

# ENTERAL NUTRITION AND MEDICATION ADMINISTRATION GUIDELINES

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AHRQ Agency for Healthcare Research and Quality  
National Guideline Clearinghouse  
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## Guideline Objective(s)

1. To examine the available literature related to the ordering, preparation, delivery, and monitoring of enteral nutrition
2. To establish evidence-based practice guidelines for the safe and effective use of enteral nutrition

## Target Population

People receiving enteral nutrition throughout the lifecycle and throughout all practice settings

The complexity of enteral nutrition (EN) feedings cannot be underestimated. All healthcare professionals should be vigilant in continuous surveillance of high risk practices, products and systems as they relate to individuals who are enterally fed. Recognition of ordering, administration, and monitoring steps of EN delivery which may increase risk of complications to the person who is enterally fed is essential.

## Major Recommendations

Definitions of the grades of recommendations (**A-C**) are provided at the end of the "Major Recommendations" field.

## Practice Recommendations

1. Do not add medication directly to an enteral feeding formula. (**B**)
2. Avoid mixing together medications intended for administration through an enteral feeding tube given the risks for physical and chemical incompatibilities, tube obstruction, and altered therapeutic drug responses (i.e., do not mix medications together, but do dilute them appropriately prior to administration). (**B**)
3. Each medication should be administered separately through an appropriate access. Liquid dosage forms should be used when available and if appropriate. Only immediate-release solid dosage forms may be substituted. Grind simple compressed tablets to a fine powder and mix with sterile water. Open hard gelatin capsules and mix powder with sterile water. (**B**)
4. Prior to administering medication, stop the feeding and flush the tube with at least 15 mL water. Dilute the solid or liquid medication as appropriate and administer using a

clean oral syringe (> 30 mL in size). Flush the tube again with at least 15 mL water taking into account person's volume status. Repeat with the next medication (if appropriate). Flush the tube one final time with at least 15 mL water. Note: Dilution/flush should be less for pediatric doses (minimum 50:50 volume) and at least 5 mL when fluid is not restricted. **(A)**

5. Restart the feeding in a timely manner to avoid compromising nutrition status. Only hold the feeding by 30 minutes or more when separation is indicated to avoid altered drug bioavailability. **(A)**
6. Use only oral/enteral syringes labeled with 'for oral use only' to measure and administer medication through an enteral feeding tube. **(B)**
7. Consult with a pharmacist for individuals who receive medications co-administered with enteral nutrition. **(C)**

**Definitions: Grade of Recommendation**

- A.** There is good research-based evidence to support the guideline (prospective, randomized trials).
- B.** There is fair research-based evidence to support the guideline (well-designed studies without randomization).
- C.** The guideline is based on expert opinion and editorial consensus.

Benefits/Harms of Implementing the Guideline Recommendations

**Potential Benefits**

1. Standardized processes for enteral nutrition care including ordering, preparation, administration, and monitoring
2. Optimal care and minimal risk of error
3. Avoidance of tube obstruction, reduced drug efficacy, or increased drug toxicity

**Potential Harms**

Not stated

**Bibliographic Source(s)**

Bankhead R, Boullata J, Brantley S, Corkins M, Guenter P, Krenitsky J, Lyman B, Metheny NA, Mueller C, Robbins S, Wessel J. Medication administration. In: A.S.P.E.N. enteral nutrition practice recommendations. JPEN J Parenter Enteral Nutr 2009 Mar-Apr;33(2):158-62. [36 references]