

## FAST FACTS AND CONCEPTS #10 TUBE FEED OR NOT TUBE FEED?

James Hallenbeck MD

**Background** Tube feeding is frequently used in chronically ill and dying patients. The evidence for much of this use is weak at best. The Fast Fact reviews data on the use of tube feeding in advanced illness.

### For prevention of aspiration pneumonia

- Numerous observational studies have demonstrated a high incidence of aspiration pneumonia in those who have been tube fed. Reduction in the chance of pneumonia has been suggested for non-bed-ridden post-stroke patients in one prospective, non-randomized study. For bedridden post-stroke patients, no reduction was observed.
- Three retrospective cohort studies comparing patients with and without tube feeding demonstrated no advantage to tube feeding for this purpose.
- Swallowing studies, such as videofluoroscopy, lack both sensitivity and specificity in predicting who will develop aspiration pneumonia. Croghan's (1994) study of 22 patients undergoing videofluoroscopy demonstrated a sensitivity of 65% and specificity of 67% in predicting who would develop aspiration pneumonia within one year. In this study no reduction in the incidence of pneumonia was demonstrated in those tube fed.
- Swallowing studies may be helpful in providing guidance regarding swallowing techniques and optimal food consistencies for populations amenable to instruction. See *Fast Fact #128* for discussion of the role of swallowing studies.

### For life prolongation via caloric support

- Data is strongest for patients with reversible illness in a catabolic state (such as acute sepsis).
- Data is weakest in advanced cancer. No improvement in survival has been found (see exceptions noted below).
- Individual patients may have weight stabilization or gain with tube feeding. However, when cohorts of patients have been studied in non-randomized retrospective or prospective studies, no survival advantage between tube fed and hand fed cohorts has been demonstrated.
- Tube feeding may be life-prolonging in select circumstances:
  - Patients with good functional status and proximal GI obstruction due to cancer
  - Patients receiving chemotherapy/XRT involving the proximal GI tract.
  - Selected HIV patients
  - Patients with Amyotrophic Lateral Sclerosis

### For enhancing quality of life

- Where true hunger and thirst exist, quality of life may be enhanced (such as in very proximal GI obstruction).
- Most actively dying patients (see *Fast Fact #3*) do not experience hunger or thirst. Although dry mouth is a common problem, there is no relation to hydration status and the symptom of dry mouth – see *Fast Fact #133*.
- A recent literature review using *palliative care* and *enteral nutrition* as search terms found no studies demonstrating improved quality of life through tube feeding (results were limited to a few observational studies).
- Tube feeding may adversely affect quality of life if patients are denied the pleasure of eating.

### Summary

Although commonly used, current data does not provide much support for the use of artificial enteral nutrition in advanced dementia, or in patients on a dying trajectory from a chronic illness. A recommendation to use, or not use, tube feeding should be made only after first establishing

the overall *Goals of Care* (see *Fast Fact* #16). Recommendations for how to discuss the issue tube feeding with patients/families can be found in *Fast Fact* #84.

#### References

1. Loeb MB, Becker M, Eady A, Walker-Dilks C. Interventions to prevent aspiration pneumonia in older adults: a systematic review. *J Am Geriatr Soc.* 2003;51(7):1018-1022.
2. Meier DE, Ahronheim JC, Morris J, Baskin-Lyons S, Morrison RS. High Short-term Mortality in Hospitalized Patients With Advanced Dementia: Lack of Benefit of Tube Feeding. *Arch Intern Med.* 2001; 161(4):594-599.
3. Nakajoh, K., T. Nakagawa, et al. Relation between incidence of pneumonia and protective reflexes in post- stroke patients with oral or tube feeding. *J Intern Med* . 2000; 247: 39-42.
4. Finucane T, Christmas C, Travis K. Tube feeding in patients with advanced dementia. *JAMA.* 1999; 282:1365-1369.
5. Finucane T, Bynum J. Use of tube feeding to prevent aspiration pneumonia. *Lancet.* 1996; 348:1421-1424.
6. Croghan J, Burke E, Caplan S, Denman S. Pilot study of 12-month outcomes of nursing home patients with aspiration on videofluoroscopy. *Dysphagia.* 1994; 9:141-146.

**Version History:** 2<sup>nd</sup> Edition published August 2005; 3<sup>rd</sup> Edition May 2015. Current version re-copy-edited May 2015.

**Fast Facts and Concepts** are edited by Sean Marks MD (Medical College of Wisconsin) and associate editor Drew A Rosielle MD (University of Minnesota Medical School), with the generous support of a volunteer peer-review editorial board, and are made available online by the [Palliative Care Network of Wisconsin](#) (PCNOW); the authors of each individual *Fast Fact* are solely responsible for that *Fast Fact's* content. The full set of *Fast Facts* are available at [Palliative Care Network of Wisconsin](#) with contact information, and how to reference *Fast Facts*.

**Copyright:** All *Fast Facts and Concepts* are published under a Creative Commons Attribution-NonCommercial 4.0 International Copyright (<http://creativecommons.org/licenses/by-nc/4.0/>). *Fast Facts* can only be copied and distributed for non-commercial, educational purposes. If you adapt or distribute a *Fast Fact*, let us know!

**Disclaimer:** *Fast Facts and Concepts* provide educational information for health care professionals. This information is not medical advice. *Fast Facts* are not continually updated, and new safety information may emerge after a *Fast Fact* is published. Health care providers should always exercise their own independent clinical judgment and consult other relevant and up-to-date experts and resources. Some *Fast Facts* cite the use of a product in a dosage, for an indication, or in a manner other than that recommended in the product labeling. Accordingly, the official prescribing information should be consulted before any such product is used.