Review: bowel preparation before elective colorectal surgery increases anastomotic leakage more than no preparation


How does mechanical bowel preparation (preparation and cleansing of the bowel before colorectal surgery) compare with no preparation before elective colorectal surgery?

**METHODS**

**Data sources:** Medline, Pascal Biomed, Scisearch, EMBASE/Excerpta Medica, Ulacs, Medical Editors’ Trials Amnesty, and Centre for Reviews and Dissemination database (all from inception through March 2003); Cochrane Library (Issue 3, 2003); major surgical journals; conference proceedings; contact with experts; and bibliographies of relevant articles.

**Study selection and assessment:** randomised controlled trials in any language that compared mechanical bowel preparation with no preparation before elective colorectal surgery. Studies were assessed for randomisation method, double blinding, and withdrawals or dropouts.

**Outcomes:** anastomotic leakage, wound infection, extra-abdominal septic complications, and non-septic complications.

**MAIN RESULTS**

7 studies (n = 1454; 720 patients had mechanical bowel preparation, and 734 had no preparation) met the selection criteria. 5 studies had follow up ranging from 7–60 days. Patients who had mechanical bowel preparation had a higher rate of anastomotic leakage than those who had no preparation (table). Mechanical bowel preparation and no bowel preparation did not differ for rates of wound infection (7 trials, 7% v 6%, p = 0.18), extra-abdominal septic complications (3 trials, 11% v 10%, p = 0.63), or non-septic complications (4 trials, 12% v 10%, p = 0.33).

**CONCLUSION**

Mechanical bowel preparation before elective colorectal surgery increases the rate of anastomotic leakage more than no preparation.

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Source of funding: no external funding.

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**Mechanical bowel preparation v no preparation before elective colorectal surgery**

<table>
<thead>
<tr>
<th>Outcomes at 7–60 days</th>
<th>Mechanical bowel preparation</th>
<th>No preparation</th>
<th>RRI (95% CI)</th>
<th>NNH (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anastomotic leakage</td>
<td>5.6%</td>
<td>3.2%</td>
<td>71% (5 to 173)</td>
<td>44 (18 to 638)</td>
</tr>
</tbody>
</table>

*Abbreviations defined in glossary; RRI, NNH, and CI calculated from odds ratio reported in article (fixed effects model).
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Evid Based Nurs 2005 8: 85
doi: 10.1136/ebn.8.3.85

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