

Criteria for judging risk of bias of each item using the ‘Risk of bias’  
assessment tool\*

	Low risk	Unclear risk	High risk
<b>Random sequence generation</b>	<ol style="list-style-type: none"> <li>1. Simple randomization;</li> <li>2. Restricted randomization;</li> <li>3. Stratified randomization</li> </ol>	Insufficient information to judge ‘Low risk’ or ‘High risk’	<ol style="list-style-type: none"> <li>1. Sequence generated by odd, date of birth, or by some rule based on date of admission or based on hospital or clinic record number;</li> <li>2. Allocation by judgement of the clinician or by preference of the participant, or by availability of the intervention;</li> <li>3. Allocation based on the results of a laboratory test or a series of tests.</li> </ol>
<b>Allocation concealment</b>	<ol style="list-style-type: none"> <li>1. Central allocation (including telephone, web-based and pharmacy-controlled randomization);</li> <li>2. Sequentially numbered drug containers of identical appearance;</li> <li>3. Sequentially numbered, opaque, sealed envelopes.</li> </ol>	Insufficient information to judge ‘Low risk’ or ‘High risk’	<ol style="list-style-type: none"> <li>1. Using an open random allocation schedule;</li> <li>2. Assignment envelopes were used without appropriate safeguards;</li> <li>3. Alternation or rotation</li> <li>4. Date of birth;</li> <li>5. Case record number;</li> <li>6. Any other explicitly unconcealed procedure.</li> </ol>
<b>Blinding of participants and personnel</b>	<ol style="list-style-type: none"> <li>1. No blinding or incomplete blinding, but the review authors judge that the outcome is not likely to be influenced by lack of blinding;</li> <li>2. Blinding of participants and key study personnel ensured, and unlikely that the blinding could have been broken.</li> </ol>	<ol style="list-style-type: none"> <li>1. Insufficient information to judge ‘Low risk’ or ‘High risk’;</li> <li>2. The study did not address this outcome.</li> </ol>	<ol style="list-style-type: none"> <li>1. No blinding or incomplete blinding, and the outcome is likely to be influenced by lack of blinding;</li> <li>2. Blinding of key study participants and personnel attempted, but likely that the blinding could have been broken, and the outcome is likely to be influenced by lack of blinding.</li> </ol>
<b>Blinding of outcome assessment</b>	<ol style="list-style-type: none"> <li>1. No blinding of outcome assessment, but the review authors judge that the outcome measurement is not likely to be influenced by lack of blinding;</li> <li>2. Blinding of outcome assessment ensured, and unlikely that the blinding could have been broken.</li> </ol>	<ol style="list-style-type: none"> <li>1. Insufficient information to judge ‘Low risk’ or ‘High risk’;</li> <li>2. The study did not address this outcome.</li> </ol>	<ol style="list-style-type: none"> <li>1. No blinding of outcome assessment, and the outcome measurement is likely to be influenced by lack of blinding;</li> <li>2. Blinding of outcome assessment, but likely that the blinding could have been broken, and the outcome measurement is likely to be influenced by lack of blinding.</li> </ol>
<b>Incomplete outcome data</b>	<ol style="list-style-type: none"> <li>1. No missing outcome data;</li> <li>2. Reasons for missing outcome data unlikely to be related to true outcome;</li> <li>3. Missing outcome data balanced in numbers across intervention groups, with similar reasons for missing data across groups;</li> <li>4. For dichotomous outcome data, the proportion of missing outcomes compared with observed event risk not enough to have a clinically relevant impact on the intervention effect estimate;</li> <li>5. For continuous outcome data, plausible effect size among missing outcomes not enough to have a clinically relevant impact on observed effect size;</li> <li>6. Missing data have been imputed using appropriate methods.</li> </ol>	<ol style="list-style-type: none"> <li>1. Insufficient reporting of attrition/exclusions to judge ‘Low risk’ or ‘High risk’;</li> <li>2. The study did not address this outcome.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reason for missing outcome data likely to be related to true outcome, with either imbalance in numbers or reasons for missing data across intervention groups;</li> <li>2. For dichotomous outcome data, the proportion of missing outcomes compared with observed event risk enough to induce clinically relevant bias in intervention effect estimate;</li> <li>3. For continuous outcome data, plausible effect size (difference in means or standardized difference in means) among missing outcomes enough to induce clinically relevant bias in observed effect size;</li> <li>4. ‘As-treated’ analysis done with substantial departure of the intervention received from that assigned at randomization;</li> <li>5. Potentially inappropriate application of simple imputation.</li> </ol>

<b>Selective reporting</b>	<p>1. The study protocol is available and all of the study's pre-specified outcomes that are of interest in the review have been reported in the pre-specified way;</p> <p>2. The study protocol is not available but it is clear that the published reports include all expected outcomes, including those that were pre-specified.</p>	<p>Insufficient information to judge 'Low risk' or 'High risk'.</p>	<p>1. Not all of the study's pre-specified primary outcomes have been reported;</p> <p>2. One or more primary outcomes is reported using measurements, analysis methods or subsets of the data that were not pre-specified;</p> <p>3. One or more reported primary outcomes were not pre-specified (unless clear justification for their reporting is provided, such as an unexpected adverse effect);</p> <p>4. One or more outcomes of interest in the review are reported incompletely so that they cannot be entered in a meta-analysis;</p> <p>5. The study report fails to include results for a key outcome that would be expected to have been reported for such a study.</p>
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\*The criteria for judging risk of bias are adapted from: **Cochrane Handbook for Systematic Reviews of Interventions Version 5.1.0 [updated March 2011]**  
[\[http://handbook.cochrane.org/\]](http://handbook.cochrane.org/)