

## **PICO 10: Er der evidens for, at et supplerende telemedicinsk tilbud kan forbedre effekten af rehabilitering ved type 2 diabetes?**

### **Methods**

**Criteria for considering studies for this review**

***Types of outcome measures***

**Primary outcomes**

HbA1c  $\geq$  1 år - kritisk

QoL - længste follow-up

**Secondary outcomes**

**Følgende outcomes er vurderet vigtige:**

BMI  $\geq$  1 år

HbA1c  $<$  1 år

Komplikationer  $\geq$  1 år

Hjertekarsygdom  $\geq$  1 år

Frafaldsrate - efter endt forløb

Selvurderet helbred - længste follow-up

Kost (adfærdstest) - længste follow-up

Fysisk aktivitet - længste follow-up

### **Characteristics of studies**

**Characteristics of included studies**

**Glasgow 2012**

<p><b>Methods</b></p>	<p><b>Study design:</b> Randomized controlled trial  <b>Study grouping:</b> Parallel group  <b>Open Label:</b>  <b>Cluster RCT:</b></p>
<p><b>Participants</b></p>	<p><b>Baseline Characteristics</b>  intervention</p> <ul style="list-style-type: none"> <li>● <i>age</i>: 58.7/57.8</li> <li>● <i>females (%)</i>: 44.6/53.7</li> <li>● <i>HbA1c (%)</i>: 8.14(0.1)</li> <li>● <i>number</i>: 331</li> </ul> <p>control</p> <ul style="list-style-type: none"> <li>● <i>age</i>: 58.7(9.1)</li> <li>● <i>females (%)</i>: 51.5</li> <li>● <i>HbA1c (%)</i>: 8.16(0.16)</li> <li>● <i>number</i>: 132</li> </ul> <p><b>Included criteria:</b> type 2 diabeets, 25-75 yrs, BMI &gt; 25, at least one risk factor (hypertension, dyslipidemia, Smoking), acces to phone and internet.  <b>Excluded criteria:</b> none indicated</p>
<p><b>Interventions</b></p>	<p><b>Intervention Characteristics</b>  intervention</p> <ul style="list-style-type: none"> <li>● <i>intervention:</i> CASMCASM participants were given access to the “My Path to HealthyLife”/“Mi Camino A La Vida Sana” website and instructed in log-in, navigation, and usage procedures by a research staff member. Participants were asked to select initial, easily achievable goals ineach of three areas: medication adherence, physical activity, and food choices. They recorded their progress on these three dailygoals using the tracking section of the website and received immediate feedback on success in meeting their goals over the past 7 days. The website, described in detail elsewhere [28], included agraphic display of the patient’s hemoglobin A1c, blood pressure, and cholesterol results; a moderated forum; and communityresources (e.g., healthful recipes, printable handouts) for diabetesself-management and healthful lifestyles, as well as features toenhance user engagement, such as rotating quiz questions andmotivational tips. After 6 weeks, participants created personalized “action plans”for medication</li> </ul>

	<p>taking, healthy eating, and physical activity. For each of the three areas, users identified barriers to achieving the goal(s) they had selected, and then chose from a list of problem-solving strategies to overcome those barriers [29]. Each user's action plan summary was available for easy reference and revision. In addition to the website, CASM participants received periodic motivational calls and prompting using a computer-based telephone system that initiated outbound calls, received inbound calls, and collected data. CASM+ participants received all aspects of the CASM intervention with the addition of two follow-up calls from an interventionist, and an invitation to attend three group visits with other participants in the same study condition. The two extra follow-up calls occurred 2 and 8 weeks after the initial visit to answer any intervention-related questions and troubleshoot problems with the website or self-management goals, and to discuss the participant's action plans, respectively. The first call was from a research project staff member and the second call to coordinate with the patients' more general diabetes management goals was from a KPCO diabetes care coordinator. The 120-min group sessions focused on (1) healthy eating, interacting with one's physician and using community resources and (2) maintenance enhancement through the use of analyzing personal behavior chains related to relapse [30]. The first group session for CASM+ participants, scheduled after their action plans were created, focused on healthy eating, and was led by a nutritionist. The meeting included information on healthful restaurant eating behaviors and grocery shopping tips. The second group visit was designed to supplement the Behavior Chain exercise introduced to enhance maintenance of the CASM+ intervention. The Behavior Chain Activity was designed to help participants understand that lapses in healthful eating, physical activity, and medication-taking practices usually result from a chain of behaviors leading up to the lapse. The Behavior Chain links may be thought of as high-risk situations in which unhealthful behaviors may be substituted for healthful ones. To prevent future lapses, the activity was designed to help participants identify their links, and then develop strategies for each link in their own Behavior Chain. The third group meeting was led by a bilingual family physician to educate participants about community diabetes resources and how to obtain maximum benefit from their doctor visits.</p> <p>control</p> <ul style="list-style-type: none"> <li>● <i>intervention</i>: enhanced usual care</li> </ul>
<p><b>Outcomes</b></p>	<p><i>Continuous:</i></p> <ul style="list-style-type: none"> <li>● HbA1c</li> <li>● HbA1c</li> <li>● self efficacy</li> <li>● health distress</li> <li>● BMI</li> <li>● HbA1c</li> </ul>

