

# Best Evidence Summaries of Topics in Mental Healthcare

**BEST in MH** *clinical question-answering service*

## Question

In adults who are overweight, how effective is Cognitive Behavioural Therapy (CBT) compared to other weight management interventions, in improving patient outcomes?

## Clarification of question using *PICO* structure

*Patients:* Adults who are overweight

*Intervention:* Cognitive Behavioural Therapy

*Comparator:* Standard weight management

*Outcome:* Improving patient outcomes

## Plain language summary

There is limited available evidence on cognitive behavioural therapy for overweight adults. More high quality research is needed in this area to adequately assess the effectiveness of CBT in comparison to weight management interventions for improving patient outcomes.

### **Clinical and research implications**

The available evidence about the effectiveness of cognitive behavioural therapy (CBT) for overweight and obesity is limited. There is some evidence to suggest that adding CBT to diet or exercise programs may result in small, but statistically significant increases in weight loss relative to diet and exercise alone. These benefits were measured at six months or less post-treatment. Studies comparing CBT alone to behavioural therapy or a dietary intervention indicate no difference in effectiveness. The only study to investigate long-term maintenance of weight loss found that weight loss associated with psychological interventions was reversed by three year follow-up.

Further studies are required to confirm the effectiveness of adding CBT interventions to diet and exercise programmes and to assess whether any weight loss achieved by such combined interventions is sustained over the long-term. There is currently very little evidence about the effectiveness of CBT alone compared to other weight loss interventions, or about the effectiveness of group versus individual interventions. Future studies should include both male and female participants, as the majority of the current evidence is derived from women only or majority women studies.

### **What does the evidence say?**

#### ***Number of included studies/reviews (number of participants)***

We identified one systematic review<sup>1</sup> and four additional randomised controlled trials (RCTs),<sup>2,3,4,5</sup> which were considered potentially relevant to this evidence summary. The systematic review assessed the effectiveness of psychological interventions for people who are overweight or obese and included 36 studies, however, only four studies compared the effectiveness of cognitive behavioural therapy (CBT) to another weight loss intervention; only these four studies were considered relevant to this evidence summary.<sup>1</sup> Of the four additional RCTs, one assessed the effects of adding CBT to an exercise programme,<sup>2</sup> one compared group CBT to an individualised dietician intervention,<sup>3</sup> one compared the long-term (three year) effects of CBT behavioural therapy and group self-help,<sup>4</sup> and one compared the effects of CBT and three other psychological interventions added to exercise and diet.<sup>5</sup> Three of the RCTs included only female participants,<sup>2,4,5</sup> and the remaining RCT included 71% females.<sup>3</sup> The systematic review and all four additional RCTs reported weight loss and/or BMI change, and three RCTs also reported one or more psychological outcome measures.<sup>2,3,4</sup>

#### ***Main findings***

The summary estimate from two of the four RCTs included in the systematic review indicated that adding CBT to diet/exercise results in greater weight loss; participants in the CBT + diet/exercise group lost a mean of 4.9kg (95% CI: 2.4 to 7.3) more than those who received diet/exercise alone, with outcomes measured at 3 to 4 months.<sup>1</sup> This observation was supported by one additional RCT, where participants in the exercise + CBT group lost a mean of 2.73 kg, compared to 0.5 kg for those in the exercise control group, at six months follow-up.<sup>2</sup> This trial also reported significant improvements in percentage body fat and psychological outcome measures of body satisfaction (BASS), physical self-concept (PSC) and exercise self-efficacy (ESE) in the CBT + exercise group, compared to no change in the exercise control group.<sup>2</sup> The study that compared four different psychological outcomes, in addition to diet and exercise, found that all four interventions (including

