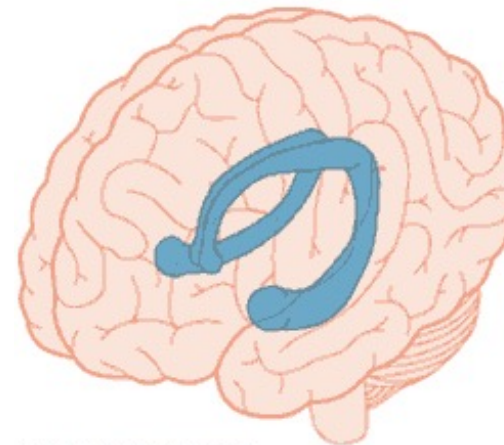
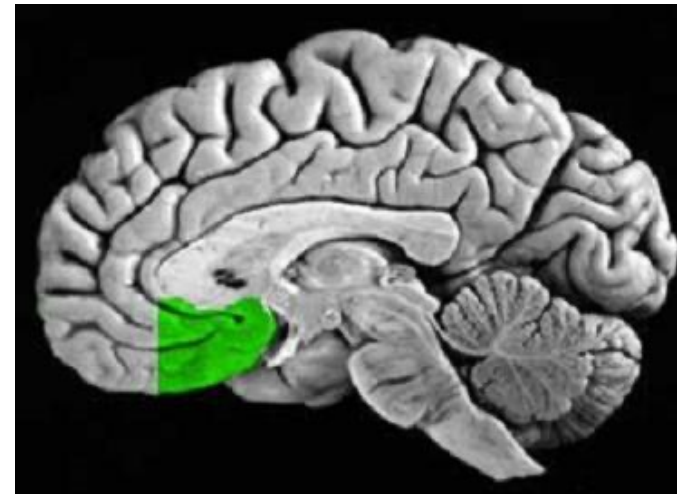


Evidence-Based Prescribing for Post-traumatic Stress Disorder

Jon Bisson
School of Medicine
Cardiff University

Neurobiology of PTSD

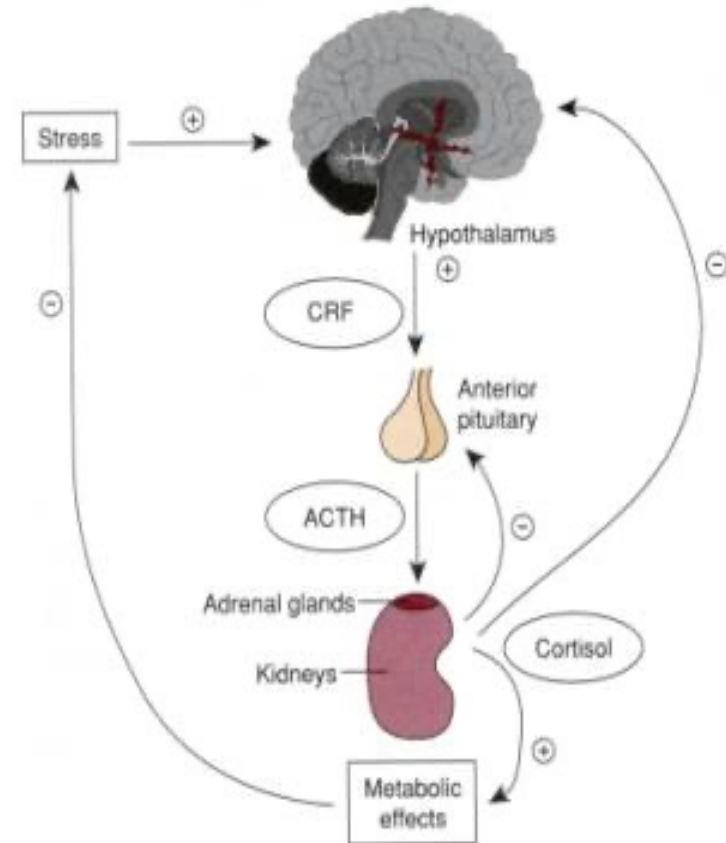
- ? PTSD represents a failure of medial prefrontal/anterior cingulate networks to regulate amygdala activity resulting in hyperreactivity to threat



