Efficacy of ginger (Zingiber officinale) in ameliorating chemotherapy-induced nausea and vomiting and chemotherapy-related outcomes: a systematic literature review update and meta-analysis
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Systematic Review Update with Meta-Analysis
Ginger for Chemotherapy-induced nausea and vomiting?

Gingerol and shogaol compounds in ginger likely interact with multiple components of the CINV pathway. Previous systematic reviews (Marx et. al. 2013 and Lee & Oh 2013) found no consistent effect of ginger as an adjuvant therapy for CINV.

Research aim: To update previous systematic reviews which evaluate the efficacy of ginger supplementation in the prevention and management of CINV.

Methods & Included Studies

Search 5 databases → Included adults receiving CTx → Ginger versus placebo/control (including anti-emetics) → Searched 204 records → Included 18 studies (3 new ones) → n=1,652 total participants, 64% female, n=9/18 studies in breast cancer → Low risk of bias in most studies (Cochrane) → Meta-analysis via RevMan → Confidence in body of evidence assessed by GRADE.

Results

**NAUSEA INCIDENCE**

Figure 1: >1g/day for any duration significantly reduced odds of overall nausea incidence by 42%. GRADE level: very low

<table>
<thead>
<tr>
<th>Study or Subgroup</th>
<th>Ginger</th>
<th>Control</th>
<th>Odds Ratio (95% CI)</th>
<th>Total Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marx 2013</td>
<td>45</td>
<td>70</td>
<td>0.58 (0.33, 0.99)</td>
<td>36.0</td>
</tr>
<tr>
<td>Lee 2017</td>
<td>46</td>
<td>71</td>
<td>0.58 (0.33, 0.99)</td>
<td>36.0</td>
</tr>
<tr>
<td>Zia et. al. 2020</td>
<td>45</td>
<td>70</td>
<td>0.58 (0.33, 0.99)</td>
<td>36.0</td>
</tr>
<tr>
<td>Total (95% CI)</td>
<td>136</td>
<td>212</td>
<td>0.58 (0.33, 0.99)</td>
<td>43.0</td>
</tr>
</tbody>
</table>

Takeaway messages

✓ No serious safety concerns identified beyond increased risk of reflux
✓ Consistent finding that >3 days of supplementation can improve nausea & vomiting incidence
✓ Evidence regarding dosing strength inconsistent likely to due to heterogeneity in active compounds
✓ Larger well-controlled studies should improve confidence in estimated effect sizes
✓ SPICE Trial currently underway in Qld Australia (n=300 Double Blind Placebo-RCT)