

Summary of Findings – Indicatiestelling en timing voor tracheotomie

Outcome Timeframe	Study results and measurements	Absolute effect estimates		Certainty of the evidence (Quality of evidence)	Summary
		Late tracheostomy / prolonged intubation	Early tracheostomy		
Complication – Pneumonia (important)	Relative risk: 0.84 (CI 95% 0.73 - 0.97) Based on data from 1217 participants in 9 study	384 per 1000 Difference: 61 fewer per 1000 (CI 95% 104 fewer - 12 fewer)	323 per 1000	Very low Due to risk of bias, imprecision, and inconsistency ¹	We are uncertain whether early tracheostomy improves or worsens complication - pneumonia
Dysphagia (important)	Relative risk: 0.51 (CI 95% 0.16 - 1.6) Based on data from 123 participants in 1 study	129 per 1000 Difference: 63 fewer per 1000 (CI 95% 108 fewer - 77 more)	66 per 1000	Very low Due to serious risk of bias, low event rate, and serious imprecision ²	We are uncertain whether early tracheostomy increases or decreases the incidence of dysphagia
Hospital mortality (important)	Relative risk: 0.88 (CI 95% 0.71 - 1.1) Based on data from 1013 participants in 7 studies Follow up 28 days	260 per 1000 Difference: 31 fewer per 1000 (CI 95% 75 fewer - 26 more)	229 per 1000	Very low Due to risk of bias, imprecision, and inconsistency ³	We are uncertain whether early tracheostomy improves or worsens hospital mortality
Duration of mechanical ventilation (critical)	Measured by: Scale: - Lower better Based on data from 482 participants in 5 studies	days Difference: MD -4.14 lower (CI 95% -10.79 lower - 2.51 lower)	days	Very low Due to serious risk of bias, inconsistency, and imprecision ⁴	We are uncertain whether early tracheostomy increases or decreases duration of mechanical ventilation
Comfort (multiple outcomes) (important)	Measured by: A questionnaire with scale 0-10 And Days	Criteria evaluated in the self-evaluation questionnaire were in favour of tracheostomy.		Very low Due to risk of bias, and serious imprecision ⁵	We are uncertain whether early tracheostomy improves or worsens comfort

		No differences regarding recovery time of oral feeding and speech			
Mobilization (chair positioning) (critical)	Measured by: Day of first transfer from bed to chair Scale: - Lower better	20 Median	22 Median	Very low Due to serious risk of bias, and imprecision ⁶	We are uncertain whether early tracheostomy improves or worsens mobilization (chair positioning)
Use of sedatives (critical)	Measured by: Sedation-free days Scale: 0 - 27 Lower better	15 Median	18 Median	Very low Due to very serious risk of bias, Due to serious imprecision ⁷	Early tracheostomy may have little or no difference on sedation use
Complications – peri-procedural mortality (important) Complications – bleeding (important) Complications - Accidental extubation/loss of airway (important) Patient satisfaction (important) Family satisfaction (important) Dysphagie (important) Reintubation (important) Weaning duration (important)	-	-	No GRADE (no evidence was found)	No evidence was found regarding the effect of tracheostomy on Complications – peri-procedural mortality, Complications – bleeding, Complications - Accidental extubation/loss of airway, Patient satisfaction, Family satisfaction, Dysphagia, Reintubation, Weaning duration	

1. *Risk of Bias: serious. Inadequate/lack of blinding of participants and personnel, resulting in potential for performance bias; Inconsistency: serious. The direction of the effect is not consistent between the included studies; Imprecision: serious. Wide confidence intervals.*
2. *Risk of Bias: serious. Inadequate/lack of blinding of participants and personnel, resulting in potential for performance bias, due to recruitment bias; Imprecision: very serious. Wide confidence intervals.*
3. *Risk of Bias: serious. Inadequate/lack of blinding of participants and personnel, resulting in potential for performance bias; Inconsistency: serious. The direction of the effect is not consistent between the included studies; Indirectness: no serious. Differences between the outcomes of interest and those reported (e.g short-term/surrogate, not patient-important); Imprecision: serious. Wide confidence intervals.*
4. *Risk of Bias: serious. Inadequate/lack of blinding of participants and personnel, resulting in potential for performance bias; Inconsistency: serious. The direction of the effect is not consistent between the included studies; Imprecision: very serious. Wide confidence intervals.*

5. *Risk of Bias: very serious. Inadequate/lack of blinding of participants and personnel, resulting in potential for performance bias, due to recruitment bias; Imprecision: serious. Wide confidence intervals.*
6. *Risk of Bias: very serious. Inadequate/lack of blinding of participants and personnel, resulting in potential for performance bias, due to recruitment bias; Imprecision: serious. Wide confidence intervals.*
7. *Risk of Bias: very serious. Inadequate/lack of blinding of participants and personnel, resulting in potential for performance bias, due to recruitment bias; Imprecision: serious. Wide confidence intervals.*