

Treatment of persons who suffer from both an eating disorder and diabetes

This is an excerpt from the full technical report, which is written in Norwegian.

The excerpt provides the report's main messages in English

No. 18–2015

Systematic review

Title: Treatment of persons who suffer from both an eating disorder and diabetes

Norwegian title: Behandling av personer som både har spiseforstyrrelse og diabetes

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Treatment of persons who suffer from both an eating disorder and diabetes
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We would like to thank all contributors for their expertise in this project. Norwegian Knowledge Centre for the Health Services assumes final responsibility for the content of this report.

Norwegian Knowledge Centre for the Health Services
Oslo, August 2015

Key messages (English)

This systematic review addresses treatment of persons who suffer from both an eating disorder and diabetes. Relevant interventions include structured treatment with a focus on control of blood sugar and regular meals, and or in combination with psychological treatment.

Our main conclusion is that there is too little available evidence to make clear conclusions about the effect of any of the treatments. Nor whether there is different effect on people who suffer different combinations of eating disorder and type of diabetes. Treatment with psychoeducation was studied in four small trials with a total of 152 participants. The results show that:

For women who both binge eat and have diabetes type 2, weekly group meetings over ten weeks with cognitive behavioral therapy may have a similar effect as weekly group meetings over ten weeks with another psychological therapy. The quality of this documentation is low, and our confidence in the effect estimate is limited.

For women with subclinical disordered eating and diabetes type 1 or women who suffer both bulimia and diabetes type 1, weekly group meetings or three months as inpatient with psychoeducation was reported to have an effect. The quality of this documentation is very low, and we have very little confidence in the effect estimates.

We did not find any studies of effect of treatment for gestational diabetes. We did not find any studies of effect of treatment for people who suffer from both anorexia and diabetes or any other combinations of eating disorder and diabetes.

Title:

Treatment of persons who suffer from both an eating disorder and diabetes

Type of publication:

Systematic review

A review of a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise relevant research, and to collect and analyse data from the studies that are included in the review. Statistical methods (meta-analysis) may or may not be used to analyse and summarise the results of the included studies.

Doesn't answer everything:

- Excludes studies that fall outside of the inclusion criteria
- No health economic evaluation
- No recommendations

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Last search for studies: February 2015.

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Øyving Rø, Torhild Torjussen Hovdal, Linn Bæra, all members of the Guideline panel for the Norwegian Directorate of Health

Executive summary (English)

Background

People may suffer several illnesses at the same time. National guidelines for treatment of eating disorders in Norway will include comorbidities. The Directorate of Health have commissioned this systematic review of treatment of persons who suffer from both an eating disorder (anorexia, bulimia, binge eating, unspecified eating disorder or subclinical disturbed eating) and diabetes (type 1, type 2 or gestational diabetes). Relevant interventions include a structured treatment with focus on control of blood sugar and regular meals and/ or in combination with psychological treatment.

Objective

This systematic review will assess the effect of treatment of persons who suffer from both an eating disorder and diabetes.

Method

We searched for systematic reviews published during the last five years. The following databases were searched 19th February 2015: Cochrane Database of Systematic Reviews (CDSR); Database of Abstracts of Reviews of Effects (DARE); MEDLINE; Embase; PsycINFO; CINAHL.

Because we did not find any systematic reviews, we went on to search for primary studies of effect in the following databases (27th February 2015): MEDLINE; Embase; Cochrane CENTRAL; PsycINFO; CINAHL.

Two persons assessed all references for inclusion independently of each other. All references considered potentially relevant were assessed in full text. Two persons independently evaluated the quality of included studies. The relevant population was persons who suffer from both an eating disorder (anorexia, bulimia, binge eating or unspecified eating disorder) and diabetes (type 1, type 2 or gestational diabetes). Relevant interventions include structured treatment with focus on control of blood sugar and regular meals and/ or in combination with psychological treatment. One

person extracted information and another person double-checked that the important and correct information were collected. We evaluated our confidence in the results using GRADE (Grading of Recommendations, Assessment, Development, and Evaluation).

Results

We did not find any systematic review about the effect of treatment for people who suffer both an eating disorder and diabetes.

