

# The effect of early oral feeding compared to standard oral feeding following total laryngectomy: a systematic review

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## **Abstract**

Pharyngocutaneous fistula is reported to be the most common early complication following total laryngectomy with significantly increased morbidity and mortality rates as well as increased resource utilisation. Post-operatively, the presence of a pharyngocutaneous fistula can double the length of an average patient hospital stay. Multiple risk factors for pharyngocutaneous fistula have been investigated in the literature. Common clinical practice is to delay the introduction of oral feeding following surgery to reduce the formation of a pharyngocutaneous fistula.

The objective of this review was to identify and synthesise the best available evidence on the effects of early oral feeding compared to standard oral feeding following total laryngectomy on the incidence of pharyngocutaneous fistula and hospital length of stay.

This review considered studies that included adults who commenced early oral feeding following total laryngectomy surgery. The intervention of interest was early oral feeding defined as oral intake in the first 6 days post-operatively. The comparator was standard care defined as oral intake from day 7 onwards. Outcome measures of interest included the incidence of pharyngocutaneous fistula and hospital length of stay. A three tier search strategy was undertaken across 10 major databases. Nine studies in total met the inclusion criteria and on the basis of appraisal, eight were of suitable methodological quality, including three experimental and five descriptive studies.

Experimental studies appraised supported that early oral feeding does not increase the incidence of pharyngocutaneous fistula in the clinical context of primary total laryngectomy and this was substantiated by meta-analysis. Descriptive studies also supported these findings. The search process highlighted a lack of quality papers seeking to address the impact of salvage total laryngectomy on the incidence of pharyngocutaneous fistula. Results for the effectiveness of early oral feeding versus standard oral feeding on length of stay were inconclusive.

It was concluded that early oral feeding prior to day seven in non irradiated or non-extensively irradiated patients undergoing primary total laryngectomy does not result in an increase or change in pharyngocutaneous fistula formation. This conclusion is supported by meta-analysis.

Although the descriptive literature also favours early oral feeding in less homogenous laryngectomy populations, the level of evidence is not high. As a result, conclusions could

not be drawn in these populations. Findings relating to the impact of early oral feeding on length of stay were mixed and inconclusive.

Implication for clinical practice and further research are presented.

**Keywords**

oral feeding, total laryngectomy, fistula

## Declaration

I, Stephanie Martin, certify that this work contains no material that has been accepted for the award of any other degree or diploma in any University of any other tertiary institution, and, to the best of my knowledge and belief, contains no material previously published or written by any other person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint award of this degree.

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Stephanie Martin

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