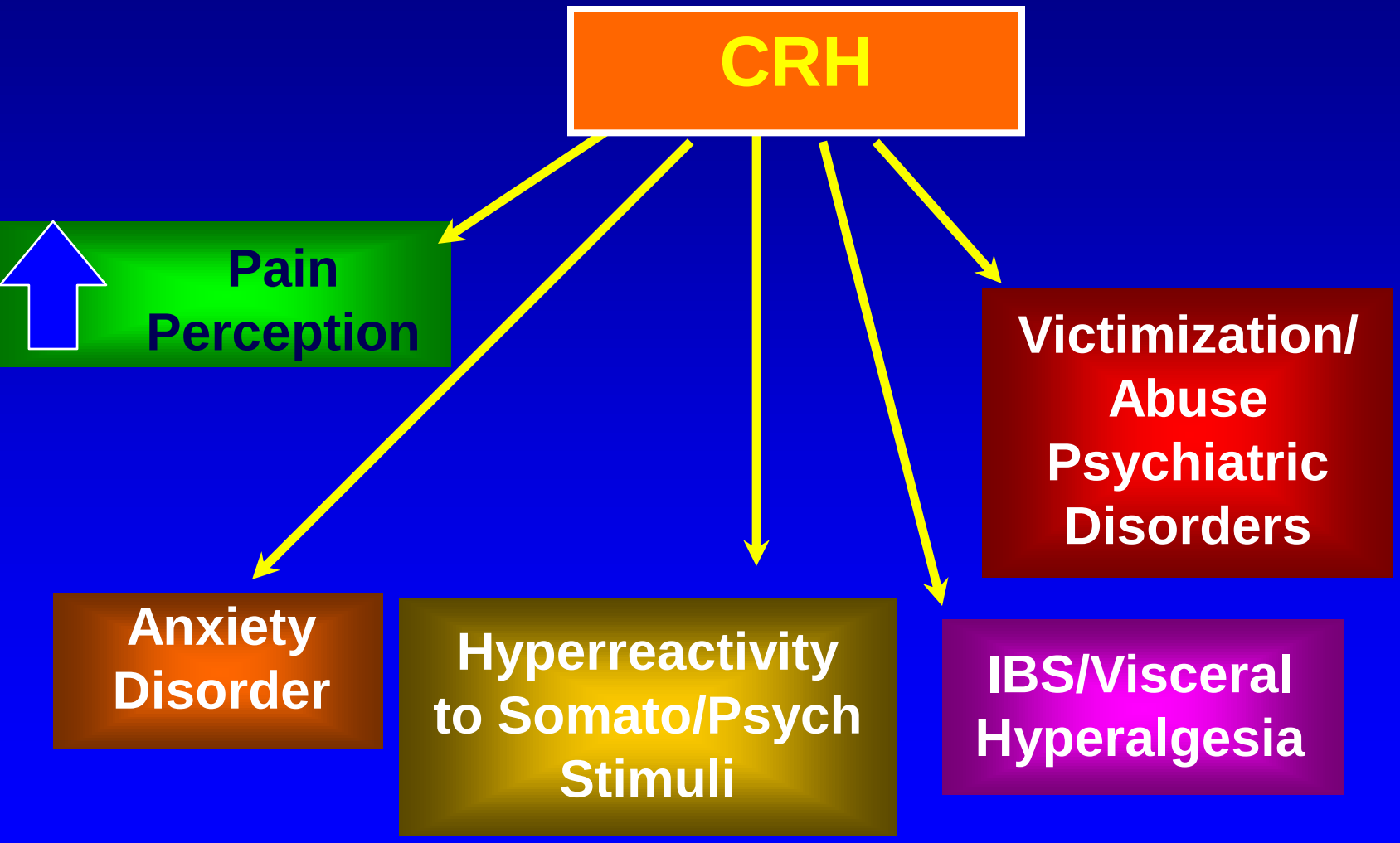


- ↓ Eating
- ↓ Reproduction
- ↓ SW Sleep
- ↑ Grooming
- ↑ Neophobia (novel environ)
- ↑ Locomotor activity (familiar environ)
- ↑ Behavioral despair
- ↑ Seizure/kindling
- ↑ Locus coeruleus FR
- ↑ Pyramidal FR