www.BrainConnection.com
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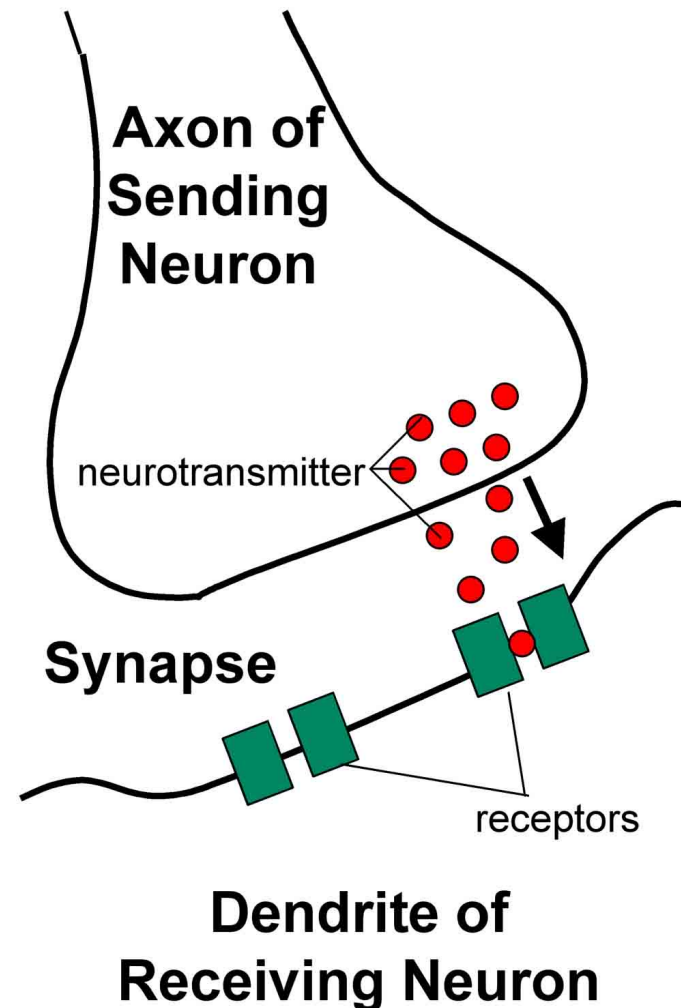
Hypothalamic- Pituitary-Adrenal Axis

- Enhanced negative feedback
- Low cortisol levels
 - Disinhib'n traumatic memory retrieval
 - Failure to contain sympathetic response
- CRF increases locus ceruleus firing and noradrenaline release
- Adrenergic surge consolidates traumatic memories



Direct Strategies to Reduce Noradrenergic Overactivity

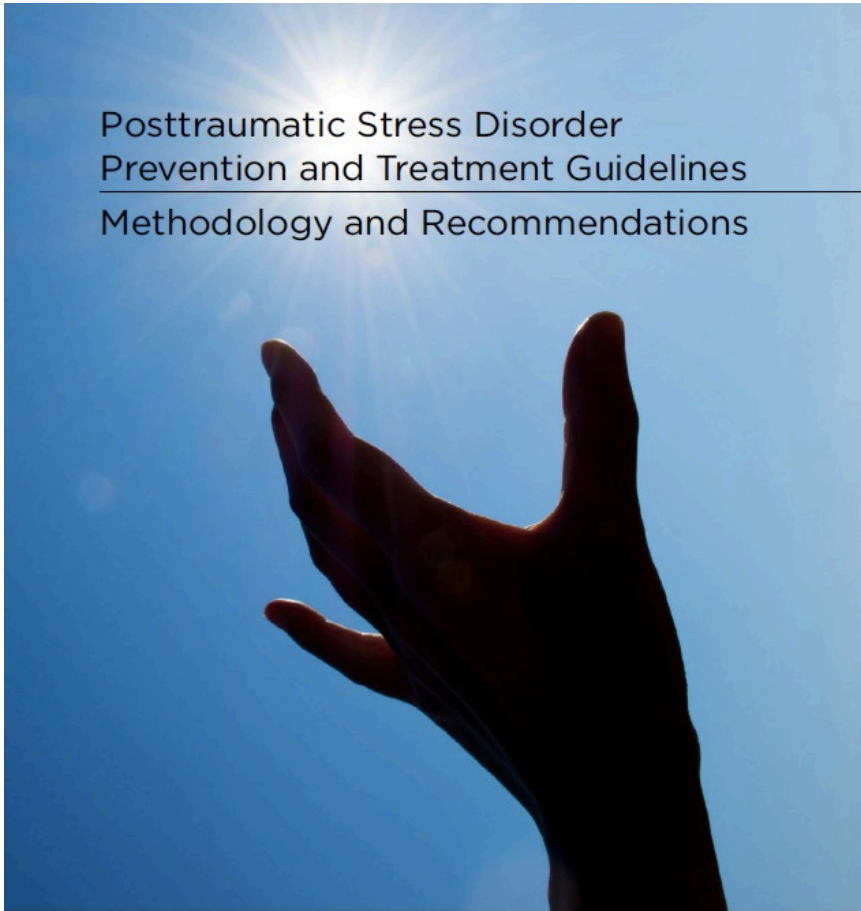
- Alpha 2 adrenergic receptor agonism – e.g. clonidine
- Postsynaptic beta adrenergic blocking – e.g. propranolol
- Alpha 1 adrenergic receptor blocking – e.g. prazosin