	<ul style="list-style-type: none"> <li>● Self efficacy</li> <li>● general health state</li> <li>● diabetes distress</li> <li>● eating habits</li> <li>● fat intake</li> <li>● Phys activity</li> </ul> <p><i>Dichotomous:</i></p> <ul style="list-style-type: none"> <li>● frafald</li> <li>● komplikation</li> <li>● CVD</li> </ul>
<p><b>Identification</b></p>	<p><b>Sponsorship source:</b> Grant DK35524 from the national Institute of Diabetes and Digestive and Kidney Diseases</p> <p><b>Country:</b> USA</p> <p><b>Setting:</b> 5 primary care clinics with Kaiser Permanente Colorado</p> <p><b>Comments:</b></p> <p><b>Authors name:</b> Glasgow RE</p> <p><b>Institution:</b> Institute for Health Research, Kaiser Permanente Colorado, Denver</p> <p><b>Email:</b> glasgowre@mail.nih.gov</p> <p><b>Address:</b> Dissemination and Implementation Science, Division of cancer control and popultions science, National cancer Institute, 6130 Executive Blvd, Room 6144, Rockville, MD 20852, USA</p>
<p><b>Notes</b></p>	<p><b>Identification:</b></p> <p><b>Participants:</b></p> <p><b>Study design:</b></p> <p><b>Baseline characteristics:</b></p> <p><b>Intervention characteristics:</b></p> <p><b>Pretreatment:</b></p> <p><b>Continuous outcomes:</b> <i>Ole Snorgaard</i> mean and SE values are intention-to-treat data.</p> <p><b>Dichotomous outcomes:</b></p> <p><b>Adverse outcomes:</b></p>

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	-
Allocation concealment (selection bias)	Unclear risk	-
Blinding of participants and personnel (performance bias)	Low risk	Objective measures
Blinding of outcome assessment (detection bias)	Low risk	Objective measures
Incomplete outcome data (attrition bias)	High risk	Large skewed dropout (14/58) and (8/58) and no intention to treat analysis.
Selective reporting (reporting bias)	Low risk	few studies in the literature shows different results, selctive outcome reporting therefore not likely
Other bias	Low risk	

Orsama 2013

<b>Methods</b>	<p><b>Study design:</b> Randomized controlled trial</p> <p><b>Study grouping:</b> Parallel group</p> <p><b>Open Label:</b></p> <p><b>Cluster RCT:</b></p>
<b>Participants</b>	<p><b>Baseline Characteristics</b></p> <p>intervention</p> <ul style="list-style-type: none"> <li>● age: 62.3(6.5)</li> <li>● females (%): 46</li> <li>● HbA1c (%): 6.86(1.56)</li> <li>● number: 24</li> </ul> <p>control</p> <ul style="list-style-type: none"> <li>● age: 61.5(9.1)</li> <li>● females (%): 46</li> <li>● HbA1c (%): 7.09(1.51)</li> </ul>

	<ul style="list-style-type: none"> <li>● <i>number</i>: 24</li> </ul> <p><b>Included criteria:</b> type 2 diabetes, age 30-70, HbA1c &gt;= 6.5%, BP &gt; 140/90</p> <p><b>Excluded criteria:</b> expected poor compliance, pregnancy, life expectancy &lt; 1 yr, psychiatric disorder, abuse</p>
<p><b>Interventions</b></p>	<p><b>Intervention Characteristics</b> intervention</p> <ul style="list-style-type: none"> <li>● <i>intervention</i>: mobile phone remote patient reporting with feed back, guided by health behavior change theory, aimed at improving self-management and health status</li> </ul> <p>control</p> <ul style="list-style-type: none"> <li>● <i>intervention</i>: Education and Medical care with followup</li> </ul>
<p><b>Outcomes</b></p>	<p><i>Continuous:</i></p> <ul style="list-style-type: none"> <li>● HbA1c</li> <li>● self efficacy</li> <li>● health distress</li> <li>● HbA1c</li> <li>● eating habits</li> <li>● HbA1c</li> <li>● Phys activity</li> <li>● fat intake</li> <li>● Self efficacy</li> <li>● general health state</li> <li>● BMI</li> <li>● diabetes distress</li> </ul> <p><i>Dichotomous:</i></p> <ul style="list-style-type: none"> <li>● CVD</li> <li>● komplikation</li> <li>● frafald</li> </ul>
<p><b>Identification</b></p>	<p><b>Sponsorship source:</b> The Finnish Funding Agency for Technology and Innovation and Bayer HealthCare LLC, Diabetes Care</p> <p><b>Country:</b> Finland</p>

	<p><b>Setting:</b> VTT Research Center of Finland, Helsinki</p> <p><b>Comments:</b></p> <p><b>Authors name:</b> Orsama</p> <p><b>Institution:</b> VTT Research Center of Finland, Helsinki</p> <p><b>Email:</b></p> <p><b>Address:</b> VTT Research Center of Finland, Helsinki</p>
<b>Notes</b>	<p><b>Identification:</b></p> <p><b>Participants:</b></p> <p><b>Study design:</b></p> <p><b>Baseline characteristics:</b></p> <p><b>Intervention characteristics:</b></p> <p><b>Pretreatment:</b></p> <p><b>Continuous outcomes:</b></p> <p><b>Dichotomous outcomes:</b></p> <p><b>Adverse outcomes:</b></p>