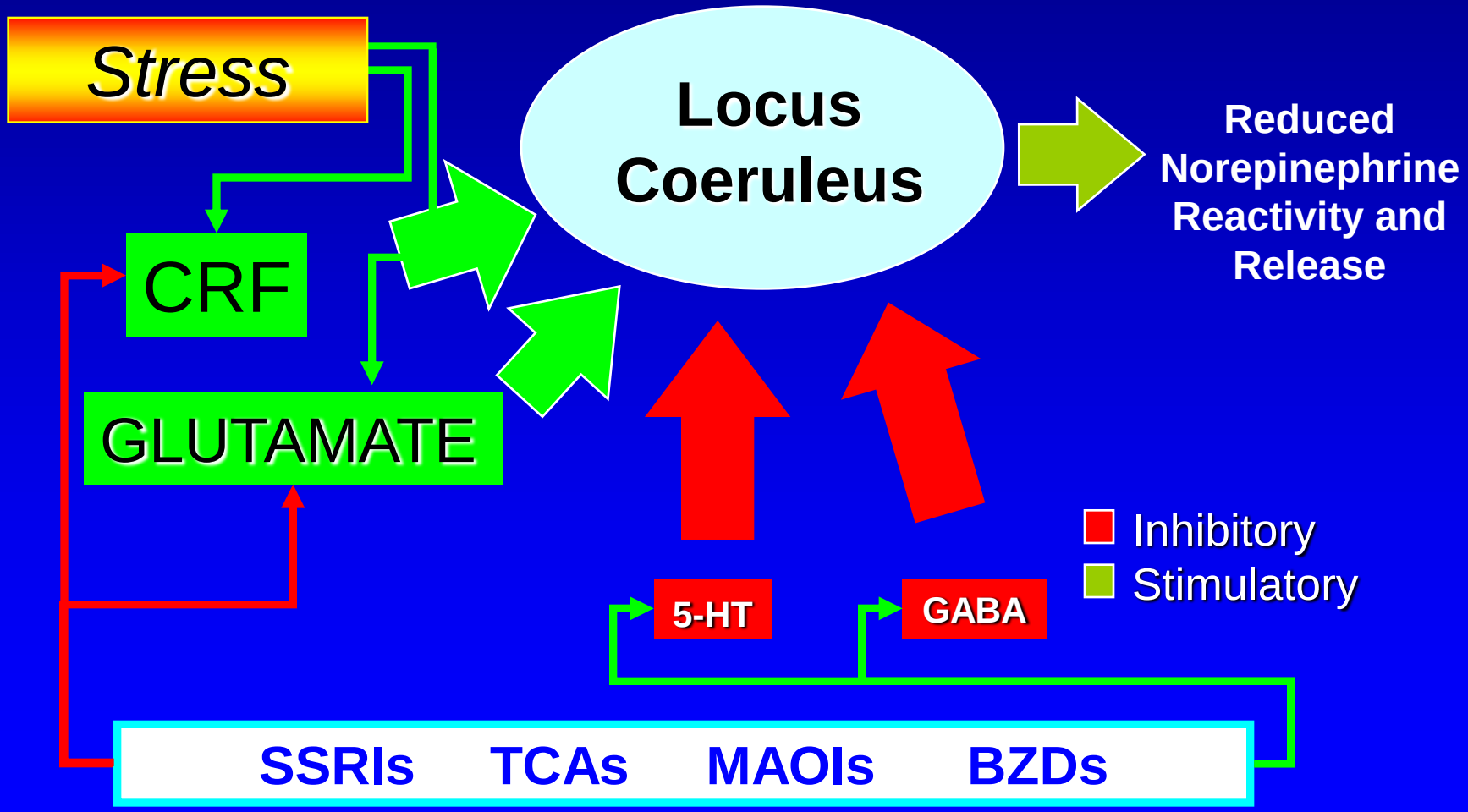
- ↑ Blood pressure
- ↑ Heart rate
- ↑ Blood sugar
- ↓ GI blood flow

- ↑ Gluconeogenesis
- ↑ Lipolysis
- ↑ Proteolysis
- ↑ Insulin resistance
- ↓ Inflammation
- ↓ Immune function

