

**Title:**

Continuous Versus Intermittent Nasogastric Feeding for Patients on Mechanical Ventilation: Impacts on Gastric Emptying and Pulmonary Aspiration-A Comprehensive Systematic Review

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**Abstract Text:**

Every 100 patients receiving mechanical ventilation, 6-25 of them will acquire ventilator associated pneumonia. Nasogastric tube (NG) feeding is usually administered to patients on ventilator for nutritional support. Yet, evidences have shown NG feeding is one of contributing factors to VAP. Evidences also have shown long-term uses of ventilator could lead to gastroesophageal reflux and pulmonary aspiration in patients also receiving NG feeding. It is unclear which NG feeding methods affect the incidence of pulmonary aspiration. A comprehensive systematic literature review was conducted to explore the effects of different NG feeding on pulmonary aspiration and gastric emptying in patients on mechanically ventilation.

A broad computerized literature search was conducted using both Chinese and English databases, as well as the reference lists of relevant articles. Articles that met selection criteria were carefully examined by two reviewers to make a final selection of the studies for this review. A total of seven studies were included in this comprehensive meta-analysis. Data were extracted and collected independently by the two reviewers and cross-checked. Comprehensive Meta-analysis version 2 (Biostat, 2006) was used to analysis statistical data extracted from retrieved articles and to conduct meta-analysis.

There were no definitive studies showing either intermittent or continuous NG feeding is better in the outcomes of gastric emptying or the amount of lipid-laden macrophage presented in sputum. However, the result showed intermittent NG feeding is better than continuous NG feeding in terms of less neutrophils present in sputum. Nevertheless, the current strength of evidence is weak and well-designed studies are strongly recommended. Based on the current evidence, it is not possible to state that one NG feeding method is better than the other.