Review: medication and cognitive behaviour therapy control symptoms of bulimia nervosa

Whittal ML, Agras WS, Gould RA. ***Bulimia nervosa: a meta-analysis of psychosocial and pharmacological treatments.*** *Behavior Therapy 1999 Winter;**30**:117–35.*

Question
In people with bulimia nervosa, how do medication and cognitive behaviour therapy (CBT) compare in controlling binge and purge frequency, depression, and eating attitudes?

Data sources
Studies were identified by searching Medline (1966–98) and PsycLIT (1974–98) using the terms bulimia, bulimia nervosa, treatment outcome, clinical trial, and double blind; the references of collected studies were reviewed; and journals specific to eating disorders were handsearched for the previous 8 years.

Study selection
Studies were selected if they were randomised controlled trials of patients diagnosed with bulimia nervosa according to *DSM-III* criteria. Furthermore, studies of pharmacological interventions had to be double blind and placebo controlled. Psychosocial studies could involve CBT, behavioural therapy, or exposure and response prevention, but for the purposes of this review were all referred to as CBT.

Data extraction
Data were extracted on number of patients, treatment duration, type of treatment, and proportion of patients who dropped out or were abstinent after treatment. Tests of heterogeneity were done and pooled effect sizes were calculated for studies with no heterogeneity to assess the magnitude of change from pre-treatment to post-treatment for 4 outcomes: binge frequency, purge frequency, depression, and eating attitudes. Positive effect sizes indicated improvement in symptoms.

Main results
9 medication trials (870 patients) and 26 CBT trials (460 patients) were included. Medication and CBT were effective for all 4 outcomes (table). For each outcome the effect sizes for CBT were higher than for medication. 4 trials provided 5 comparisons of medication combined with CBT. Combined treatment was effective for binge and purge frequency (table). Heterogeneity existed among combined treatment studies for depression and eating attitudes. Combined treatment was more effective than medication alone for binge and purge frequency and more effective than CBT alone for binge frequency. The dropout rate did not reach statistical significance between medication trials and CBT trials.

Conclusions
In people with bulimia nervosa, medication and cognitive behaviour therapy are both effective in controlling binge and purge frequency, depression, and eating attitudes. Cognitive behaviour therapy is the most effective single treatment.

Effect sizes for medication, cognitive behaviour therapy (CBT), and combined treatment

Outcome	*Number of studies with no heterogeneity*	*Overall weighted effect size (95% CI)*
Medication trials		
Binge frequency	9	0.66 (0.52 to 0.81)
Purge frequency	6	0.39 (0.24 to 0.54)
Depression	9	0.73 (0.58 to 0.88)
Eating attitudes	8	0.71 (0.56 to 0.86)
CBT trials		
Binge frequency	17	1.28 (1.09 to 1.47)
Purge frequency	24	1.22 (1.06 to 1.39)
Depression	19	1.31 (1.10 to 1.51)
Eating attitudes	13	1.35 (1.12 to 1.58)
Combined treatment		
Binge frequency	4	1.77 (1.34 to 2.21)
Purge frequency	5	1.33 (0.94 to 1.73)

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Commentary

What always alarms me about meta-analytic studies is the sheer number of treatment trials that are not eligible for inclusion because of inadequate methodology. Whittal *et al* have done a heroic job of sifting through a massive amount of literature, but still find only 26 valid studies. The use of the term "psychosocial treatments" in the title is somewhat misleading because the authors make it clear that their interest is in the relative efficacy of cognitive and behavioural therapies. Given the literature over the past decade, this interest seems entirely appropriate. As a result, the review lays down an important benchmark, confirming the marked superiority of conventional CBT over medication for bulimia nervosa, and suggesting some advantages in the combination of the 2.

At a more general level, this meta-analysis raised some concerns. Firstly, it was disappointing that there were not more long term follow up medication trials; the few that exist show high relapse rates. Secondly, only a broad type of treatment was considered. In a less well controlled meta-analysis, there was no effect for type of psychotherapy, but there were effects for treatment duration and whether relationship issues were addressed.[1] Whittal *et al* might have considered similar issues so that we could start to work more effectively within the broad envelope of what currently masquerades as a relatively homogenous CBT.[2]

The question must now be "where next?" Whittal *et al* have shown that the CBT that is currently practised is a necessary element of our toolbox. However, it is clearly not sufficient, given the failure to achieve remission in about 50% of patient cases.[2] It would be a shame to see further clinical research efforts simply restating this case. Rather, we should establish the general effectiveness of other psychotherapies. Once this is done we can start to work towards the real goal—identifying the patient characteristics that determine who is likely to benefit most from what form of treatment.

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1 Hartmann A, Herzog T, Drinkman A. Psychotherapy of bulimia nervosa: what is effective? A meta-analysis. *J Psychosom Res* 1992;**36**:159–67.
2 Mitchell JE, Hoberman HN, Peterson CB, *et al.* Research on the psychotherapy of bulimia nervosa: half empty or half full. *Int J Eat Disord* 1996;**20**:219–29.