Indirect Strategies to Reduce Noradrenergic Overactivity

- GABA agents - oppose noradrenaline action in the amygdala
 - benzodiazepines, alcohol
- Cortisol – inhibits retrieval, facilitates extinction

Posttraumatic Stress Disorder
Prevention and Treatment Guidelines
Methodology and Recommendations



THIRD EDITION

**Effective Treatments for
PTSD**

**Practice Guidelines from
the International Society
for Traumatic Stress
Studies**

edited by

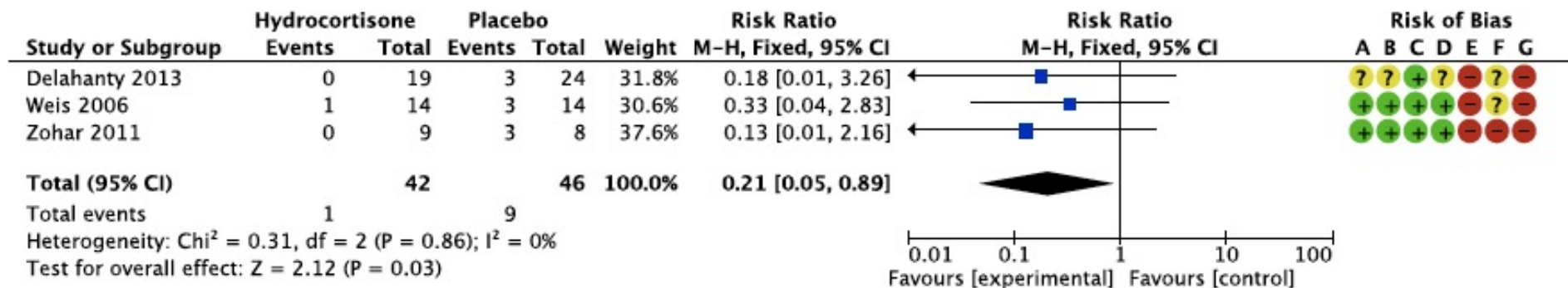
David Forbes

Jonathan I. Bisson

Candice M. Monson

Lucy Berliner

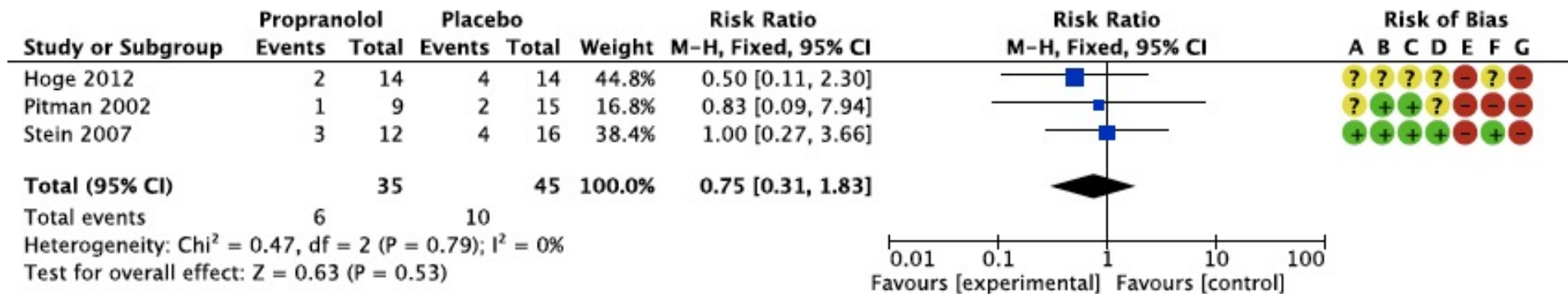
Early Hydrocortisone Prevention



Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Early Propranolol Prevention