**Risk of bias table**

<b>Bias</b>	<b>Authors' judgement</b>	<b>Support for judgement</b>
Random sequence generation (selection bias)	Low risk	Comment: Randomization stratified by sex and age
Allocation concealment (selection bias)	Low risk	Comment: Excel-generated random numbers
Blinding of participants and personnel (performance bias)	High risk	Comment: blinding not possible
Blinding of outcome assessment (detection bias)	Low risk	Comment: No blinding but objective outcomes
Incomplete outcome data (attrition bias)	Unclear risk	Comment: low and equal drop-out rate. 6 in the intervention Group and 5 in the controlgroup were given training in glucose monitoringdropout 3/27 and 5/29. No description of reasons for dropouts and no intention to treat analysis.
Selective reporting (reporting bias)	Unclear risk	Comment: No trial protocol

Other bias	High risk	Comment: patients was self-selected to participate and therefore motivated for the technology.
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**Welch 2011**

<b>Methods</b>	
<b>Participants</b>	
<b>Interventions</b>	
<b>Outcomes</b>	
<b>Identification</b>	
<b>Notes</b>	

**Risk of bias table**

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Comment: Not described how randomisation was done
Allocation concealment (selection bias)	Unclear risk	-
Blinding of participants and personnel (performance bias)	Low risk	Comment: No blinding but objective meassures not likely to be influenced by this
Blinding of outcome assessment (detection bias)	Low risk	-
Incomplete outcome data (attrition bias)	High risk	High, skewed dropout. No itt analysis
Selective reporting (reporting bias)	Low risk	Comment: few studies in the literature shows different results, selctive outcome reporting therefore not likely
Other bias	Low risk	-

*Footnotes*

**Characteristics of excluded studies**

***Avdal 2011***

Reason for exclusion	Wrong intervention
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***Bond 2007***

Reason for exclusion	Wrong patient population
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***Bond 2010***

Reason for exclusion	Wrong patient population
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***Dale 2009***

Reason for exclusion	Wrong comparator
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***Eakin 2014***

Reason for exclusion	Wrong comparator
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***Faridi 2008***

Reason for exclusion	unclear randomisation
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***Glasgow 2010***

Reason for exclusion	preliminary results of included study
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***Jennings 2014***

Reason for exclusion	Wrong intervention
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***Liebreich 2009***

Reason for exclusion	Wrong comparator
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***Lorig 2010***

Reason for exclusion	Wrong comparator
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***McMahon 2012***

Reason for exclusion	Wrong intervention
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***Noh 2010***

Reason for exclusion	Wrong intervention
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***Ralston 2009***

Reason for exclusion	Wrong comparator
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***Tang 2013***

Reason for exclusion	Wrong comparator
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***Waki 2014***

Reason for exclusion	Wrong comparator
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**Williams 2012**

Reason for exclusion	Wrong comparator
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*Footnotes***Characteristics of studies awaiting classification***Footnotes***Characteristics of ongoing studies***Footnotes***Summary of findings tables****Additional tables****References to studies****Included studies****Glasgow 2012**

Glasgow RE, Kurz D, King D, Dickman JM, Faber AJ, Halterman E, et al.. Twelve-month outcomes of an Internet-based diabetes self-management support program.. *Patient Education & Counseling* 2012;87(1):81-92. [DOI: <http://dx.doi.org/10.1016/j.pec.2011.07.024>]

**Orsama 2013**

Orsama AL, Lahteenmaki J, Harno K, Kujju M, Wintergerst E, Schachner H, et al.. Active assistance technology reduces glycosylated hemoglobin and weight in individuals with type 2 diabetes: results of a theory-based randomized trial. *Diabetes Technol Ther* 2013;15(8):662-9. [DOI: [10.1089/dia.2013.0056](https://doi.org/10.1089/dia.2013.0056)]

**Welch 2011**

Welch G, Zagarins SE, Feinberg RG, Garb JL. Motivational interviewing delivered by diabetes educators: does it improve blood glucose control among poorly controlled type 2 diabetes patients? *Diabetes Res Clin Pract* 2011 ;91(1):54-60.

**Excluded studies****Avdal 2011**

Avdal,E. U.; Kizilci,S.; Demirel,N.. The effects of web-based diabetes education on diabetes care results: a randomized control study. CIN: Computers, Informatics, Nursing 2011 ;29(2):101-106. [DOI: <http://dx.doi.org/10.1097/NCN.0b013e3181fcbd66>]

**Bond 2007**

Bond,G. E.; Burr,R.; Wolf,F. M.; Price,M.; McCurry,S. M.; Teri,L.. The effects of a web-based intervention on the physical outcomes associated with diabetes among adults age 60 and older: a randomized trial.. *Diabetes Technology & Therapeutics* 2007 ;9(1):52-59. [DOI: ]

**Bond 2010**

Bond,G. E.; Burr,R. L.; Wolf,F. M.; Feldt,K.. The effects of a web-based intervention on psychosocial well-being among adults aged 60 and older with diabetes: a randomized trial.. *Diabetes Educator* 2010 ;36(3):446-456. [DOI: <http://dx.doi.org/10.1177/0145721710366758>]

