

**Supplementary Table 1 Databases and Search Terms**

Database	Search Terms
PubMed	(((("Liver Transplantation"[Mesh] OR "liver transplant"[tw] OR "liver transplants"[tw] OR "liver transplantation"[tw] OR "liver transplantations"[tw] OR "liver graft"[tw] OR "liver grafts"[tw] OR "liver grafting"[tw] OR "liver graftings"[tw] OR "hepatic transplantation"[tw] OR "hepatic transplantations"[tw])) AND ("Hyperglycemia"[Mesh] OR hyperglycemia[tw] OR hyperglycemias[tw] OR hyperglycaemia[tw] OR hyperglycaemias[tw] OR glucose[tw] OR glycemictw] OR glycaemic[tw])) AND (post[tw] OR following[tw] OR "long term"[tw] OR after[tw]))
Embase	'liver transplant'/exp OR 'liver transplant' OR 'liver transplants' OR 'liver transplantation'/exp OR 'liver transplantation' OR 'liver transplantations' OR 'liver graft'/exp OR 'liver graft' OR 'liver grafts' OR 'liver grafting' OR 'liver graftings' OR 'hepatic transplantation'/exp OR 'hepatic transplantation' OR 'hepatic transplantations' AND ('hyperglycemia'/exp OR hyperglycemia OR hyperglycemias OR 'hyperglycaemia'/exp OR hyperglycaemia OR hyperglycaemias OR 'glucose'/exp OR glucose OR glycemictw] OR glycaemic) AND (post OR following OR 'long term' OR after) AND [embase]/lim NOT [medline]/lim
Scopus	TITLE-ABS-KEY ( ( "liver transplant" OR "liver transplants" OR "liver transplantation" OR "liver transplantations" OR "liver graft" OR "liver grafts" OR "liver grafting" OR "liver graftings" OR "hepatic transplantation" OR "hepatic transplantations" ) AND ( hyperglycemia OR hyperglycemias OR hyperglycaemia OR hyperglycaemias OR glucose OR

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	glycemic OR glycaemic ) AND ( post OR following OR "long term" OR after ) )
clinicaltrials.gov	( "liver transplant" OR "liver transplants" OR "liver transplantation" OR "liver transplantations" OR "liver graft" OR "liver grafts" OR "liver grafting" OR "liver graftings" OR "hepatic transplantation" OR "hepatic transplantations" ) AND ( hyperglycemia OR hyperglycemias OR hyperglycaemia OR hyperglycaemias OR glucose OR glycemic OR glycaemic ) AND ( post OR following OR "long term" OR after )
WHO ICTRP	liver AND transplant* AND glucose (12 results) liver AND graft* AND glucose (1 result) hepatic AND transplant* AND glucose (12 results) liver AND transplant* AND *glycemi* (4 results) hepatic AND transplant* AND *glycemi* (4 results)

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**Supplementary Table 2 Quality of Evidence**

<b>Newcastle-Ottawa Scale (Retrospective cohort/case-control)</b>			
Author	Selection (Maximum 4 stars)	Comparability (Maximum 2 stars)	Outcome/Exposure (Maximum 3 stars)
Ammori <i>et al</i>	****	**	***
Chung <i>et al</i>	****	**	***
Gelley <i>et al</i>	**	*	**
Hartog <i>et al</i>	****	*	***
Keegan <i>et al</i>	***	**	***
Linder <i>et al</i>	****	**	***
Park <i>et al</i>	****	**	***
Trail <i>et al</i>	***	**	***
Wallia <i>et al</i>	***	**	**
Wallia <i>et al</i>	****	**	***
Yoo <i>et al</i>	****	**	***
<b>Modified Newcastle-Ottawa Scale (Cross-sectional study)</b>			
Author	Selection (Maximum 5 stars)	Comparability (Maximum 2 stars)	Outcome (Maximum 3 stars)
Alvarez-Sotomayor <i>et al</i>	*****	*	**
<b>Newcastle-Ottawa Scale (Prospective non-randomized study)</b>			
Author	Selection	Comparability	Outcome

	(Maximum 4 stars)	(Maximum 2 stars)	(Maximum 3 stars)
Villanueva <i>et al</i>	***	**	**

**Cochrane risk of bias assessment for randomized study**

Author	Selection bias	Reporting bias	Attrition bias	Detection bias	Performance bias
Welsh <i>et al</i>	Moderate risk	Low Risk	Moderate risk	Low risk	Low risk



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**Bias**

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## Assessing Risk of Bias in Included Studies

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Please refer to the latest version of Chapter 8 of the **Cochrane Handbook** (<http://handbook.cochrane.org/>) for the most up to date version of the Risk of Bias Tool.

Over the last year, the BMG has been leading the evaluation and update of the Cochrane Risk of Bias Tool. Should you have any queries or comments, please do not hesitate to contact the group or to post comments on our discussion forum: <http://www.cochrane.org/forum> (<http://www.cochrane.org/forum>).

### What is Bias?

### Sources of Bias in Clinical Trials

### The Cochrane Risk of Bias Tool

### What is Bias?

A bias is a systematic error, or deviation from the truth, in results or inferences. Biases can operate in either direction: different biases can lead to underestimation or overestimation of the true intervention effect. Biases can vary in magnitude: some are small (and trivial compared with the observed effect) and some are substantial (so that an apparent finding may be entirely due to bias). Even a particular source of bias may vary in direction: bias due to a particular design flaw (e.g. lack of allocation concealment) may lead to underestimation of an effect in one study but overestimation in another study. It is usually impossible to know to what extent biases have affected the results of a particular study, although there is good empirical evidence that particular flaws in the design, conduct and analysis of randomized clinical trials lead to bias. Because the results of a study may in fact be unbiased despite a methodological flaw, it is more appropriate to consider risk of bias.

Differences in risks of bias can help explain variation in the results of the studies included in a systematic review (i.e. can explain heterogeneity of results). More rigorous studies are more likely to yield results that are closer to the truth. Meta-analysis of results from studies of variable validity can result in false positive conclusions (erroneously concluding an intervention is effective) if the less rigorous studies are biased toward overestimating an intervention's effect. They might also come to false negative conclusions (erroneously concluding no effect) if the less rigorous studies are biased towards underestimating an intervention's effect (Detsky 1992).

It is important to assess risk of bias in all studies in a review irrespective of the anticipated variability in either the results or the validity of the included studies. For instance, the results may be consistent among