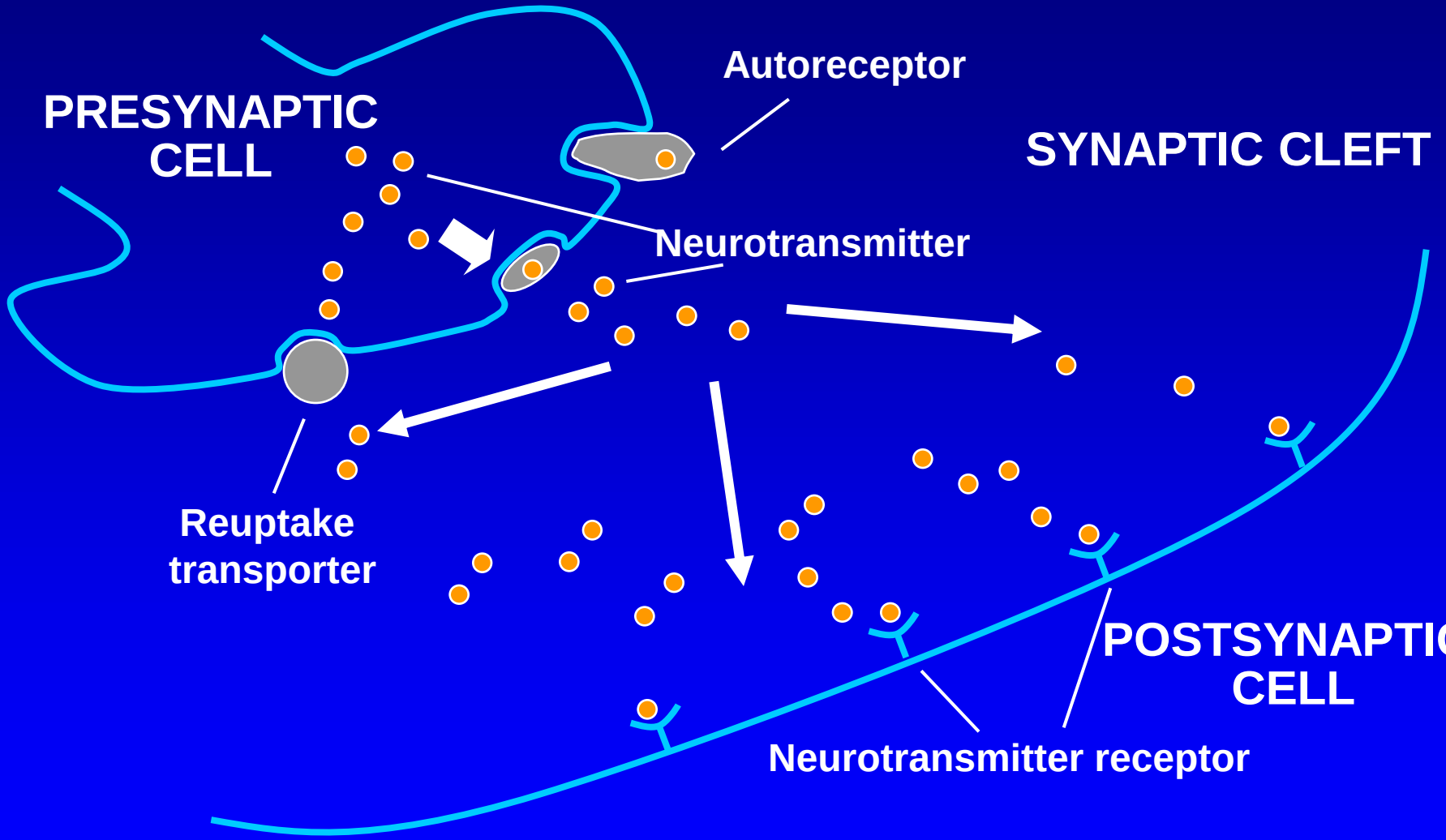
CRF Role in Stress Related Illnesses



Locus Coeruleus System as a Site of Action for Psychotropics



Neurotransmitters—Mechanisms of Action

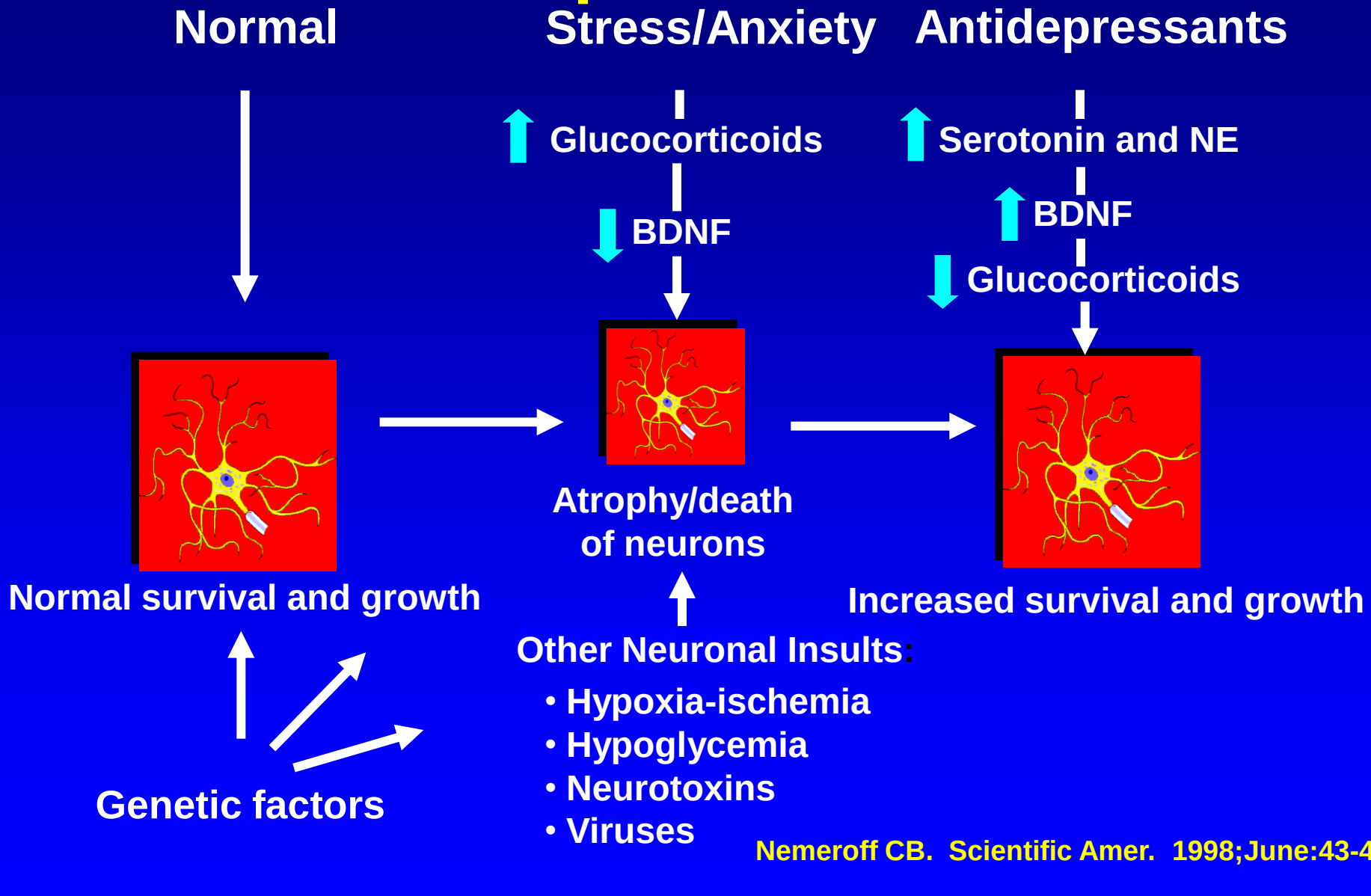


Nemeroff CB. Scientific Amer. 1998;June:43-49.