CBT) resulted in reductions in BMI from baseline to post-treatment, however, none of the interventions were compared to each other or to diet and exercise alone.<sup>5</sup> One study in the systematic review and one additional RCT compared CBT to behavioural therapy.<sup>1,4</sup> The study from the systematic review found that participants in the CBT group lost more weight by six months than those in the behavioural therapy group (mean  $7\pm 1.96$  versus  $4.5\pm 2.6$ ) and this difference in weight loss was increased at 12 months, however, the study included only 24 participants and no detailed description of the interventions was provided.<sup>1</sup> The additional RCT investigated maintenance of weight loss over the long-term (up to three years) and found that, whilst both CBT and behavioural therapy were associated with greater weight loss during treatment than the group self-help control, almost study participants had re-gained the weight lost by the three year follow-up.<sup>4</sup> The final RCT compared group CBT to individualised dietician intervention and found no significant differences in physiological or psychological outcomes between the two groups.<sup>3</sup>

### ***Authors conclusions***

Shaw 2005 – The authors concluded that people who are overweight or obese benefit from psychological interventions, particularly behavioural and cognitive-behavioural strategies, to enhance weight reduction. They further noted that these interventions are predominantly useful when combined with dietary and exercise strategies.

Annesi 2010 - Improvements on all measures were greatest in the CBT support condition. Improvement in BASS score was better predicted by changes in the two psychological measures than by physiological changes.

Ash 2006 - A cognitive behaviour-based lifestyle intervention was more effective than control and as effective as intensive individualised dietetic intervention in weight loss and improvements in self-efficacy.

Cooper 2010 – The authors concluded that their findings support to the idea that obesity is resistant to psychological methods of treatment, if anything other than a short-term perspective is taken.

Heris 2013 – The authors concluded that adding psychological interventions to dietary plans and regular physical activities in overweight management would be useful in optimising physiological outcomes. However, it should be noted that they did not present any data comparing psychological interventions plus diet and physical activity to diet and physical activity alone.

### ***Reliability of conclusions/Strength of evidence***

The evidence in this summary is derived from one high quality Cochrane systematic review and four additional RCTs, all of which had significant methodological weaknesses. The majority of the studies included in the systematic review were not considered relevant to this summary because they did not assess the effectiveness of CBT compared to other weight loss interventions; only 4 of the 36 included studies have contributed to this summary. The majority of the evidence in this summary relates to the effectiveness of CBT combined with diet or exercise, meaning that the comparative effectiveness of CBT interventions alone remains uncertain. Finally, studies were generally

conducted in female or majority female populations, and findings may therefore have limited applicability to the general population.

### **What do guidelines say?**

NICE guidelines (CG189: pp20-21) do not comment specifically on CBT but make the following recommendations for any behavioural intervention for treating overweight adults:

Deliver any behavioural intervention with the support of an appropriately trained professional. Include the following strategies in behavioural interventions for adults, as appropriate:

- self-monitoring of behaviour and progress
- stimulus control
- goal setting
- slowing rate of eating
- ensuring social support
- problem solving
- assertiveness
- cognitive restructuring (modifying thoughts)
- reinforcement of changes
- relapse prevention
- Strategies for dealing with weight regain.

**Date question received:** 12/07/2016

**Date searches conducted:** 12/07/2016

**Date answer completed:** 12/09/2016

### **References**

#### ***Systematic reviews***

1. Shaw KA, O'Rourke P, Del Mar C, Kenardy J. Psychological interventions for overweight or obesity. *Cochrane Database of Systematic Reviews* 2005, Issue 2.

#### ***Randomised controlled trials***

2. Annesi, J. J. (2010). Relations of changes in self-regulatory efficacy and physical self-concept with improvements in body satisfaction in obese women initiating exercise with cognitive-behavioral support. *Body Image, 7*(4), 356-359.
3. Ash, S., Reeves, M., Bauer, J., Dover, T., Vivanti, A., Leong, C., ... & Capra, S. (2006). A randomised control trial comparing lifestyle groups, individual counselling and written information in the management of weight and health outcomes over 12 months. *International journal of obesity, 30*(10), 1557-1564.
4. Cooper, Z., Doll, H. A., Hawker, D. M., Byrne, S., Bonner, G., Eeley, E., ... & Fairburn, C. G. (2010). Testing a new cognitive behavioural treatment for obesity: A randomized controlled trial with three-year follow-up. *Behaviour research and therapy, 48*(8), 706-713.