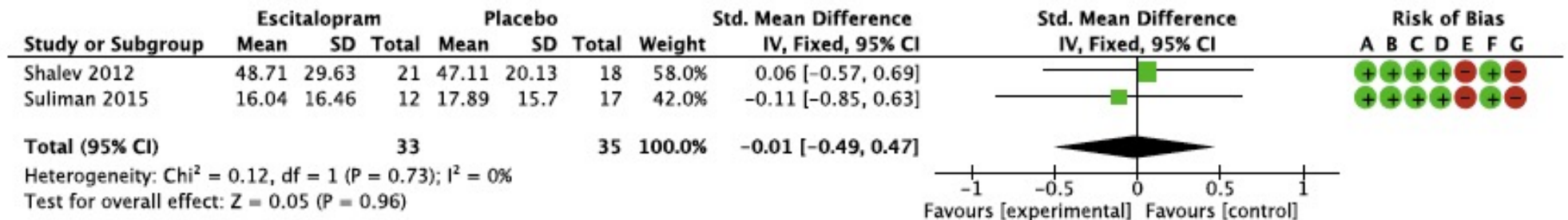


Risk of bias legend

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Astill Wright et al. *Translational Psychiatry* (2019) 9:334

Early PTSD Treatment



Risk of bias legend

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Astill Wright et al. *Translational Psychiatry* (2019) 9:334

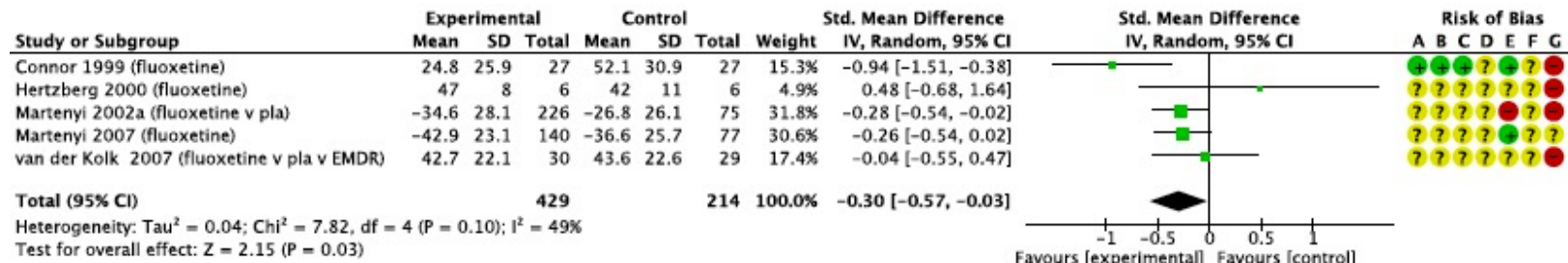
Early Pharmacological Recommendations

- Emerging Intervention
 - Hydrocortisone
- Insufficient Evidence to Recommend
 - Docosahexaenoic Acid,
 - Escitalopram
 - Gabapentin
 - Oxytocin
 - Propranolol

Pharmacotherapy for PTSD

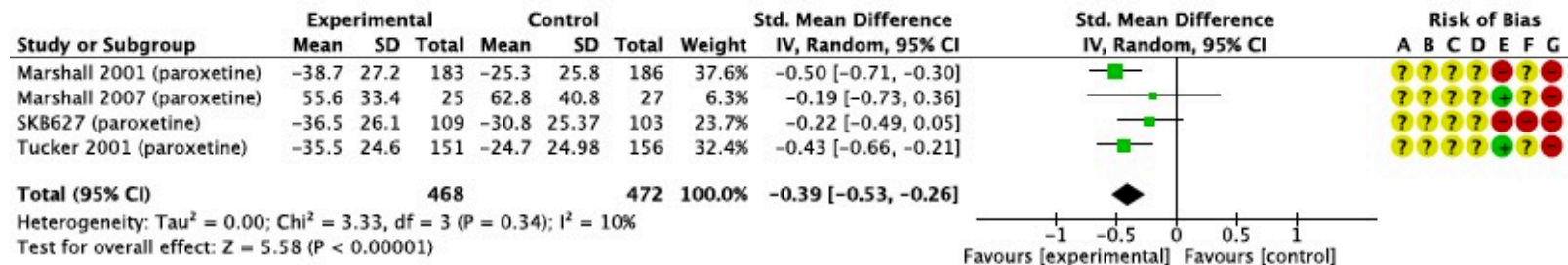
- Systematic review and meta-analyses
- Primary outcome reduction in clinician assessed severity of PTSD symptoms
- Placebo control
- 49 monotherapy studies
- 34 augmentation studies