Antidepressants: Transductional Targets of Action

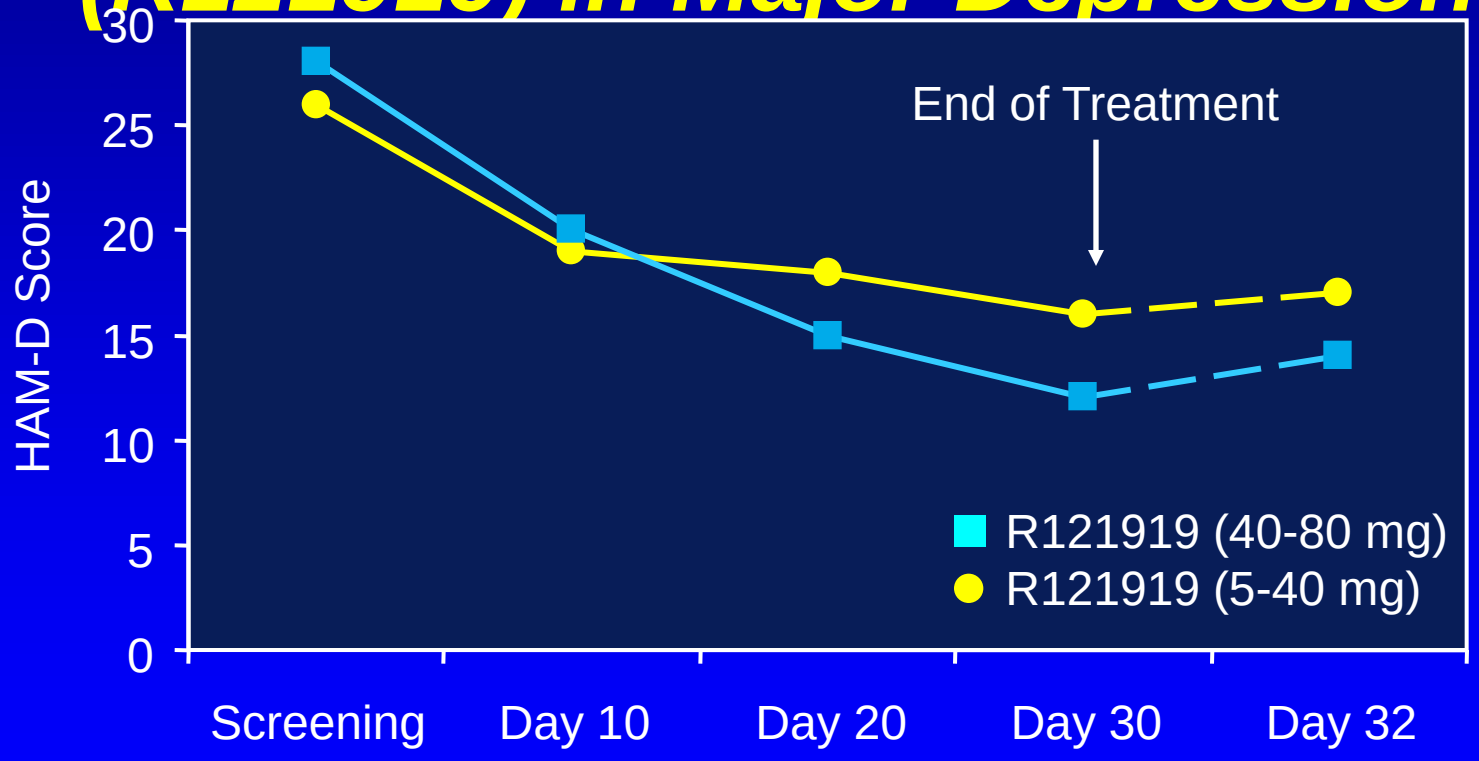
- Antidepressants increase NE, 5-HT or both
- Activate transductional cascades
  - Activate or inhibit the synthesis of specific gene products
- Multiple, synergistic mechanisms likely

Hypothesis of Stress, Anxiety and Depression



Nemeroff CB. Scientific Amer. 1998;June:43-49.

The First 20 Patients: *Effects of the High-Affinity CRF 1 Antagonist (R121919) in Major Depression*



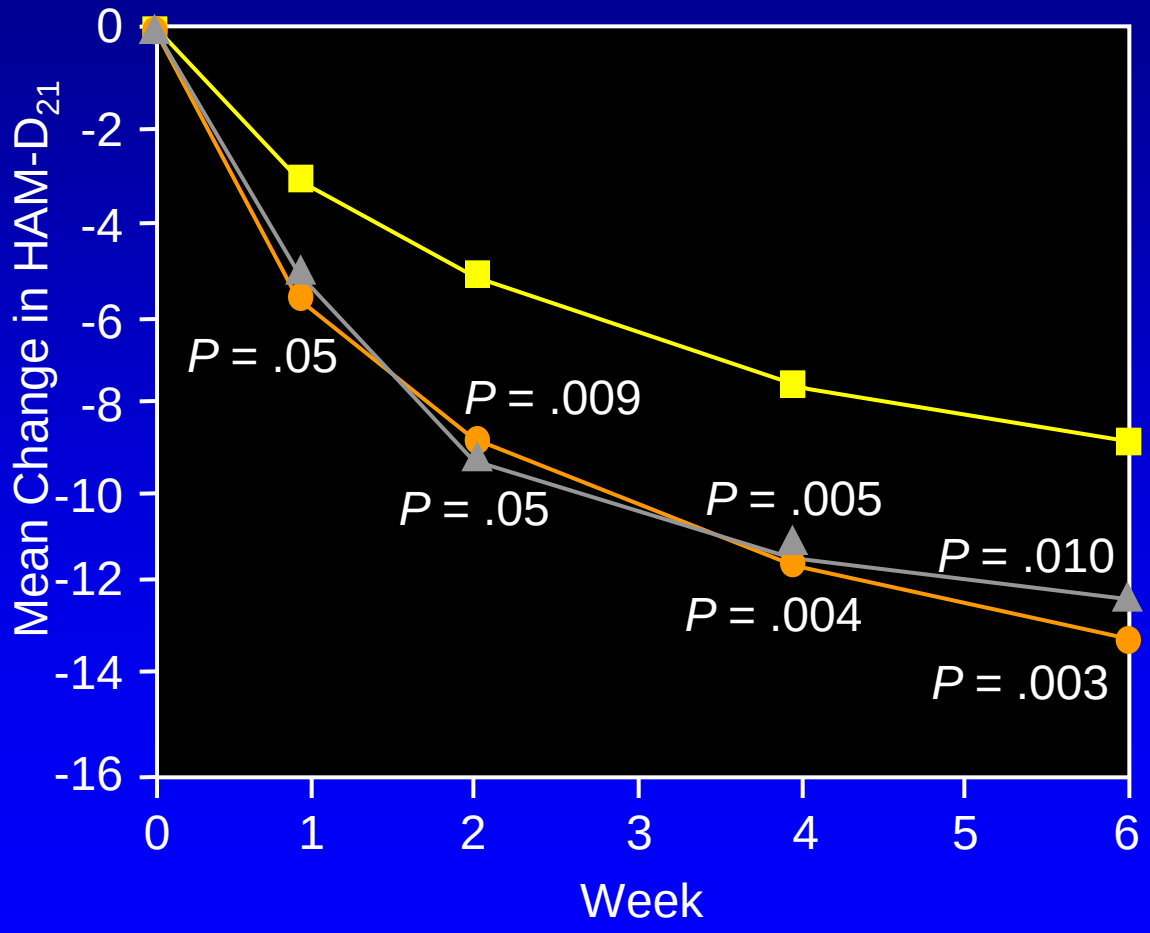
Zobel AW et al. *J Psychiatr Res*. 2000;34:171-181.