5. Heris, M. A., Alipour, A., Janbozorgi, M., Hajhosseini, R., Shaghghi, F., Golchin, N., & Nouhi, S. (2013). Lipid profile improvement after four group psychological interventions in combination to nutritional and physical activity instructing among overweight and obese individuals. *Iranian journal of public health*, 42(1), 86.

### **Guidelines**

National Institute for Clinical Excellence. Obesity: identification, assessment and Management. CG189. UK:NICE

<https://www.nice.org.uk/guidance/cg189/resources/obesity-identification-assessment-and-management-35109821097925>

## Results

### *Systematic reviews*

Author (year)	Search date	Inclusion criteria	Number of included studies	Summary of results	Risk of bias
Shaw et al. (2005)	June 2003	<p><b>Participants:</b> Adults (18 years or older) who were overweight or obese by any measure (e.g. BMI, waist measurement, waist-to-hip ratio).</p> <p><b>Intervention:</b> Individual or group psychological interventions for overweight or obesity</p> <p><b>Comparator:</b> Control, another psychological intervention, or diet/exercise</p> <p><b>Outcome:</b> Weight or other indicator of body mass, morbidity, quality of life, measures of psychological functioning, biochemical measures</p> <p><b>Study design:</b> Randomised controlled trials (RCTs)</p>	n=36 studies; n=4 studies relevant to this evidence summary	<p>This systematic review aimed to assess the effectiveness of psychological interventions for achieving sustained weight loss in people who are overweight or obese.</p> <p>Four of the 36 studies included in the review compared cognitive behavioural therapy to another weight loss intervention and hence were considered relevant to this evidence summary.</p> <p>Two studies, with a total of 63 participants, compared CBT with diet/exercise to diet/exercise alone. The duration of the interventions in the two studies was 10 weeks and 4 months. A meta-analysis indicated that participants in the CBT + diet/exercise group lost a mean of 4.9kg (95% CI: 2.4 to 7.3) more than those who received diet/exercise alone.</p>	<p>The research question was clearly stated and appropriate inclusion criteria were defined.</p> <p>Five bibliographic databases were searched without language restrictions. The bibliographies of retrieved articles were screened for additional studies.</p> <p>The review methods included measures to</p>

				<p>One study, with 24 participants, compared CBT with behavioural therapy. Participants in the CBT group lost more weight by six months than those in the behavioural therapy group (mean <math>7\pm 1.96</math> versus <math>4.5\pm 2.6</math>); the difference in weight loss was increased at 12 months.</p> <p>One study, with 70 participants, compared CBT with diet/exercise to CBT alone. Participants in the CBT + diet/exercise group lost a mean of <math>1.9\pm 0.6</math> kg by three months follow-up, where as participants in the CBT only group gained a mean of <math>0.5\pm 0.6</math> kg.</p>	<p>minimise error and bias and the methodological quality of included studies was assessed using published criteria.</p> <p>Appropriate methods of synthesis were used.</p>
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### ***Randomised controlled trials***

<b>Author (year)</b>	<b>Inclusion criteria</b>	<b>Number of participants</b>	<b>Summary of results</b>	<b>Risk of bias</b>
Annesi (2010)	<p><b>Participants:</b> Obese women aged 21-65 years with a BMI of 31-45 <math>\text{kg}/\text{m}^2</math></p> <p><b>Intervention:</b> Exercise (3 x 20-40 min sessions per week) supported by a cognitive-behavioural protocol (6 x 45 minute sessions)</p> <p><b>Comparator:</b> Exercise (3 x 20-40 min</p>	<p>n = 134 (Exercise with cognitive-behavioural support n=68,</p>	<p>This trial aimed to assess the effects, on psychological and weight loss outcome measures, of adding CBT to an exercise programme for obese women.</p> <p>With the exception of body composition, there were no significant differences in the outcome measures between the groups at baseline; body composition differences were</p>	<p>No information about randomisation or allocation concealment methods was</p>

