

Appendix A: Search Strategies

MEDLINE (Ovid SP) search strategy

#1 ((pneumothor*[Title]) AND recurr*[Title/Abstract])

#2 (((pneumothor*) AND recurrence[MeSH Terms]))

#3 (pneumothorax[Title]) AND epidemiology[Title/Abstract]

#4 (#1 OR #2 OR #3)

Embase (Ovid SP) search strategy

#1 pneumothor*.ti and recurr*.ab

#2 (pneumothor* and recurr*).ti

#3 pneumothor*.ti and recurrence.kw

#4 (pneumothor* and epidemiology).ti

#5 (1 or 2 or 3 or 4)

Appendix B: Data collection Sheet

Name of study	
Authors	
Date	
Type of study	
Interventions	
N (PSP)	
M:F	
Excluded patients	
1st or 2nd recurrence included	
Overall recurrence	
Follow-up period (months)	
1 year recurrence	
2 year recurrence	
weight categories	
Weight Recurrence	
Gender Recurrence	
Smoking Recurrence	
Proportion Surgery	
Proportion pleurodesis	
Conservative Recurrence	
Aspiration Recurrence	
ICD Recurrence	
Ipsilateral/contralateral	

Appendix C: Risk of bias

Randomised trials

	Randomisation	Allocation of Concealment	Blinding of participants and personal	Blinding of outcome assessment	Incomplete data outcome	Selective reporting	Other Bias
Al-Mourgi 2015	?	?	-	?	+	-	-
Chen 2013	+	+	-	+	+	+	+
Harvey 1994	?	?	-	?	?	?	?
Light 1990	+	?	-	+	+	+	+

Figure S1: Risk of bias summary: review authors' judgements about each risk of bias item for each included study.

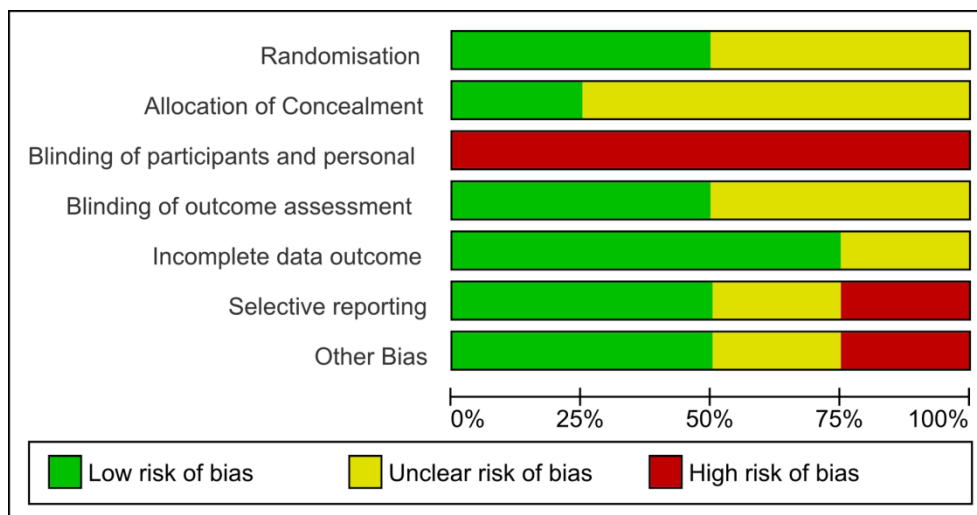


Figure S2: Risk of bias graph: review authors' judgements about each risk of bias item presented as percentages across all included study.

Non-randomised studies

Authors	Selection				Comparability	Assessment of outcomes (Max:★)	Outcome		Total score (out of 10)
	Representativeness of exposed cohort (Max:★)	Selection of non-exposed cohort (Max:★)	Ascertainment of exposure (Max:★)	Demonstration that outcome of interest was not present at start of study (Max:★)	Comparability of cohorts on the basis of the design or analysis (Max:★★)		Was follow-up long enough for outcomes to occur (Max:★)	Adequacy of follow up of cohorts (Max:★)	
Al-Alawi et al. 2009	★	-	★	-	-	★	★	★	5
Andersen et al. 1965	★	-	★	-	-	-	★	★	4
Casali et al. 2013	★	-	★	-	-	★	★	★	5
Chan et al. 2006	★	-	★	-	-	-	★	★	4
Chen et al. 2008	★	★	★	★	★	★	-	★	7
Chen et al. 2008	★	★	★	★	★	★	-	-	6
Ganesalingam et al. 2010	★	-	★	-	-	★	★	★	5
Huang et al. 2017	★	-	★	★	-	★	★	★	6
Karasaki et al. 2014	★	-	★	★	-	-	-	-	3
Kim et al. 2014	★	-	★	★	-	-	-	-	3
Kuan et al. 2009	★	-	★	-	-	★	-	-	3
Lichter et al. 1974	-	-	★	★	-	★	★	★	5
Martinez-Ramos et al. 2007	-	-	★	★	-	★	★	★	5
Mehta et al. 2016	★	-	★	★	-	-	★	-	4
Nishiuma et al. 2012	-	-	★	★	-	★	★	-	4
Noh et al. 2015	★	-	★	★	-	★	★	-	5
Noh et al. 2015	★	-	★	-	-	★	★	★	5
Olesen et al. 2016	★	-	★	★	-	★	★	★	6
Ouanes-Besbes et al. 2006	★	-	★	-	-	★	★	★	5
Primavesi et al. 2016	★	★	★	-	-	-	★	★	5
Sadikot et al. 1997	-	-	★	★	-	-	★	★	4
Sayar et al. 2014	★	-	★	-	-	★	★	★	5
Schramel et al. 1996	★	★	★	-	★	-	★	-	5
Tan et al. 2017	★	-	★	★	-	★	★	★	6
Tulay et al. 2015	★	-	★	-	★	★	-	★	5

Figure S3: Quality assessment of studies in the meta-analysis based on modified Newcastle-Ottawa Scale Judgement