**Dale 2009**

Dale,J.; Caramlau,I.; Sturt,J.; Friede,T.; Walker,R.. Telephone peer-delivered intervention for diabetes motivation and support: the telecare exploratory RCT.. *Patient Education & Counseling* 2009 ;75(1):91-98. [DOI: <http://dx.doi.org/10.1016/j.pec.2008.09.014>]

**Eakin 2014**

Eakin,E. G.; Winkler,E. A.; Dunstan,D. W.; Healy,G. N.; Owen,N.; Marshall,A. M.; Graves,N.; Reeves,M. M.. Living well with diabetes: 24-month outcomes from a randomized trial of telephone-delivered weight loss and physical activity intervention to improve glycemic control.. *Diabetes care* 2014 ;37(8):2177-2185. [DOI: <http://dx.doi.org/10.2337/dc13-2427>]

**Faridi 2008**

Faridi,Z.; Liberti,L.; Shuval,K.; Northrup,V.; Ali,A.; Katz,D. L... Evaluating the impact of mobile telephone technology on type 2 diabetic patients' self-management: the NICHE pilot study.. *Journal of evaluation in clinical practice* 2008 ;14(3):465-469. [DOI: <http://dx.doi.org/10.1111/j.1365-2753.2007.00881.x>]

**Glasgow 2010**

Glasgow, R. E.; Kurz, D.; King, D.; Dickman, J. M.; Faber, A. J.; Halterman, E.; Wooley, T.; Strycker, L. A.; Estabrooks, P. A.; Osuna, D.; Ritzwoller, D.. Outcomes of minimal and moderate support versions of an internet-based diabetes self-management support program.. Journal of General Internal Medicine 2010;25(12):1315-1322. [DOI: <http://dx.doi.org/10.1007/s11606-010-1480-0>]

**Jennings 2014**

Jennings, C. A.; Vandelanotte, C.; Caperchione, C. M.; Mummery, W. K.. Effectiveness of a web-based physical activity intervention for adults with Type 2 diabetes-A randomised controlled trial.. Preventive medicine 2014;60(Journal Article):33-40. [DOI: <http://dx.doi.org/10.1016/j.ypmed.2013.12.011>]

**Liebreich 2009**

Liebreich, T.; Plotnikoff, R. C.; Courneya, K. S.; Boule, N.. Diabetes NetPLAY: A physical activity website and linked email counselling randomized intervention for individuals with type 2 diabetes.. International Journal of Behavioral Nutrition and Physical Activity 2009;6(Journal Article). [DOI: <http://dx.doi.org/10.1186/1479-5868-6-18>]

**Lorig 2010**

Lorig, K.; Ritter, P. L.; Laurent, D. D.; Plant, K.; Green, M.; Jernigan, V. B.; Case, S.. Online diabetes self-management program: a randomized study.. Diabetes care 2010;33(6):1275-1281. [DOI: <http://dx.doi.org/10.2337/dc09-2153>]

**McMahon 2012**

McMahon, G. T.; Fonda, S. J.; Gomes, H. E.; Alexis, G.; Conlin, P. R.. A randomized comparison of online- and telephone-based care management with internet training alone in adult patients with poorly controlled type 2 diabetes.. Diabetes Technology & Therapeutics 2012;14(11):1060-1067. [DOI: <http://dx.doi.org/10.1089/dia.2012.0137>]

**Noh 2010**

Noh, J. H.; Cho, Y. J.; Nam, H. W.; Kim, J. H.; Kim, D. J.; Yoo, H. S.; Kwon, Y. W.; Woo, M. H.; Cho, J. W.; Hong, M. H.; Yoo, J. H.; Gu, M. J.; Kim, S. A.; An, K. E.; Jang, S. M.; Kim, E. K.; Yoo, H. J.. Web-based comprehensive information system for self-management of diabetes mellitus.. Diabetes Technology & Therapeutics 2010;12(5):333-337. [DOI: <http://dx.doi.org/10.1089/dia.2009.0122>]

**Ralston 2009**

Ralston, J. D.; Hirsch, I. B.; Hoath, J.; Mullen, M.; Cheadle, A.; Goldberg, H. I.. Web-Based Collaborative Care for Type 2 Diabetes: A pilot randomized trial. Diabetes care 2009;32(2):234-239. [DOI: [10.2337/dc08-1220](https://doi.org/10.2337/dc08-1220)]

**Tang 2013**

Tang, P. C.; Overhage, J. M.; Chan, A. S.; Brown, N. L.; Aghighi, B.; Entwistle, M. P.; Hui, S. L.; Hyde, S. M.; Klieman, L. H.; Mitchell, C. J.; Perkins, A. J.; Qureshi, L. S.; Waltmyer, T. A.; Winters, L. J.; Young, C. Y.. Online disease management of diabetes: engaging and motivating patients online with enhanced resources-diabetes (EMPOWER-D), a randomized controlled trial... Journal of the American Medical Informatics Association 2013;20(3):526-534. [DOI: <http://dx.doi.org/10.1136/amiajnl-2012-001263>]