Interventions with Low Effect



Risk of bias legend

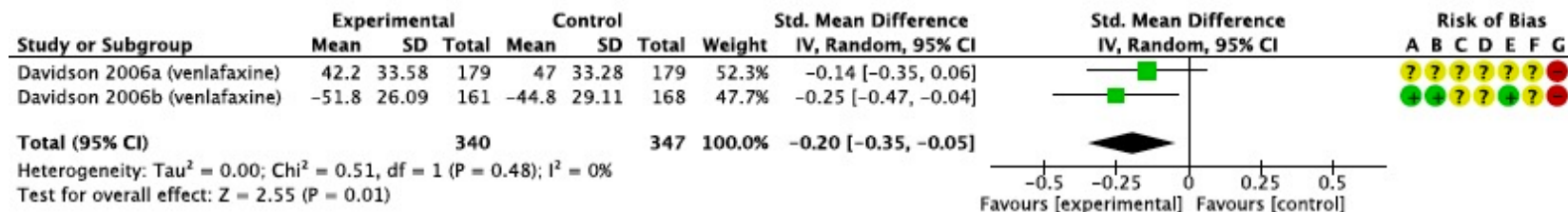
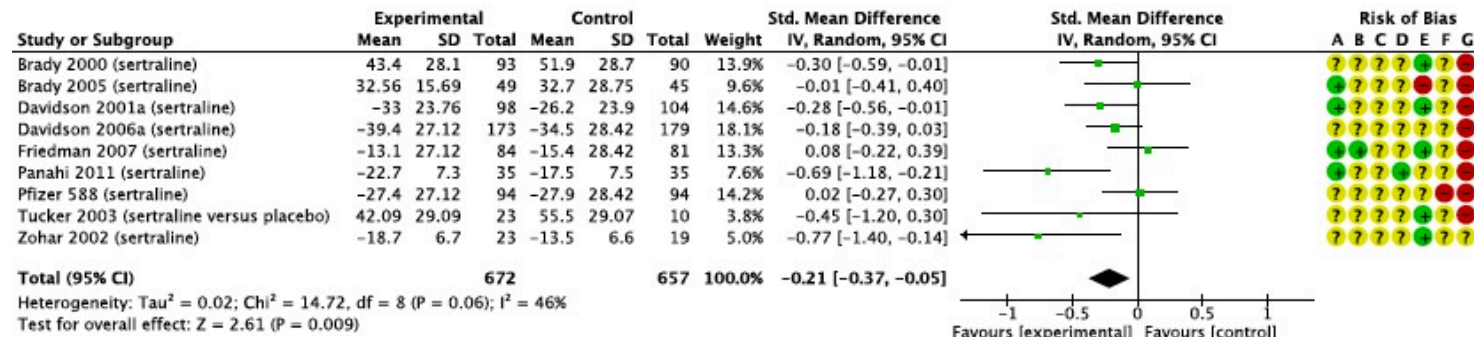