Substance P Antagonists

- Substance P $\Rightarrow$ anxiety, depression, pain
- Three receptors identified in CNS
- MK-869: nonpeptide NK_1 receptor antagonist
- Oral, once-daily formulation

Kramer MS et al. *Science*. 1998;281:1640-1645.

Effect of MK-869 and Paroxetine on Depression



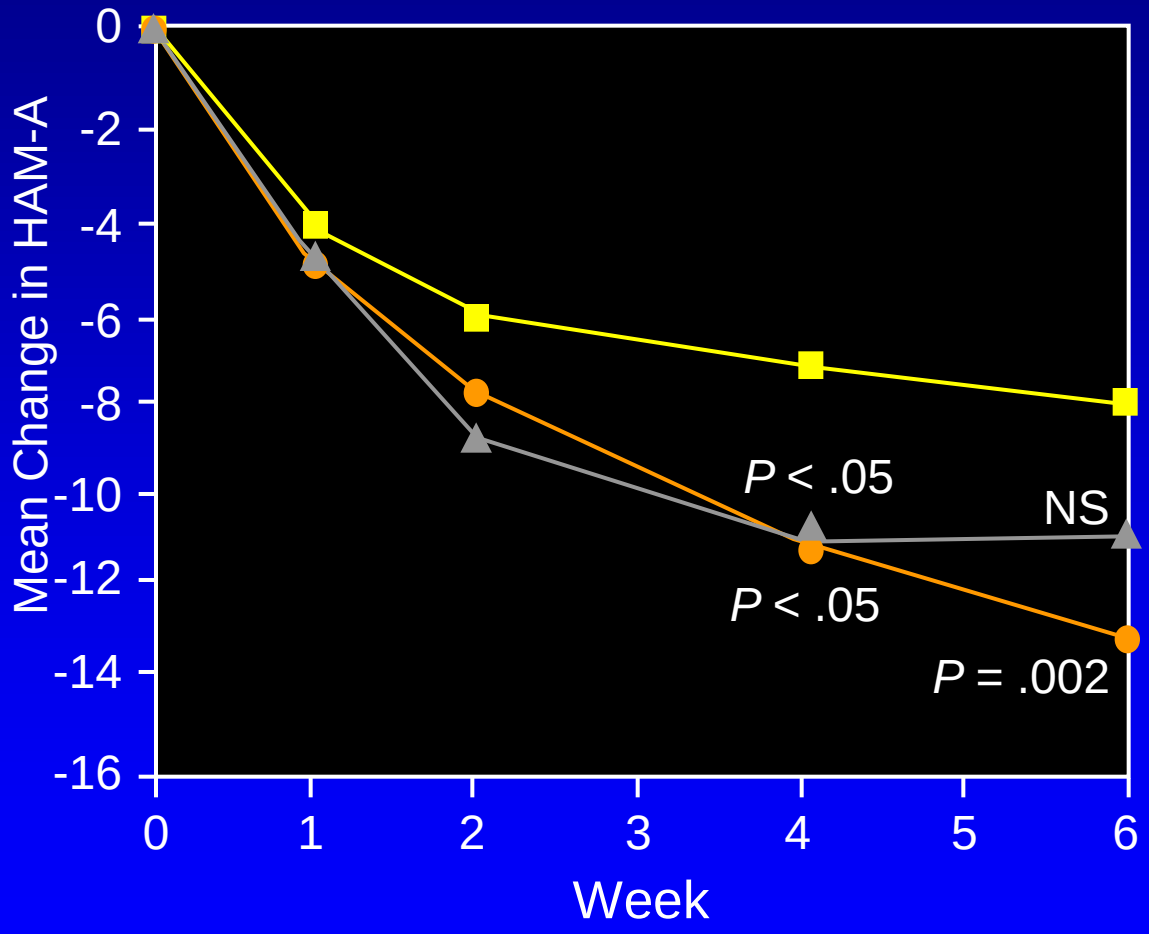
Placebo (n = 70)

Paroxetine 20 mg (n = 72)

MK-869 300 mg (n = 71)

Kramer MS et al. *Science*. 1998;281:1640-1645.

Effect of MK-869 and Paroxetine on Anxiety



Placebo (n = 70)

Paroxetine 20 mg (n = 72)