**Waki 2014**

Waki K.; Fujita H.; Uchimura Y.; Omae K.; Aramaki E.; Kato S.; Lee H.; Kobayashi H.; Kadowaki T.; Ohe K.. DialBetics: A Novel Smartphone-based Self-management Support System for Type 2 Diabetes Patients.. Journal of diabetes science and technology 2014;8(2):209-215. [DOI: 10.1177/1932296814526495]

**Williams 2012**

Williams, E. D.; Bird, D.; Forbes, A. W.; Russell, A.; Ash, S.; Friedman, R.; Scuffham, P. A.; Oldenburg, B.. Randomised controlled trial of an automated, interactive telephone intervention (TLC Diabetes) to improve type 2 diabetes management: baseline findings and six-month outcomes.. BMC Public Health 2012;12(Journal Article):602. [DOI: <http://dx.doi.org/10.1186/1471-2458-12-602>]

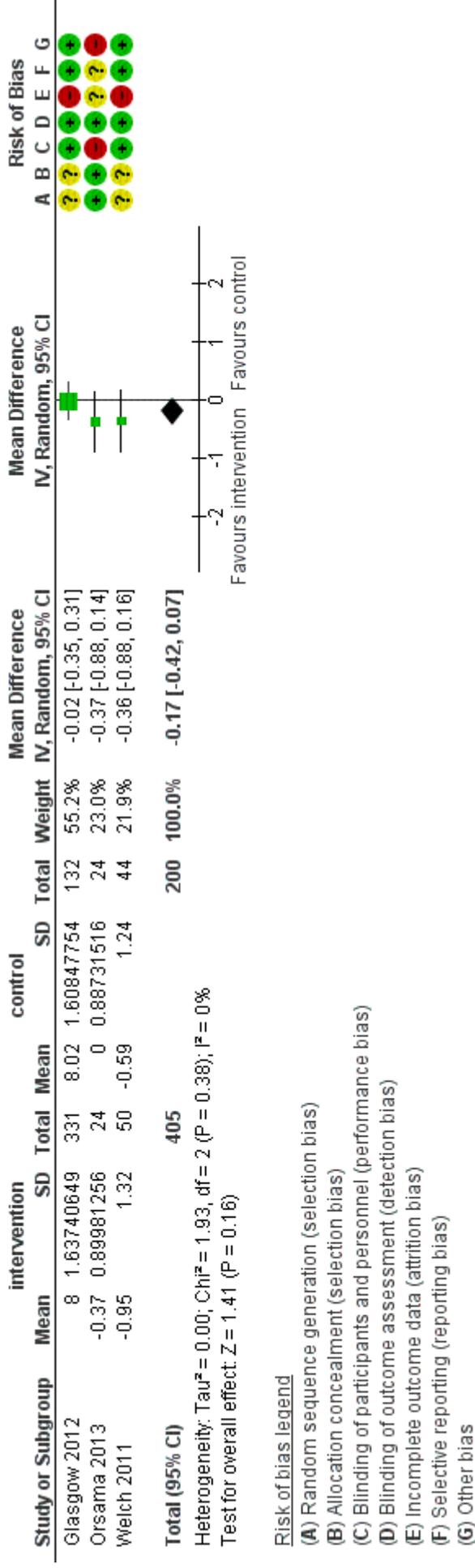
**Studies awaiting classification****Ongoing studies****Other references****Additional references****Other published versions of this review****Data and analyses****1 intervention vs control**

Outcome or Subgroup	Studies	Participants	Statistical Method	Effect Estimate
1.1 HbA1c <1 år	3	605	Mean Difference (IV, Random, 95% CI)	-0.17 [-0.42, 0.07]

1.2 HbA1c >= 1 år	1	463	Mean Difference (IV, Random, 95% CI)	0.12 [-0.21, 0.45]
1.3 Self efficacy < 1 year higher = better	1	463	Mean Difference (IV, Random, 95% CI)	-0.40 [-0.74, -0.06]
1.4 Self efficacy longest f.u. higher = better	1	463	Mean Difference (IV, Random, 95% CI)	-0.31 [-0.67, 0.05]
1.5 general health state < 1 year higher=better	1	463	Mean Difference (IV, Random, 95% CI)	0.00 [-3.10, 3.10]
1.6 general health state longest f.u. higher=better	1	463	Mean Difference (IV, Random, 95% CI)	0.60 [-2.77, 3.97]
1.7 diabetes distress < 1 year lower=better	1	463	Mean Difference (IV, Random, 95% CI)	-0.16 [-1.35, 1.03]
1.8 diabetes distress longest f.u. lower=better	1	463	Mean Difference (IV, Random, 95% CI)	-0.06 [-0.29, 0.17]
1.9 eating habits < 1 year higher=better	1	463	Mean Difference (IV, Random, 95% CI)	-0.13 [-0.17, -0.09]
1.10 eating habits longest f.u. higher=better	1	463	Mean Difference (IV, Random, 95% CI)	-0.09 [-0.16, -0.02]
1.11 Phys activity (cal/week)< 1 year	1	463	Mean Difference (IV, Random, 95% CI)	-706.00 [-1335.30, -76.70]
1.12 Phys activity longest f.u.	1	463	Mean Difference (IV, Fixed, 95% CI)	-360.00 [-1044.56, 324.56]
1.13 frafald endt forløb	3	632	Risk Ratio (IV, Random, 95% CI)	1.17 [0.47, 2.91]

## Figures

### Figure 1 (Analysis 1.1)



Forest plot of comparison: 1 intervention vs control, outcome: 1.1 HbA1c <1 år.