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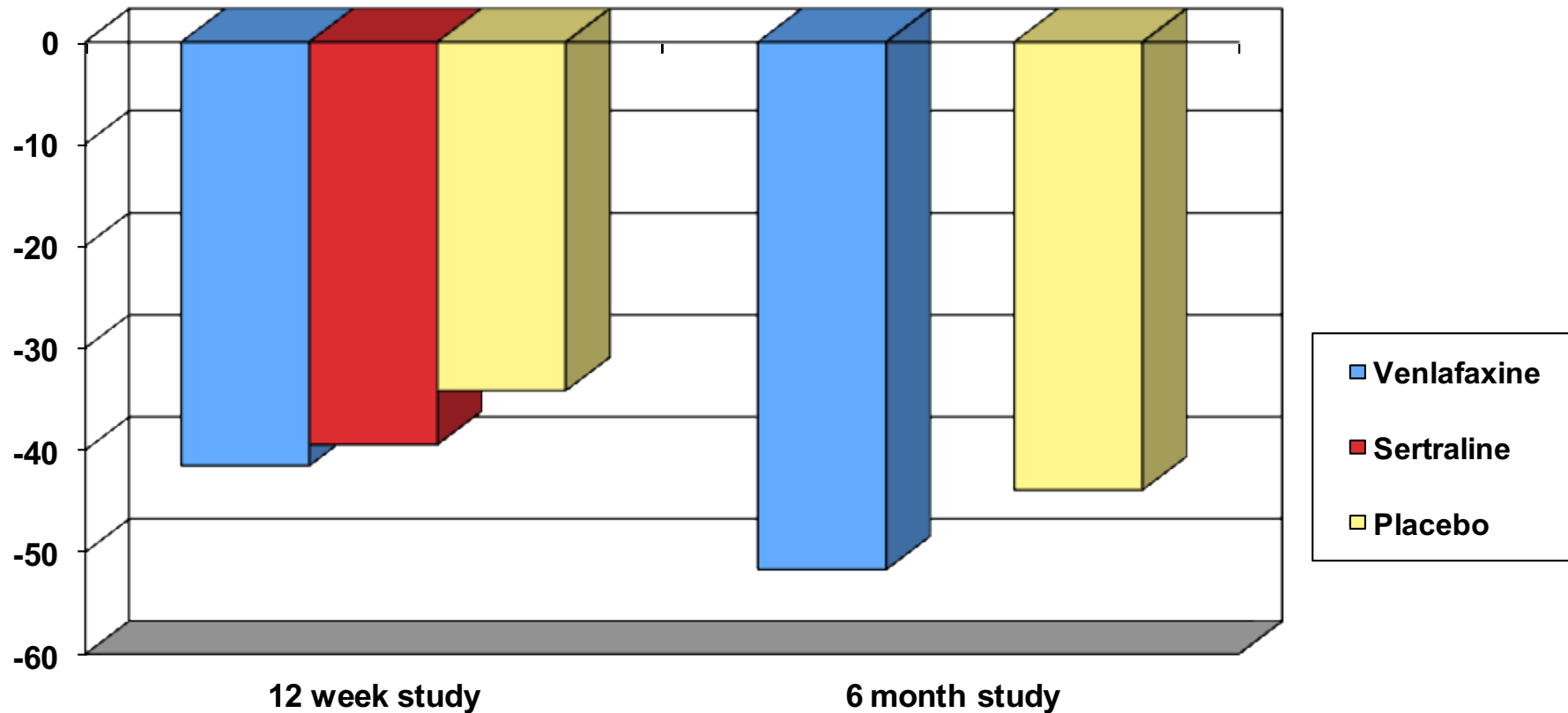
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Interventions with Low Effect