	<p>sessions per week) supported by a typical exercise support programme with the same contact time as the CBT condition.</p> <p><b>Outcome:</b> Body satisfaction (BASS), physiological factors (body weight and body composition (percent body fat using skin fold calipers)), exercise self-efficacy (ESE), physical self-concept (PSC), attendance to physical training sessions. All outcomes were measured at baseline and 24 weeks.</p>	<p>Exercise alone n=66)</p>	<p>adjusted for in the model.</p> <p>Physiological outcomes: Only the exercise + CBT group experienced statistically significant changes in weight and body composition from baseline to week 24. The exercise + CBT group lost a mean of 2.73 kg, compared to 0.5 kg in the exercise control group. Similarly percentage body fat was reduced by 2.29% in the exercise + CBT group, compared with 0.06% in the exercise control group.</p> <p>Psychological outcomes: Only the exercise + CBT group experienced statistically significant changes in ESE and PSC. The ESE score increased by 1.13 (from 16.74 to 17.87 out of a maximum of 35) in the exercise + CBT group, compared to a reduction of 0.34 in the exercise control group. The PSC score increased by 3.05 (from 41.76 to 44.81 out of a maximum of 70) in the exercise + CBT group, compared to 1.44 in the exercise control group. There was a statistically significant increase in BASS, from baseline to week 24, in both groups; this increase was greater in the exercise + CBT group (0.5) than in the exercise control group (0.26).</p>	<p>reported.</p> <p>The nature of the intervention precluded blinding of participants and therapists and it was not clear whether outcomes were assessed blind to group allocation.</p> <p>Analyses were conducted on an intention-to-treat basis.</p> <p>Results were reported for all specified outcomes.</p>
<p>Ash et al. (2006)</p>	<p><b>Participants:</b> Adults with BMI&gt;27 kg/m<sup>2</sup></p> <p><b>Intervention:</b> Group-based cognitive behaviour therapy lifestyle intervention,</p>	<p>n=176 (FBI n=57, IDT n=65,</p>	<p>This trial aimed to compare the effects of a group CBT lifestyle intervention and individualised dietetic treatment on weight, physical activity, health and well-being.</p>	<p>Randomisation was done by the project</p>



