

## SUPPLEMENTAL DATA

# Association of laryngopharyngeal reflux with chronic rhinosinusitis prevalence in adults: A systematic review and meta-analysis

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Full article is available at the following link: [Association of laryngopharyngeal reflux with chronic rhinosinusitis prevalence in adults: A systematic review and meta-analysis](#)

## **Supplemental file 1. Detailed search strategy for each database**

### **PubMed**

("Laryngopharyngeal Reflux"[Mesh] OR "laryngopharyngeal reflux"[tiab] OR "laryngo-pharyngeal reflux"[tiab] OR "laryngopharyngeal reflux disease"[tiab] OR LPR[tiab] OR "extraesophageal reflux"[tiab] OR "extra-oesophageal reflux"[tiab] OR "supraesophageal reflux"[tiab]) AND ("Sinusitis"[Mesh] OR rhinosinusitis[tiab] OR "chronic rhinosinusitis"[tiab] OR CRS[tiab] OR (sinusitis[tiab] AND chronic[tiab]))

### **Embase**

('laryngopharyngeal reflux'/exp OR 'laryngopharyngeal reflux':ti,ab,kw OR 'laryngo-pharyngeal reflux':ti,ab,kw OR 'laryngopharyngeal reflux disease':ti,ab,kw OR LPR:ti,ab,kw OR 'extraesophageal reflux':ti,ab,kw OR 'extra-oesophageal reflux':ti,ab,kw OR 'supraesophageal reflux':ti,ab,kw) AND ('chronic rhinosinusitis'/exp OR 'rhinosinusitis'/exp OR 'sinusitis'/exp OR 'chronic rhinosinusitis':ti,ab,kw OR rhinosinusitis:ti,ab,kw OR CRS:ti,ab,kw OR (sinusitis:ti,ab,kw AND chronic:ti,ab,kw))

### **Web of Science**

TS=("laryngopharyngeal reflux" OR "laryngo-pharyngeal reflux" OR "laryngopharyngeal reflux disease" OR LPR OR "extraesophageal reflux" OR "extra-oesophageal reflux" OR "supraesophageal reflux") AND TS=("chronic rhinosinusitis" OR rhinosinusitis OR CRS OR (sinusitis NEAR/3 chronic))

### **Wanfang**

主题 = (“咽喉反流” OR “咽-喉反流” OR “咽喉反流病” OR LPR OR “食管外反流” OR “食管外返流” OR “上食管反流”) AND 主题 = (“慢性鼻窦炎” OR “慢性鼻-窦炎” OR “鼻-窦炎” OR “鼻窦炎” OR CRS OR (“鼻窦炎” AND “慢性”))

### **CNKI (China National Knowledge Infrastructure)**

主题 = (“咽喉反流” OR “咽-喉反流” OR “咽喉反流病” OR LPR OR “食管外反流” OR “食管外返流” OR “上食管反流”) AND 主题 = (“慢性鼻窦炎” OR “慢性鼻-窦炎” OR “鼻-窦炎” OR “鼻窦炎” OR CRS OR (“鼻窦炎” AND “慢性”))

## **Supplemental file 2. Newcastle-Ottawa Scale adapted for cross-sectional studies**

### **Selection:** (Maximum 5 stars)

#### 1) Representativeness of the sample:

- a) Truly representative of the average in the target population. \* (all subjects or random sampling)
- b) Somewhat representative of the average in the target population. \* (non-random sampling)
- c) Selected group of users.
- d) No description of the sampling strategy.

#### 2) Sample size:

- a) Justified and satisfactory. \*
- b) Not justified.

#### 3) Non-respondents:

- a) Comparability between respondents and non-respondents characteristics is established, and the response rate is satisfactory. \*
- b) The response rate is unsatisfactory, or the comparability between respondents and non-respondents is unsatisfactory.
- c) No description of the response rate or the characteristics of the responders and the non-responders.

#### 4) Ascertainment of the exposure (risk factor):

- a) Validated measurement tool. \*\*
- b) Non-validated measurement tool, but the tool is available or described.\*
- c) No description of the measurement tool.

### **Comparability:** (Maximum 2 stars)

#### 1) The subjects in different outcome groups are comparable, based on the study design or analysis. Confounding factors are controlled.

- a) The study controls for the most important factor (select one). \*
- b) The study control for any additional factor. \*

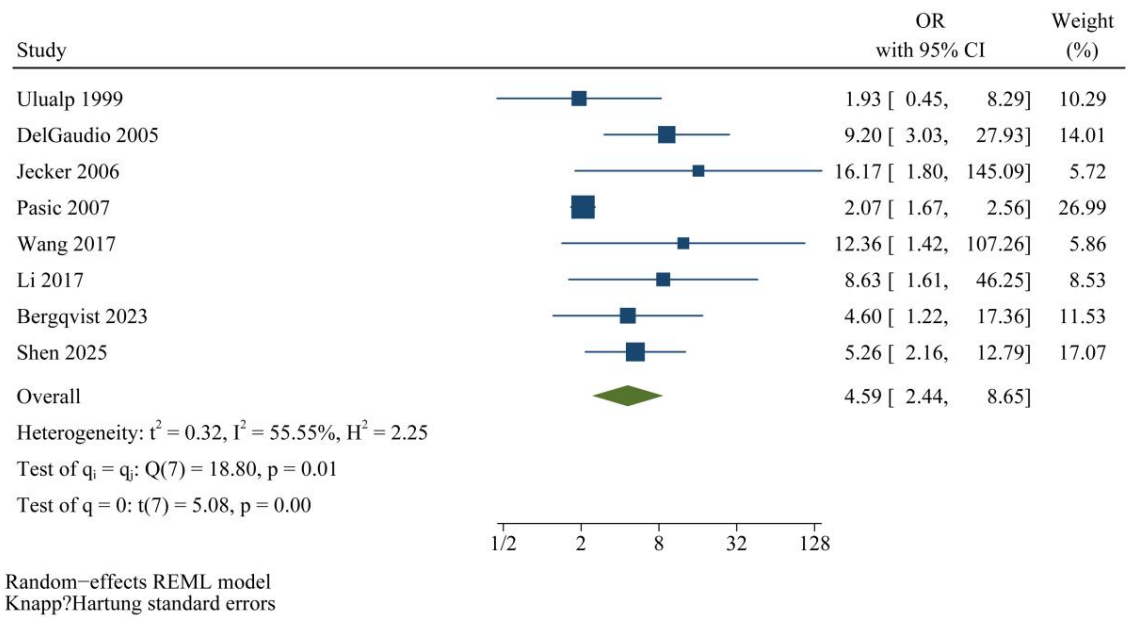
### **Outcome:** (Maximum 3 stars)

1) Assessment of the outcome:

- a) Independent blind assessment. \*\*
- b) Record linkage. \*\*
- c) Self report. \*
- d) No description.

2) Statistical test:

- a) The statistical test used to analyze the data is clearly described and appropriate, and the measurement of the association is presented, including confidence intervals and the probability level (p value). \*
- b) The statistical test is not appropriate, not described or incomplete.



**Supplemental figure 1. Sensitivity analysis of the association between LPR and CRS using a random-effects REML model with Hartung–Knapp adjustment.**

The pooled estimate remained significant and consistent with the primary analysis (OR = 4.59, 95% CI 2.44–8.65;  $p < 0.001$ ;  $I^2 = 55.6\%$ ). Abbreviations: LPR: laryngopharyngeal reflux; CRS: chronic rhinosinusitis; REML: restricted maximum likelihood; OR: odds ratio; CI: confidence interval.