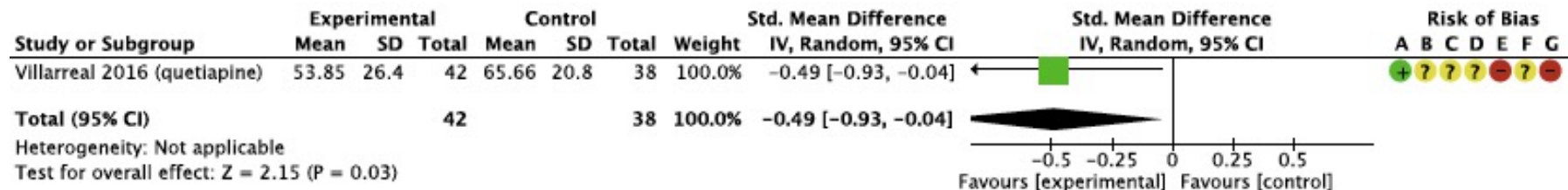


CAPS–SX Reductions in Means



Davidson et al, 2006 x 2

Intervention with Emerging Evidence



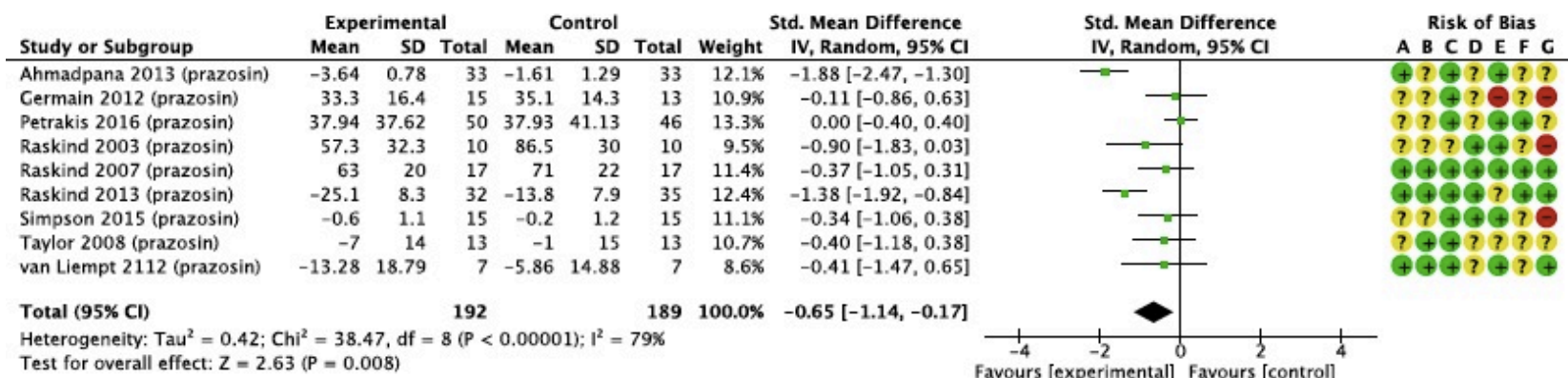
Risk of bias legend

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- (G) Other bias

Insufficient Evidence to Recommend

- Amitriptyline
- Brofaromine
- Divalproex
- Ganaxolone
- Imipramine
- Ketamine
- Lamotrigine
- Mirtazapine
- Neurokinin-1 Antagonist
- Olanzapine
- Phenelzine
- Tiagabine
- Topiramate

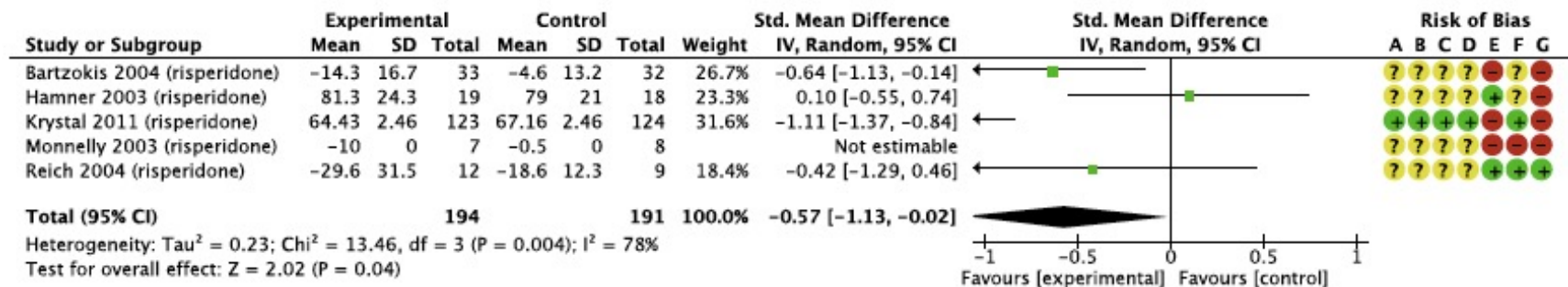
Pharmacological Augmentation (Prazosin)



Risk of bias legend

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Pharmacological Augmentation (Risperidone)



Risk of bias legend

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Editorial

Evidence-based prescribing for post-traumatic stress disorder

Jonathan I. Bisson, Amy Baker, William Dekker and Mathew D. Hoskins



Summary

There is strong research evidence to support the pharmacological treatment of post-traumatic stress disorder (PTSD) as a second line to trauma-focused psychological interventions. Fluoxetine, paroxetine, sertraline and venlafaxine are the best-evidenced drugs, with lower-level evidence for other medications. It is important that prescribing for PTSD is evidence-based.

Declaration of interest

None.