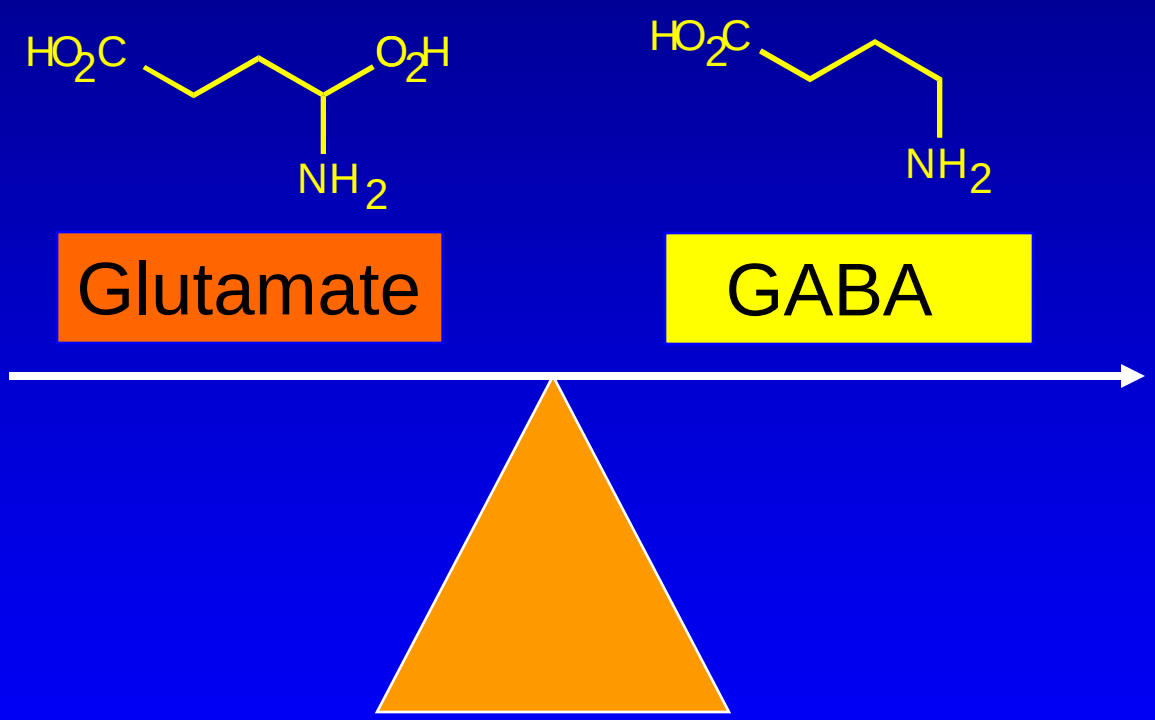
MK-869 300 mg (n = 71)

Kramer MS et al. *Science*. 1998;281:1640-1645.

Glutamatergic System mGLU Agonists

- Novel presynaptic mechanism
- Decreases excitatory neurotransmitter glutamate release
- May modulate GABA transmission