Figure 2 (Analysis 1.2)

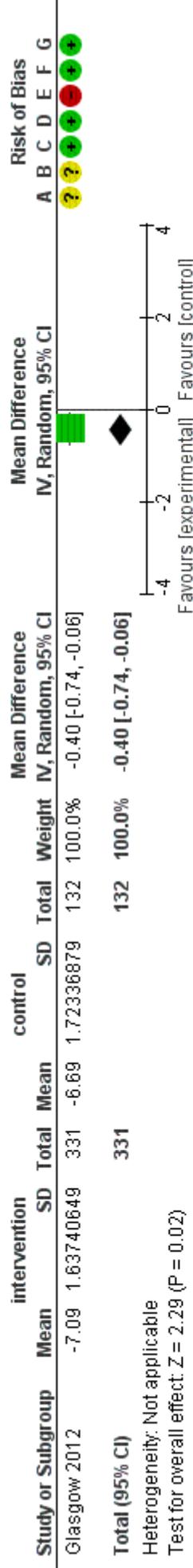


Risk of bias legend

- (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

Forest plot of comparison: 1 intervention vs control, outcome: 1.2 HbA1c >= 1 år.

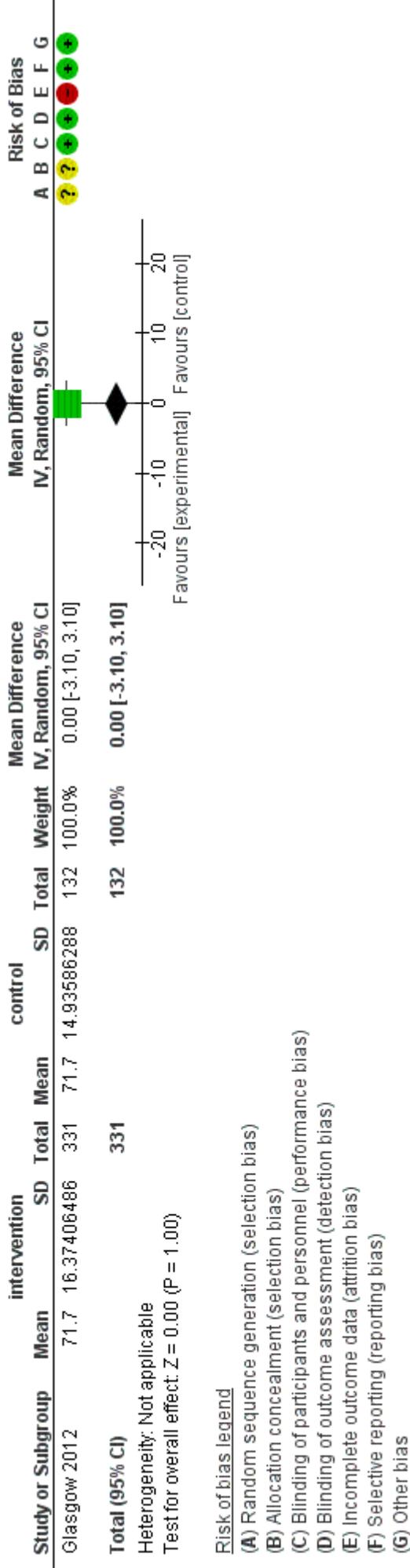
**Figure 3 (Analysis 1.3)**



Risk of bias legend

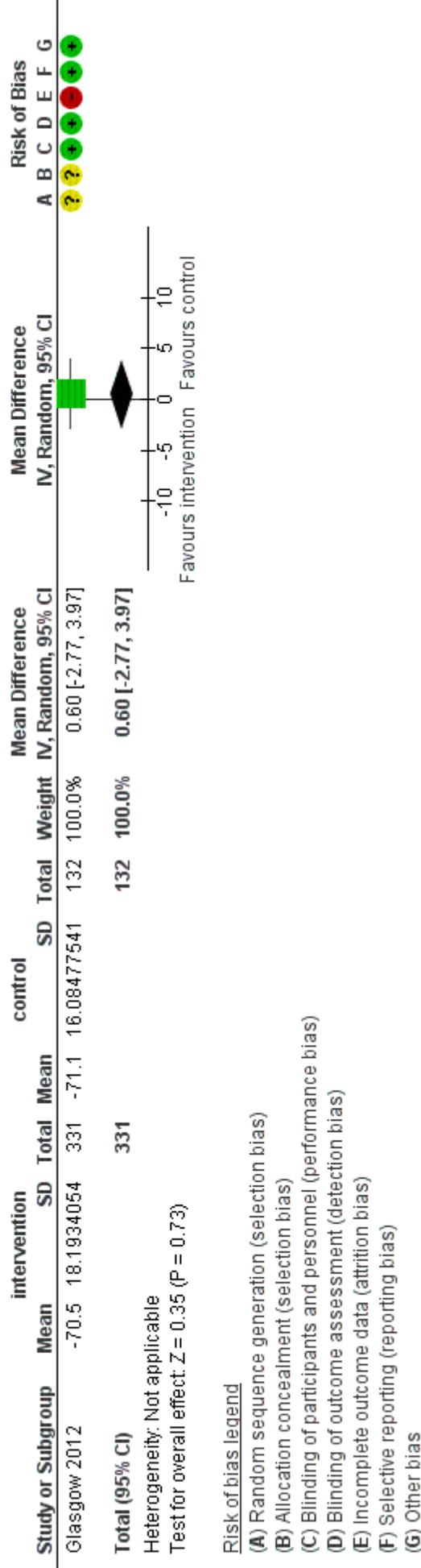
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)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