Keywords

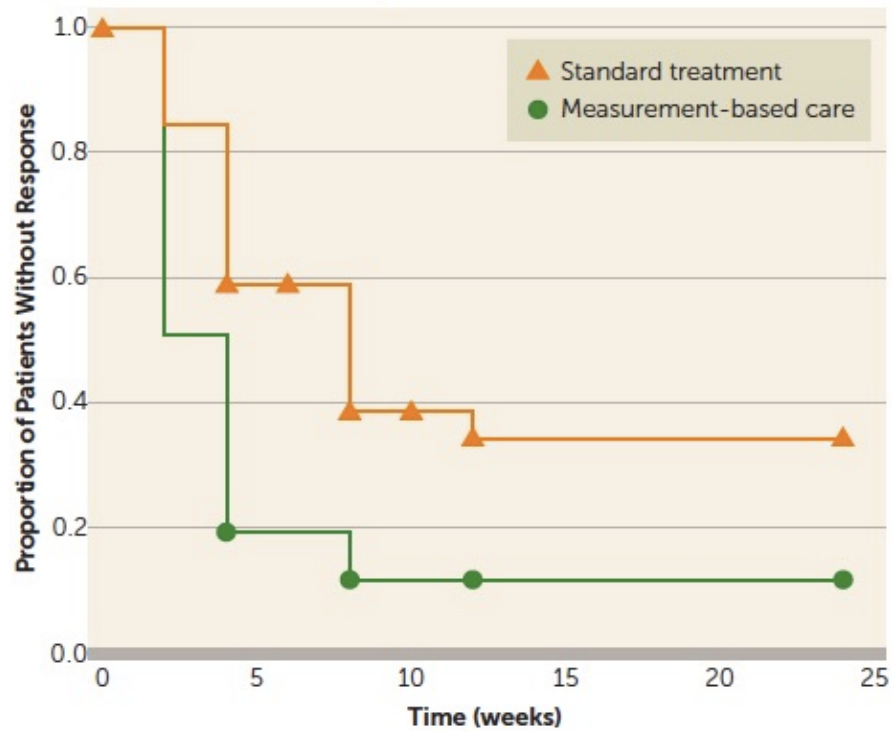
PTSD; pharmacotherapy; prescribing algorithm; treatment; evidence-based.

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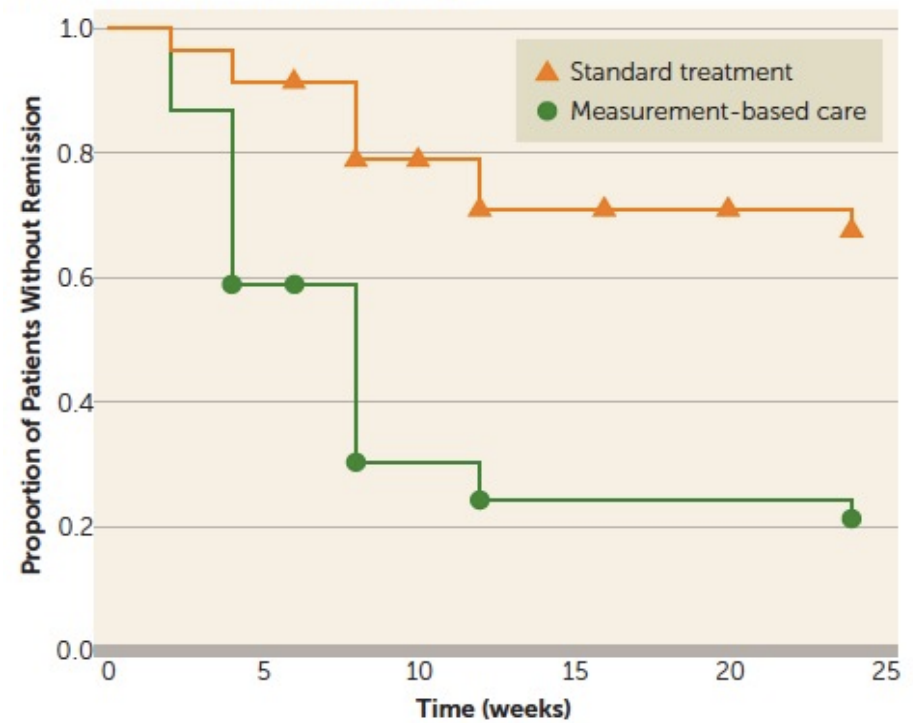
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Measurement-based Care

A. Estimated Mean Time to Response



B. Estimated Mean Time to Remission



Guo et al (2015), AJP

Cardiff Post-Traumatic Stress
Disorder
Prescribing Algorithm