

Lightening the load? A systematic review of community pharmacy-based weight management interventions

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CRD summary

The review concluded that there was insufficient evidence for the effectiveness and cost-effectiveness of community pharmacy-based weight management initiatives to support investment in their provision. The review was generally well conducted but the evidence base was limited so the authors' cautious conclusions seem appropriate.

Authors' objectives

To assess the effectiveness and cost-effectiveness of pharmacy-based weight management interventions.

Searching

MEDLINE, CINAHL, EMBASE, Cochrane Central Register of Controlled Trials (CENTRAL), DARE, Health Information Resources, IPA, Health Management Information Consortium and Pharm-line were searched from 1999 to 2009 for articles in any language. Search terms were reported. The search was updated to March 2010 in MEDLINE and EMBASE. Reference lists of retrieved articles, books, reports and reviews were searched. Grey literature was searched. Experts in the field, weight loss/slimming companies and pharmacies were contacted.

Study selection

Studies of community pharmacy-based weight management interventions were eligible for inclusion. The primary outcome was change in weight. All secondary outcomes were considered and these included blood pressure, lipid levels, blood glucose, quality of life and user satisfaction. Studies were excluded if weight loss was a coincidental change produced by another intervention or if they included pregnant women or participants with an eating disorder.

The included studies considered various multicomponent pharmacy-based weight loss interventions; all included a dietary component but could also include pharmacotherapy, physical activity advice, behaviour change techniques, self-monitoring diaries and social support network. Most participants were self-referred. The studies were conducted in USA, UK, Switzerland, Denmark and Spain. Half of the studies were single centre and half were multicentre. The mean body mass index (BMI) was 25 to 35 kg/m² (where reported). Most participants were women. Mean age of participants ranged from 42 to 60.9 years. Training of the service provided ranged from five hours to two days (where reported). Study length ranged from three months to one year.

One reviewer performed study selection; samples were assessed in duplicate.

Assessment of study quality

Study validity was assessed using the checklist devised by the Review Body for International Procedures group.

Two reviewers performed quality assessment. Disagreements were resolved by consensus or discussion with a third reviewer.

Data extraction

Data were extracted on weight change outcomes and secondary outcomes.

Data were extracted by two reviewers and disagreements were resolved by consensus or by a third reviewer. Articles in languages other than English were extracted by one reviewer.

Methods of synthesis

Due to significant heterogeneity, a narrative synthesis was presented. It was reported according to the PRISMA statement.

Results of the review

Ten studies were included in the review. These included a reported 2,583 participants (calculated as 2,558) and 582 pharmacies. One study was a RCT, one was a controlled trial and eight were before-and-after studies. Study sample sizes ranged from 19 to 1,370 participants. All studies had reporting and methodological weaknesses. Only two studies performed intention-to-treat analysis and blinding was unclear. Loss to follow-up ranged from 29% to 93%.

Weight loss: Long-term weight loss at one year ranged from 1.1 to 4.1kg with pharmacy-based interventions and was statistically significantly reduced from baseline in two out of three studies. Shorter-term weight loss ranged from 0.5 to 5.6kg at six months (three out of five studies were statistically significant) to 0.6 to 5.3kg at three months (five studies).

Secondary outcomes: The effects on blood pressure were mixed across the three studies that reported it; two out of three studies showed an improvement. The single RCT showed no difference between pharmacy-based intervention and control in terms of blood pressure and lipid levels. One study showed no difference in quality of life between intervention and control. Participant satisfaction was reportedly positive in all five studies that measured it.

Cost information

No study reported cost-effectiveness. The cost of the intervention reported in three studies ranged from €54 to €327 per participant.

Authors' conclusions

There was insufficient evidence for the effectiveness and cost-effectiveness of community pharmacy-based weight management initiatives to support investment in their provision.

CRD commentary

Inclusion criteria for the review were clearly defined. Several relevant data sources were searched without language restrictions. Publication bias was not assessed, but an extensive search of unpublished studies was undertaken and three unpublished studies were included. Some attempts were made to reduce reviewer error and bias throughout the review process. The authors acknowledged that quality assessment indicated generally suboptimal quality of the included studies and that the studies were very different in terms of intervention, participants and setting. There were other issues with the studies (such as short follow-up, large drop-out rates and use of self-reported weight loss, which can be unreliable). Studies were synthesised narratively, which was appropriate given the type of evidence.

The review was generally well conducted. The authors' conclusions were suitably cautious and seem appropriate.

Implications of the review for practice and research

Practice: The authors stated that effects in men were especially uncertain; community pharmacy may be an inappropriate setting for men or novel approaches to attract men may be needed.

Research: The authors' recommendations included a need for larger long-term studies, preferably RCTs, to establish the effectiveness of pharmacy-based interventions. Body weight should be provider-measured rather than self-reported and outcomes such as cardiovascular risk factors, cardiovascular events, morbidity and adverse effects should be reported. Cost-effectiveness studies were needed.

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This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.