Glutamatergic-GABAergic Interactions



Pathology

Hyperexcitability

mGlu Receptors

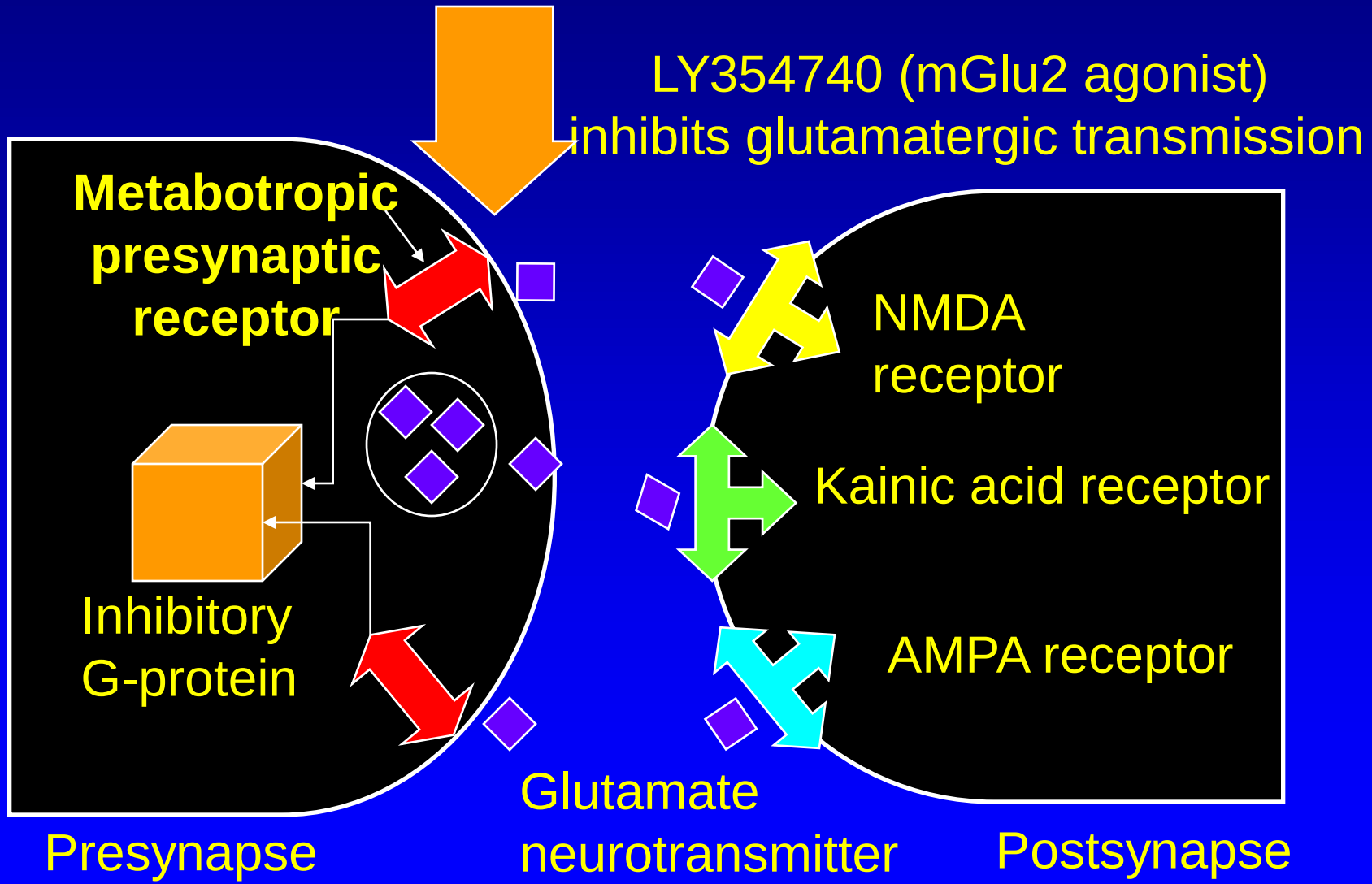
Physiological Range

mGlu Receptors

Hypoexcitability

Pathology

Schema of Glutamatergic Neurotransmission



Partial BZD Agonists

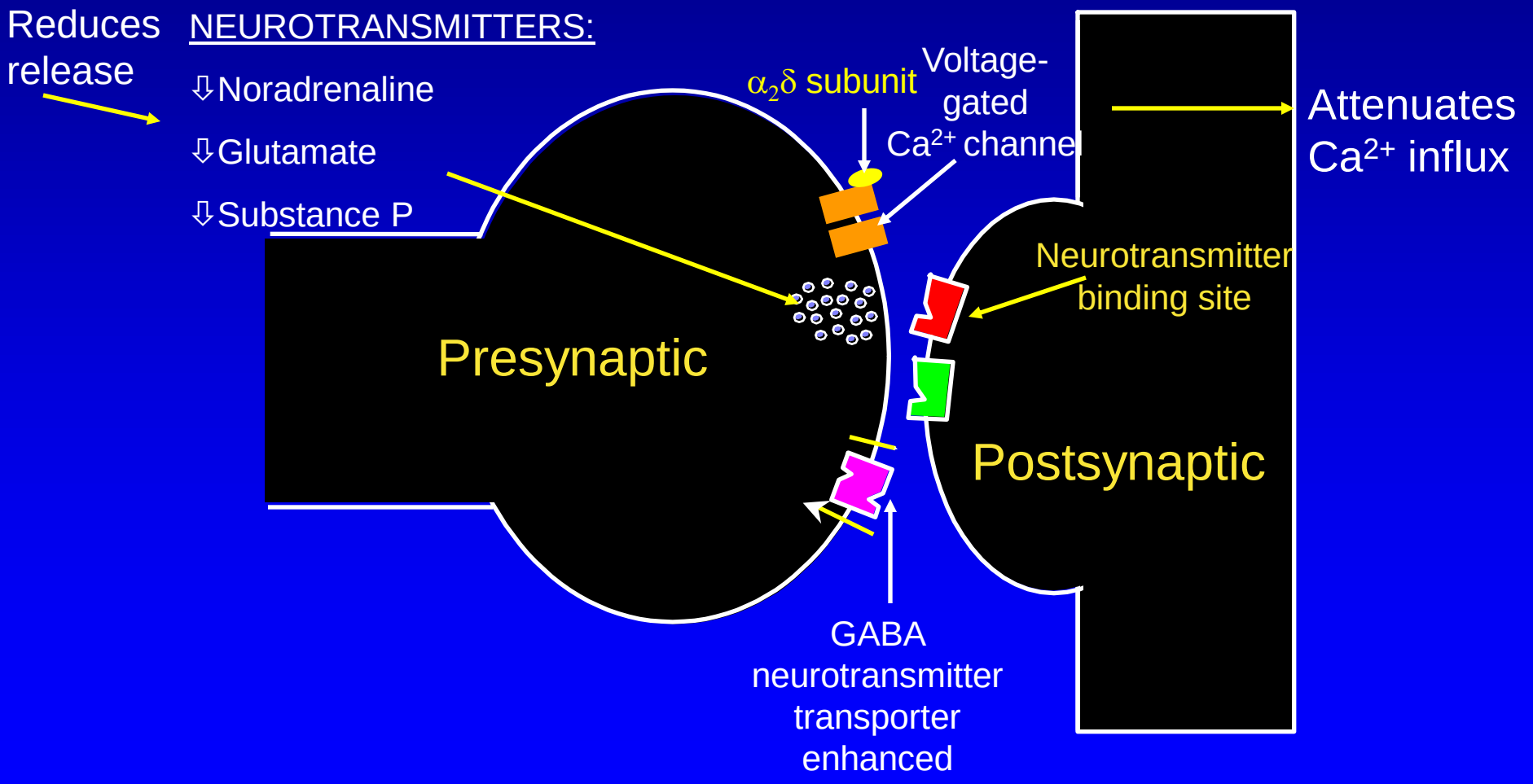
- Pagoclone
  - Effective in panic disorder
  - In development
- Abecarnil
  - Some effect in GAD, not sustained?
- Others in pipeline

