A systematic review of outcomes of abdominoplasty
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CRD summary
The review concluded that the quality of evidence of positive health effects for patients having abdominoplasty was very low for all study outcomes and better evidence was needed to establish the benefits and harms of this procedure. The authors' conclusions reflect the evidence presented and are likely to be reliable.

Authors' objectives
To evaluate the benefits and risks for patients having abdominoplasty after massive weight loss or childbirth.

Searching
PubMed, Cochrane Database of Systematic Reviews, CRD databases, CINAHL, AMED and PsycINFO were searched up to October 2011 for relevant articles published in English, Swedish, Norwegian or Danish. Three Health Technology Assessment organisation databases and reference lists of identified articles were searched. Search terms were reported.

Study selection
Controlled studies with at least 30 patients or case series of at least 100 patients that evaluated the effects of full or partial abdominoplasty, panniculectomy or belt lipectomy compared with no surgical intervention were eligible for inclusion. Studies had to include women and men of all ages with abdominal tissue excess after massive weight loss or women with abdominal tissue excess after childbirth. Case studies were excluded. Outcomes of interest were quality of life, respiratory function, back pain and complications.

Patients in the included studies underwent single or combined procedures; some had multiple procedures.

The authors did not report how many reviewers selected studies for inclusion.

Assessment of study quality
Study quality was assessed using the Swedish Council on Technology Assessment in Healthcare checklists. The quality of each study was graded as high, moderate or low.

At least two reviewers independently assessed study quality. Disagreements were resolved by discussion.

Data extraction
Data were extracted on study characteristics, outcomes and complications.

The authors did not report how many reviewers extracted data.

Methods of synthesis
The data were described in a narrative synthesis. The overall quality of the evidence was evaluated using the GRADE-system.

Results of the review
Sixteen studies were included: one controlled observational study and 15 case series. Only one of the case series had a prospective design. The controlled study and all the case series were categorised as low quality. The total number of patients was 3,462 and sample sizes ranged from 60 to 577.

Patients in one small controlled study (60 patients) reported a significant improvement in attractiveness and self esteem for body image after abdominoplasty compared to a control group of gastric banding patients.

Complications: One prospective study (449 patients; 511 procedures) reported significantly more complications for a multiple procedure (52%) compared with a single-procedure group (25%). The most frequently reported complications in both groups were dehiscence, seroma and cellulitis. In all cases the presence of a complication was directly related to...
maximum body mass index and body mass index reduction after bariatric surgery. Fourteen retrospective case series reported a similar pattern of minor complications. One major complication, venous thromboembolism was reported in 2% to 8% of three of the case series.

No controlled studies were found that evaluated respiratory function or back pain.

Authors’ conclusions
The quality of evidence of positive health effects for patients having abdominoplasty was very low for all study outcomes and better evidence was needed to establish the benefits and harms of this procedure.

CRD commentary
This review addressed a clear review question that was supported by appropriate inclusion criteria. The authors attempted to identify all the relevant published evidence; while some unpublished data may have been overlooked this was unlikely to have substantially changed the findings of the review. The published evidence was found to be of very low quality and the authors correctly advised that the reported outcomes (including incidence of complications) may not be reliable.

The authors’ conclusions reflect the evidence presented and their recommendations for further research are appropriate.

Implications of the review for practice and research
Practice: The authors did not state any implications for practice.

Research: The authors stated that further prospective studies of high quality were needed to evaluate health effects and complications of abdominoplasty.

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