	<p>Fat Booters Incorporated (FBI) – A group intervention, with 10-12 participants per group comprising 1.5 hour weekly sessions, for 6 weeks.</p> <p><b>Comparator:</b> Individualised dietetic treatment (IDT), comprising individualised weekly contact with a dietician for 8 weeks, or information booklet only control.</p> <p><b>Outcome:</b> Weight and body composition (Model TBF-410), percent body fat, waist circumference, physical activity (IPAQ), health status (GHQ-12), self-efficacy (GSES) and life satisfaction (SWLS). Outcomes were assessed at baseline and at 3, 6 and 12 months.</p>	<p>control n=54)</p> <p>Only data for the active intervention groups are included in this evidence summary</p>	<p>For the two intervention groups included in this evidence summary, the mean age of participants was 48.5±13 years and the mean baseline BMI was 34±5.5 kg/m<sup>2</sup>; approximately 71% were female. There were no statistically significant differences between the groups in age, gender distribution, or baseline measures of weight, physical activity or health and well-being.</p> <p>The group CBT programme used a tri-phasic design involving knowledge and skill development, cognitive behaviour therapy and relapse prevention with a focus on improvements in self-concept, self-efficacy and skills mastery. It emphasised empowerment, development of self-efficacy and skills, with a non-directive approach taken by facilitators. While information was available about diet and exercise, it was up to individuals if they acted on this information in making changes to their lifestyle.</p> <p>There were no statistically significant differences between the two treatment groups, over time, in weight, BMI, % body fat or waist circumference; both groups experienced reductions in weight-related measures over time.</p> <p>There were no statistically significant differences in the odds of being sufficiently physically active, between the two treatment groups.</p>	<p>manager, using a random numbers table.</p> <p>The nature of the intervention precluded blinding of participants and therapists and it was not clear whether outcomes were assessed blind to group allocation.</p> <p>Analyses were conducted on an intention-to-treat basis, however, only 26 patients (46%) in the FBI group and</p>
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			Both intervention groups were associated with significant improvements in mean self-efficacy scores over time, but there were no significant differences between the two groups.	44 patients (68%) in the IDT group completed the study.  Results were reported for all specified outcomes.
Cooper et al. (2010)	<p><b>Participants:</b> Females aged 20-60 years with a BMI between 30.0 and 39.9 without other major medical complications (including type I or type II DM) or psychiatric conditions. Participants were excluded if they had weight loss of <math>\geq 10\%</math> in the previous six months.</p> <p><b>Intervention:</b> CBT</p> <p><b>Comparator:</b> Behaviour therapy (BT) or guided self-help (GSH).</p> <p><b>Outcome:</b> Weight, weight maintenance behaviour (Eating Disorder Examination), general psychiatric features (BSI, SCL-90), quality of life (SF-36) and mental and physical well-being (MCS and PCS). Outcomes were assessed at baseline, post-treatment and at 12, 24 and 36 months follow-up.</p>	n= 150, (CBT n=49, BT n=50, GSH n=51)	<p>This trial aimed to assess the immediate and long-term effects of a new CBT intervention, which was designed to minimise post-treatment weight gain.</p> <p>The three groups were similar with respect to age, marital status, weight history and family history of obesity. However, those in the CBT group had lower baseline weight and BMI; analyses were adjusted for baseline weight.</p> <p>The mean age of study participants was <math>41.5 \pm 9</math> years and their mean weight at baseline was <math>94 \pm 10</math> kg, with a mean BMI of <math>34.7 \pm 2.9</math>. 24% Of study participants were classified as having a binge eating disorder.</p> <p>The guided self-help (GSH) intervention lasted for 24 weeks and involved two initial face-to-face sessions with a therapist followed by 15 20 minute telephone sessions. Behavioural therapy (BT) was based on the Pittsburgh Behavioural Weight</p>	<p>Randomisation was conducted by an independent researcher, using a computer-generated scheme. The allocation sequence was concealed in numbered sealed opaque envelopes.</p> <p>The nature of the</p>