BZD Receptor Subunit Agonists

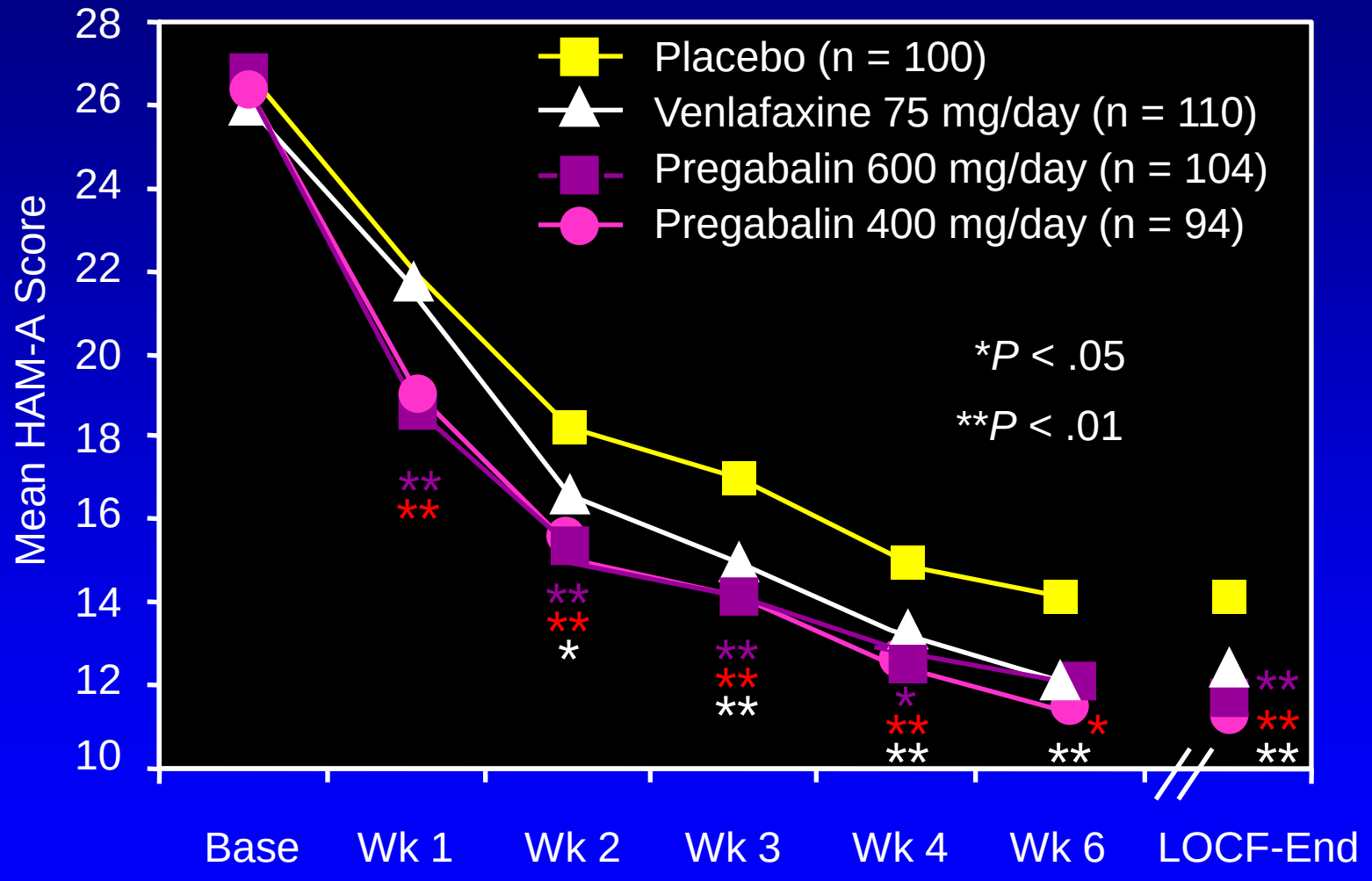
- GABA-A_{1a}
  - Sedation, anxiolytic
- GABA-A_{2a}
  - Anxiolytic
- GABA-A_{3a}
  - Muscle relaxation
- GABA-A_{5a}
  - Memory, muscle relaxant

Pregabalin Novel Mechanism: $\alpha_2\delta$ *Binding Inhibitory Effect*

Synapse



Pregabalin vs Venlafaxine IR Study in GAD



All medication doses b.i.d.

Data on file, Pfizer Inc.

Pregabalin: *Summary*

- Novel Mechanism
- Comparable to BZDs in GAD
- Optimal dosing likely 150-450 mg daily
- b.i.d. dosing
- Little to no abuse potential
- No evidence of dependence
- ***Antidepressant efficacy unclear***

Summary and Conclusions

- The future looks bright
- Research is active
- Better tolerability
- Comparable efficacy
- Polypharmacy possibilities

Post Lecture Exam
Question 1

1. **Epidemiological studies indicate that the lifetime prevalance of generalized anxiety disorder is:**

A. 17.1%

B. 0.7%

C. 5.1%

D. 24.9%

E. 13.3%

Question 2

2. **Which of the following symptoms is most frequently present in patients with generalized anxiety disorder?**

A. Panic attacks

B. Feeling a detachment and estrangement from others.

C. Markedly diminished interest in significant activities

D. Disturbed sleep

E. Fear of being home alone

Question 3

3. **In contrast to patients with generalized anxiety disorder, subjects with hyperthyroidism:**

A. Experience fatigue

B. May have tachycardia

C. May complain of heat intolerance

D. Present with irritability

E. Always present with goiter

Question 4

4. **Which one of the following statements is true about comorbidity in generalized anxiety disorder?**

A. Panic disorder is the most common coexisting psychiatric disorder.

B. Approximately 25% of patients have a comorbid psychiatric disorder.

C. Major depression rarely co-occurs with generalized anxiety disorder.

D. Borderline personality disorder is the most prevalent Axis II disorder in these patients.

E. Social phobia is the most prevalent coexisting comorbid psychiatric disorder.

Question 5

5. **Which of the following statements about childhood presentation of generalized anxiety disorder is true?**

A. The disorder is uncommon in children and adolescents.

B. 10% of children with overanxious anxiety disorder have a comorbid psychiatric disorder.

C. They often appear overcompliant and perfectionistic.

D. They often experience significant separation anxiety.

E. They respond well to treatment with propranolol.

Question 6

6. **Which of the following compounds have demonstrated efficacy in the treatment of generalized anxiety disorder?**

A. Lithium
B. Tranylcypromine
C. Trazodone
D. Bupropion
E. Pimozide

Question 7

7. **Which of the following statements is true regarding the use of buspirone for generalized anxiety disorder?**

A. The onset of action is immediate, often as rapid as that of alprazolam.

B. Buspirone may be administered once a day.

C. Patients frequently report drowsiness and sedation.

D. Buspirone carries no risk of dependence or withdrawal symptoms.

E. Optimal response is usually achieved at a dose of 15 mg per day.

Question 8

8. **Which of the following is true regarding generalized anxiety disorder in the elderly?**

A. The prevalence of generalized anxiety disorder in the elderly is low.

B. The long acting benzodiazepine diazepam is the preferable medication in these patients.

C. Hepatic clearance of anxiolytic medications is decreased in the elderly.

D. The use of TCA's is contraindicated in the elderly.

E. Elderly patients require higher doses of buspirone in order to achieve therapeutic effect.

Answers to Pre & Post Competency Exams

1. C
2. D
3. C
4. E
5. C
6. C
7. D
8. C