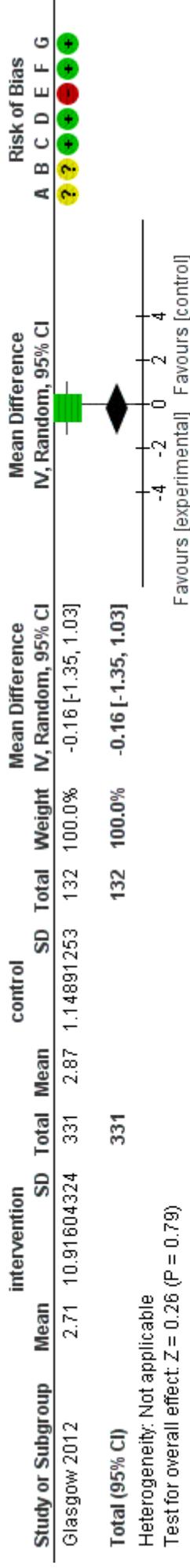
Forest plot of comparison: 1 intervention vs control, outcome: 1.5 general health state < 1 year higher=better.

Figure 6 (Analysis 1.6)



Forest plot of comparison: 1 intervention vs control, outcome: 1.6 general health state longest f.u. higher=better.

**Figure 7 (Analysis 1.7)**



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

Forest plot of comparison: 1 intervention vs control, outcome: 1.7 diabetes distress < 1 year lower=better.

**Figure 8 (Analysis 1.8)**

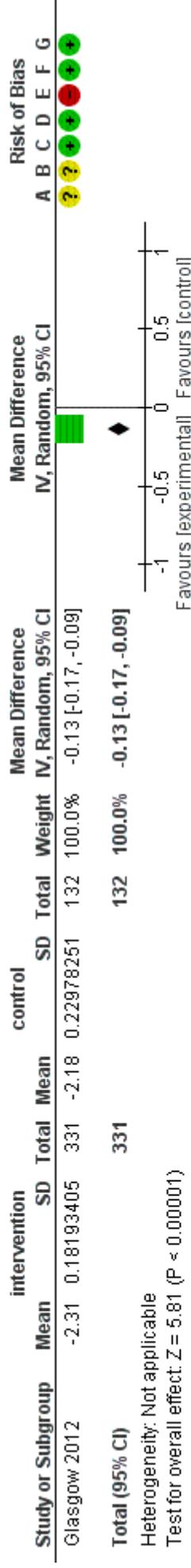


Risk of bias legend

- (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

Forest plot of comparison: 1 intervention vs control, outcome: 1.8 diabetes distress longest f.u. lower=better.

**Figure 9 (Analysis 1.9)**

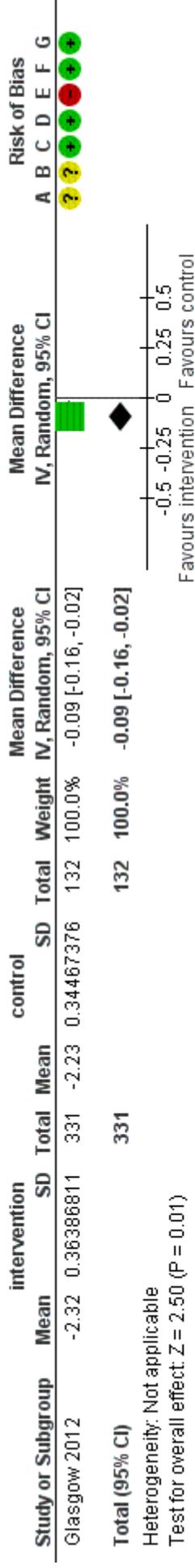


Risk of bias legend

- (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

Forest plot of comparison: 1 intervention vs control, outcome: 1.9 eating habits < 1 year higher=better.

**Figure 10 (Analysis 1.10)**

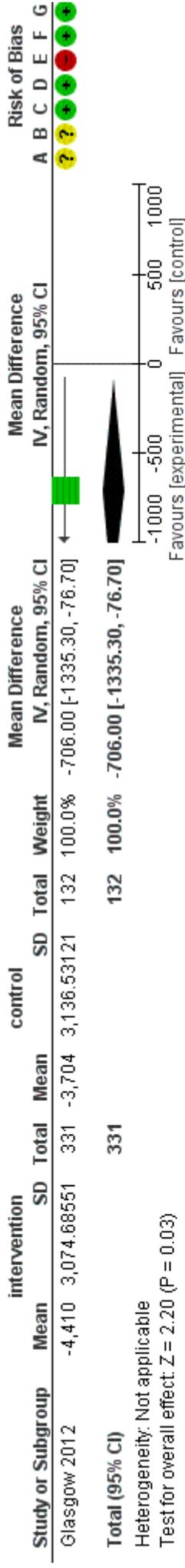


Risk of bias legend

- (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

Forest plot of comparison: 1 intervention vs control, outcome: 1.10 eating habits longest f.u. higher=better.

