

# The Recent Advance of Generalized Anxiety Disorder and Algorithm

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## Sparsity of research data

- ① General practioners see patients
- ② Diagnosis : comorbid condition
- ③ Pharmacotherapy is less effective

*(Kaplan & Sadock 7<sup>th</sup> ed)*

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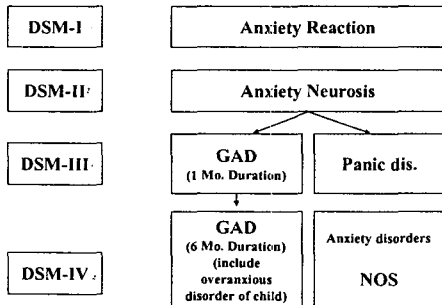
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## Change of DSM criteria



*(Rickels K, Rynn M, 2001)*

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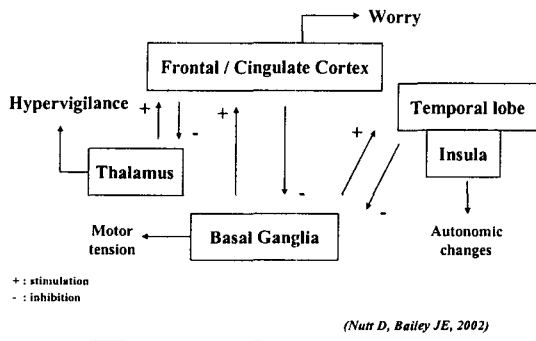
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## Brain Circuit of GAD




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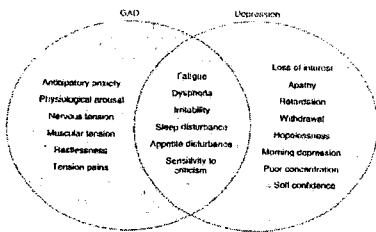
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## Overlapping Sx of GAD and Depression

Figure 8  
 Overlap and discrimination of anxiety and depressive symptoms.



Depr Anxiety 1997;168(suppl 30)

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## Main Target Symptoms and their Treatments of GAD

- Worry : Cognitive therapy
- Anxiety : Pharmacotherapy  
 (ADs, Benzodiazepines, Buspirone)
- Tension : Behavior therapy(Relaxation),  
 Pharmacotherapy(Benzodiazepines, Ads)

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## Pharmacotherapy of GAD (Nutt 1998)

### First Line

- SNRI(Venlafaxine XR)
- SSRIs(Paroxetine)
- Buspirone
- TCAs
- Benzodiazepines

### Second Line

- Flupenthixol
- Hydroxyzine
- MAOIs

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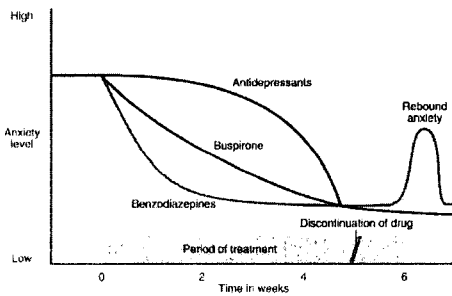
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Rickels et al, Arch Gen Psy 1993

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## Comparison of Medications in GAD Treatment

Drugs	SSRI/SNRI	TCAs	Benzodiazepines	Buspirone
Onset	Slow	Slow	Fast	Slow
Therapeutic tolerance	No	No	Little	No
Abuse	-	-	+	-
Withdrawal	+	+	++	-
Interactions with ethanol	+	+	+++	+
Sedation	-	++	++	-
Amnesia	-	+	++	-
Overdose risk	-	++	+	-

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### **Duration of Treatment**

- Long-term treatment and maintenance required
- At least 6 Months ~ 1 Year after recovery

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### **Predictors of Treatment Outcome**

- Good Predictors Factors
  - acute onset
  - early intervention
  - positive response to previous treatment
  - good compliance
  - realistic expectation from treatment
  - good ego strength
  - marital stability
- Negative Predictors
  - co-current personality disorder

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### **Future GAD Medication**

**Abecarnil – partial BDZ agonist**  
**Tropisetron – 5-HT3 antagonist**  
**Serazepine – 5-HT2 antagonist**  
**Gepirone, ipsapirone – related buspirone**

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## Strategy for Tx of GAD

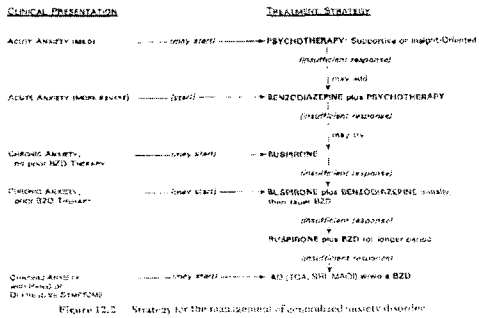
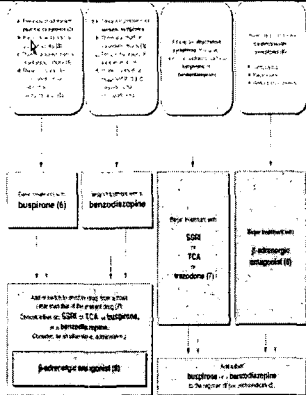
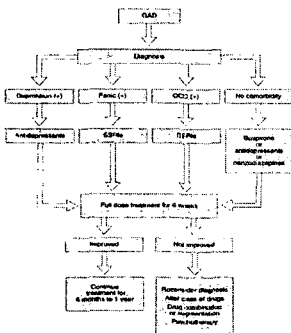


Figure 12.2 Strategy for the management of generalized anxiety disorder

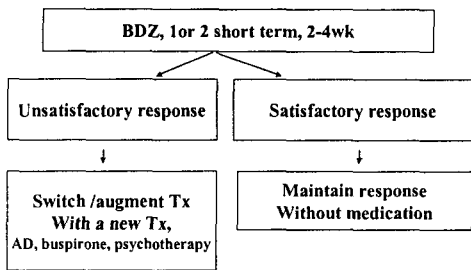
## Atlas of psychotherapy, 1999



## Nutt and Argyropoulos 1998



### Algorithm A. Subthreshold GAD Sx



*(Rickels K, Schweizer E, 1998)*

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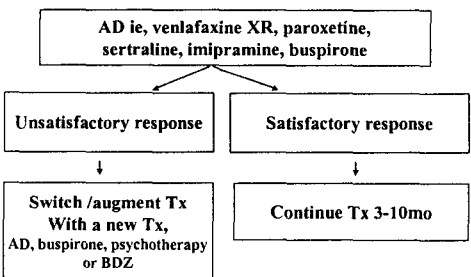
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### Algorithm B. Full-threshold Chronic GAD Sx (Rickels 199)



*(Rickels K, Schweizer E, 1998)*

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### Conclusions

- ① A few new trial drugs - updated
- ② still controversial entity
- ③ algorithm development needed

*(Kaplan & Sadock 7<sup>th</sup> ed)*

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