Dietary fibre modification in the recovery and prevention of reoccurrence of acute, uncomplicated diverticulitis: A systematic review and meta-analysis

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Dietary fibre modification in the recovery and prevention of reoccurrence of acute, uncomplicated diverticulitis: a systematic review and meta-analysis

By Camilla Dahl, Megan Crichton, Julie Jenkins, Romina Nucera, Sophie Mahoney, Skye Marshall
ACUTE UNCOMPLICATED DIVERTICULITIS

Sandler et. al. Gastroenterology, 2002; AIHW 2016
<table>
<thead>
<tr>
<th>Guideline/Statement</th>
<th>Updated</th>
<th>Diet Recommendation</th>
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<tbody>
<tr>
<td>American Gastroenterological Association Institute</td>
<td>2015</td>
<td>No comment</td>
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<tr>
<td>American Society of Colon &amp; Rectal Surgeons</td>
<td>2014</td>
<td>Bowel rest</td>
</tr>
<tr>
<td>Italian Society of Colon &amp; Rectal Surgery</td>
<td>2015</td>
<td>No comment</td>
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<tr>
<td>World Society of Emergency Surgery</td>
<td>2015</td>
<td>Dietary restriction is unproven</td>
</tr>
<tr>
<td>Danish Surgical Society</td>
<td>2011</td>
<td>Dietary restriction is unproven</td>
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<tr>
<td>World Gastroenterology Organisation</td>
<td>2007</td>
<td>Bowel rest should be used in the first 48 hours</td>
</tr>
</tbody>
</table>
ACUTE, UNCOMPLICATED DIVERTICULITIS

**Restricted Diet**
- Nil by mouth
- Clear fluids
- Free fluids

**Liberalised Diet**
- Full diet

**Fibre Intakes**
- Lower Fibre: <10g/day
- Higher Fibre: >25g/day
The efficacy of **dietary fibre modifications**, either alone or alongside probiotics and antibiotics, versus any comparator on *recovery*, *gastrointestinal symptoms*, *health care use* and *reoccurrence*
PROSPERO registration number: CRD42016048741
Records identified through database searching: -
PubMed (961)
Embase (1973)
Web of Science (767)
CINAHL (1823)
(n = 5,524)

Additional records identified through other sources
Google scholar
(n = 5)

Records screened title and abstract only
(n = 5323)

Number duplicates removed
(n = 209)

Records excluded
(n = 5212)

Full-text articles assessed for eligibility
(n = 111)

Full-text articles excluded, with reasons
Duplicate Publications
Not Population
Not Intervention
Not Outcomes
(n = 103)

Studies included in qualitative synthesis
(n = 8)

Studies included in quantitative synthesis
(ma-analysis)
(n = 3)
<table>
<thead>
<tr>
<th>Study</th>
<th>Design</th>
<th>Treatment failure result for liberal vs restricted</th>
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<tbody>
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<td>RCT, n=79</td>
<td>Ø (lib. Vs bowel rest)</td>
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![Risk Ratio Chart]

Risk Ratio
M-H, Random, 95% CI

Favours liberalised diet     Favours restricted diet
<table>
<thead>
<tr>
<th>Outcome &amp; hypothesis</th>
<th>Risk of bias (Cochrane)</th>
<th>Inconsistency (heterogeneity)</th>
<th>Indirectness (confidence in effect)</th>
<th>Imprecision</th>
<th>Publication bias</th>
<th>Quality of the body of evidence (GRADE)</th>
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</thead>
<tbody>
<tr>
<td>Length of stay lower in liberalised diet</td>
<td>Serious</td>
<td>Not serious</td>
<td>Serious</td>
<td>Not serious</td>
<td>N/A</td>
<td>☀️☀️☀️ Low</td>
</tr>
<tr>
<td>No difference in reoccurrence</td>
<td>Serious</td>
<td>Not serious</td>
<td>Serious</td>
<td>Serious</td>
<td>N/A</td>
<td>☀️☀️☀️ Very low</td>
</tr>
<tr>
<td>Both diets safe (low risk of treatment failures)</td>
<td>Serious</td>
<td>Not serious</td>
<td>Not serious</td>
<td>Very serious</td>
<td>N/A</td>
<td>☀️☀️☀️ Very low</td>
</tr>
<tr>
<td>No difference in GI symptoms</td>
<td>Serious</td>
<td>N/A</td>
<td>Serious</td>
<td>Serious</td>
<td>N/A</td>
<td>☀️☀️☀️ Very low</td>
</tr>
<tr>
<td>No difference in outpatient visits</td>
<td>Very serious</td>
<td>N/A</td>
<td>Serious</td>
<td>N/A</td>
<td>N/A</td>
<td>☀️☀️☀️ Very low</td>
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Limited confidence
Confounding variables
Missed studies
Wider outcome reporting

1st to synthesise evidence
Provides guidance
Limited concerns, failures or safety problems

Benefits
CONCLUSION

1. There is insufficient evidence to make recommendations;

2. Use clinical expertise and incorporate patients values and preferences in a patient centered care approach;

3. More research is needed

PUBLICATION

• Submitted shortly

• High dietary fibre advice upon discharge
Thank you
Any questions?

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This research received no specific funding

Conflict of interest:
None