**Figure 11 (Analysis 1.11)**

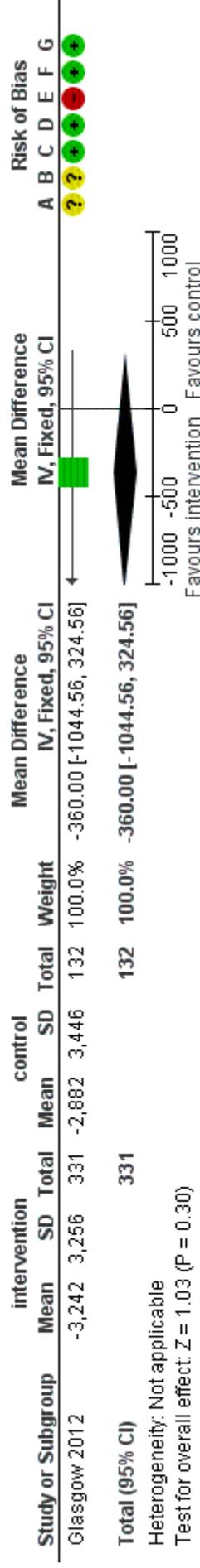


Risk of bias legend

- (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

Forest plot of comparison: 1 intervention vs control, outcome: 1.11 Phys activity (cal/week) < 1 year.

**Figure 12 (Analysis 1.12)**

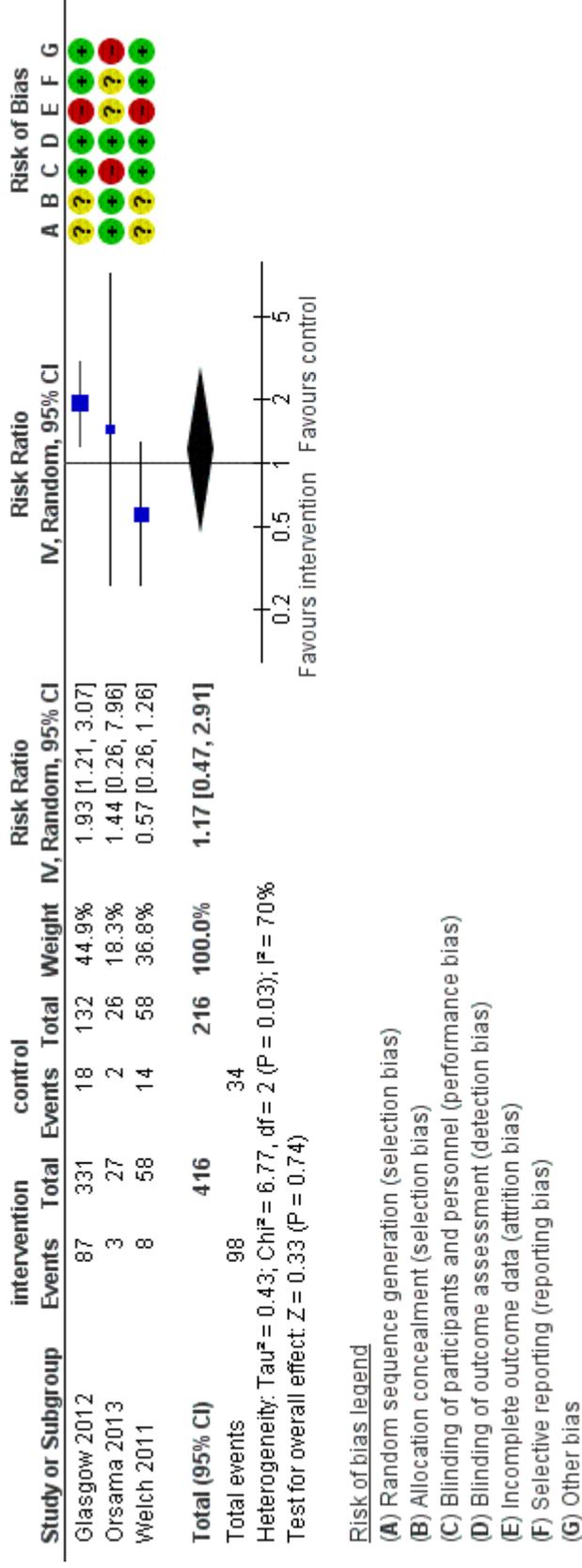


Risk of bias legend

- (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

Forest plot of comparison: 1 intervention vs control, outcome: 1.12 Phys activity longest f.u..

**Figure 13 (Analysis 1.13)**



Forest plot of comparison: 1 intervention vs control, outcome: 1.13 frafald endt forløb.