We included four studies with 152 participants, all women, age ranging from 12 to over 60 years. Two were randomized controlled trials and two were before-and-after-studies. Two of the studies were from Canada, one was from Australia and one from Japan. The intervention in all of the studies included some form of psychoeducation in addition to treatment for diabetes. The results show:

Weekly group meetings with cognitive behavioral therapy over ten weeks to women who both binge eat and have diabetes type 2 may lead to similar effect after three months as weekly meetings over ten weeks with another psychological group therapy on the following outcomes:

- body mass index (BMI) (Mean Difference (MD) 4.23 (-0.14 to 8.6)
- frequency of bingeing (MD 0.82 (-1.86 to 0.22))
- Eating Disorder Inventory (EDI) subscales (MD
 - bulimia 0.18 (-4.59 to 4.23)
 - drive for thinness 0.79 (-2.55 to 4.13)
 - body dissatisfaction 0.29 (-4.6 to 5.18))
- well-being (The Well being Questionnaire (WBQ), MD 2.17 (-10.67 to 6.33))

The quality of this documentation is low, and our confidence in the effect estimate is limited.

For women with subclinical disordered eating and diabetes type 1, weekly group meetings over six weeks with psychoeducation was reported after 1 month to reduce:

- depression (MD -15.7 (-28.23 to -3.17)
- eating disorder symptoms measured by Eating Attitudes Test (EAT) (MD -13.2 (-23.69 to -2.71)

The quality of this documentation is very low, and we have very little confidence in the effect estimates.

After six months, there were no reported differences in the following outcomes:

- blood sugar (MD 0 (-0.68 to 0.68))
- insulin omission (MD 0.2 (-2.14 to 2.54))
- binge episodes (MD -1.8 (-4.32 to 0.72))
- Eating Disorder Inventory (EDI) subscales (MD
 - Drive for thinness (MD -0.2 (-2.74 to 2.34))
 - bulimia -0.9 (-2.3 to 0.5)

- body dissatisfaction -1 (-4.25 to 2.25)
- Eating Disorder Examination (EDE) subscales (MD)
 - restraint 0 (-0.5 to 0.5)
 - over eating -0.1 (-0.3 to 0.1)

The quality of this documentation is also very low, and we have very little confidence in the effect estimates.

For women who suffer both bulimia and diabetes type 1, inpatient treatment for three months was reported after 3 years to reduce:

- blood sugar (MD -2.9 (-4.83 to 0.97))
- diagnoses of eating disorder (RR 0.25 (0.07 to 0.85))
- SDS depressions (MD -14.4 (-24.05 to -4.75))
- EDI (MD -34.4 (-61.82 to -6.98))
- frequency of bingeing (MD -3.5 (-5.75 to -1.28))
- State Trait Anxiety Inventory (STAI) trait anxiety (MD -13.8 (-24.24 to -3.36))

No differences were reported for

- BMI (MD 0.9 (-1.87 to 3.67))
- insulin omission (RR 0.2 (0.03 to 1.39))

The quality of this documentation is very low, and we have very little confidence in the effect estimates.

We did not find any studies of effect of treatment for gestational diabetes or any other combinations of eating disorder and diabetes.

Discussion

This review presents results from four small studies about treatment of people who suffer from both an eating disorder and diabetes. The studies included women with three combinations of eating disorder and diabetes: subclinical eating disorder and diabetes type 1; bulimia and diabetes type 1; binge eating and diabetes type 2. The studies include three combinations of intervention and comparison: psychoeducation during weekly group meetings compared with waiting list; inpatient care for three months compared with waiting list; two types of weekly psychological treatment given during group meetings compared with each other.

The available evidence about these interventions is of low and very low quality. This does not mean that these interventions do not work, but that the available research documentation is not sufficient to draw definitive conclusions about their effect.

There is a need for further research about the effect of treatment for people who suffer from both an eating disorder and diabetes.

Conclusion

The available research documentation is not sufficient to conclude about the effect of these interventions. Nor is it sufficient to inform if there may be different effect for people with different combinations of eating disorder and diabetes.

Results suggests similar effect of the two different group meeting based psychological treatments when both lasted ten weeks.