		<p>Control Manual and used established behavioural methods to help participants change their eating habits and activity level, with the aim of restricting their energy intake to 1200 kcal daily. The CBT intervention was designed to address psychological processes thought to interfere with weight maintenance. Both CBT and BT interventions lasted for 44 weeks.</p> <p>There were no statistically significant differences between the groups in the proportion of participants not completing treatment (CBT 16%, BT 18%, GSH 8%).</p> <p>The CBT and BT treatment groups had post-treatment mean weight loss, relative to baseline, of <math>-8.93 \pm 6.82\%</math> and <math>-12.73 \pm 9.89\%</math>, respectively. The GSH group had a mean pre- to post-treatment weight loss of <math>-5.43 \pm 8.34\%</math>. Weight loss was not sustained at 36 months follow-up; mean weight change, relative to baseline, was <math>0.05 \pm 7.3\%</math> in the GSH group, <math>-3.38 \pm 8.27\%</math> in the BT group and <math>-0.44 \pm 7.01\%</math> in the CBT group.</p> <p>The proportion of participants with a &gt;5% weight loss at the end of treatment, which was maintained at 36 months follow-up, was 7.8% in the GSH group, 24% in the BT group and 16.3% in the CBT group. Similarly, the proportion of participants with a &gt;10% weight loss at the end of treatment, which was maintained at 36 months follow-up, was 5.9% in the GSH group, 12% in the BT group and 2% in the CBT group.</p>	<p>intervention precluded blinding of participants and therapists. Outcome assessments were conducted by independent practitioners who were blind to the treatment group.</p> <p>Analyses were conducted on an intention-to-treat basis.</p> <p>Only weight-related outcomes were reported in full.</p>
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<p>Heris et al. (2013)</p>	<p><b>Participants:</b> Females aged 20-45 years with a BMI &gt;25 without other major medical complications (including DM) or psychological illness. Participants were excluded if they had weight loss of ≥10% in the previous six months.</p> <p><b>Intervention:</b> Group CBT – a program to address certain psychological processes that interfere with weight management (24 90 minute sessions).</p> <p><b>Comparator:</b> Group Lifestyle Attitudes Exercise Relationships and Nutrition (LEARN) program for weight management comprising 16 weekly 90 minute sessions, group cognitive therapy (12 90 minute sessions) or group metacognitive therapy (12 90 minute sessions).</p> <p><b>Outcome:</b> BMI, fasting blood sugar, low density lipid, high density lipid and triglyceride.</p>	<p>n= 61 (LEARN n=13, CBT n=17, CT n=17, MCT n=14)</p>	<p>This study aimed to compare the effects of different psychological interventions for individuals with overweight and obesity.</p> <p>The mean age of study participants was 26.75 years (range 20 to 43 years). The baseline BMI appeared similar across the four treatment groups, but it was not clear whether there were any other significant differences between the groups at baseline.</p> <p>All four psychological interventions were applied in addition to diet and physical exercise.</p> <p>Participants in all four treatment groups experienced a statistically significant reduction in BMI from baseline to post-treatment; mean reductions in BMI were 2.58 in the CBT group, 3.14 in the LEARN group, 2.54 in the CT group, and 2.33 in the MCT group. No measures of difference between the groups or follow-up data were reported.</p> <p>Results were also reported for biochemical measures.</p>	<p>The study was described as having a 'quasi-experimental' design and no details of randomisation or allocation concealment were reported.</p> <p>The nature of the intervention precluded blinding of participants and therapists and it was not clear whether outcomes were assessed blind to group allocation.</p> <p>No between</p>
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
















				<p>group measures were assessed, only within-group baseline to post-treatment differences were reported and it was not clear whether all study participants were included in the analyses.</p> <p>Results were reported for all specified outcomes.</p>
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## Risk of bias


### Systematic reviews


Author (year)	RISK OF BIAS				
	Inclusion criteria	Searches	Review process	Quality assessment	Synthesis
Shaw et al. (2005)					

### Randomised controlled trials

Study	RISK OF BIAS					
	Random allocation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective Reporting
Annesi (2010)						
Ash et al. (2006)						
Cooper et al. (2010)						
Heris et al. (2013)						

 Low risk

 High risk

 Unclear risk

## Search details

Source	Search Strategy	Number of hits	Relevant evidence identified
<i>Guidelines</i>			
NICE	Obesity	66	
MEDLINE	11. Medline; (obesity OR obese OR overweight OR weight OR bmi OR (body mass index)).ti,ab; 876419 results. 12. Medline; exp OBESITY/; 161561 results. 13. Medline; exp OVERWEIGHT/; 167869 results. 14. Medline; exp BODY MASS INDEX/; 94340 results. 15. Medline; 11 OR 12 OR 13 OR 14; 920385 results. 16. Medline; cbt.ti,ab; 6534 results. 17. Medline; (cognitive adj3 therap*).ti,ab; 15238 results. 18. Medline; exp COGNITIVE THERAPY/; 19414 results. 19. Medline; 16 OR 17 OR 18; 27541 results. 20. Medline; 15 AND 19; 1235 results. 21. Medline; "randomized controlled trial".ti,ab; 44579 results. 22. Medline; "controlled clinical trial".ti,ab; 10418 results. 23. Medline; randomi\$ed.ti,ab; 2 results. 24. Medline; placebo.ti,ab; 174033 results. 25. Medline; "drug therapy".ti,ab; 30338 results. 26. Medline; randomly.ti,ab; 249690 results. 27. Medline; trial.ti,ab; 414409 results. 28. Medline; groups.ti,ab; 1569305 results. 29. Medline; exp RANDOMIZED CONTROLLED TRIAL/; 0 results. 30. Medline; exp CLINICAL TRIAL/ OR exp CONTROLLED CLINICAL TRIAL/; 0 results. 31. Medline; 21 OR 22 OR 23 OR 24 OR 25 OR 26 OR 27 OR 28 OR 29 OR 30; 2091858 results. 32. Medline; 20 AND 31; 481 results.	481	
EMBASE	33. EMBASE; (obesity OR obese OR overweight OR weight OR bmi OR (body mass index)).ti,ab; 1167270 results.	787	

	<p>34. EMBASE; exp OBESITY/; 370126 results.  35. EMBASE; exp OVERWEIGHT/; 370126 results.  36. EMBASE; exp BODY MASS INDEX/; 252095 results.  37. EMBASE; 33 OR 34 OR 35 OR 36; 1300925 results.  38. EMBASE; cbt.ti,ab; 10407 results.  39. EMBASE; (cognitive adj3 therap*).ti,ab; 21931 results.  40. EMBASE; exp COGNITIVE BEHAVIOR THERAPY/; 41591 results.  41. EMBASE; 38 OR 39 OR 40; 48919 results.  42. EMBASE; 37 AND 41; 2528 results.  43. EMBASE; random*.ti,ab; 1092678 results.  44. EMBASE; factorial*.ti,ab; 27618 results.  45. EMBASE; ((crossover* OR cross-over*).ti,ab; 80690 results.  46. EMBASE; placebo*.ti,ab; 235976 results.  47. EMBASE; ((doubl* ADJ blind*).ti,ab; 163978 results.  48. EMBASE; ((singl* ADJ blind*).ti,ab; 17670 results.  49. EMBASE; assign*.ti,ab; 287590 results.  50. EMBASE; allocat*.ti,ab; 104507 results.  51. EMBASE; volunteer*.ti,ab; 203056 results.  52. EMBASE; exp "RANDOMIZED CONTROLLED TRIAL (TOPIC)"/ OR exp CONTROLLED CLINICAL TRIAL/; 651768 results.  53. EMBASE; 43 OR 44 OR 45 OR 46 OR 47 OR 48 OR 49 OR 50 OR 51 OR 52; 1850432 results.  54. EMBASE; 42 AND 53; 787 results.</p>		
PsycINFO/CINAHL	<p>1. PsycInfo; (obesity OR obese OR overweight OR weight OR bmi OR (body mass index)).ti,ab; 86952 results.  2. PsycInfo; exp OBESITY/; 19506 results.  3. PsycInfo; exp OVERWEIGHT/; 20507 results.  4. PsycInfo; exp BODY MASS INDEX/; 4008 results.  5. PsycInfo; 1 OR 2 OR 3 OR 4; 87474 results.  6. PsycInfo; cbt.ti,ab; 9874 results.  7. PsycInfo; (cognitive adj3 therap*).ti,ab; 25336 results.  8. PsycInfo; exp COGNITIVE BEHAVIOR THERAPY/; 15503 results.  9. PsycInfo; 6 OR 7 OR 8; 31463 results.  10. PsycInfo; 5 AND 9; 877 results.</p>	877	



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