

CHS 431

Lecture 2

# Enteral Nutrition for Adults

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# Formula classification system



Polymeric



Pre-  
digested



Modular

# Delivery Methods

It's recommended to start with a full strength product at a lower rate, and increase gradually as tolerated to goal.

# Polymeric

- Contains protein, fat, CHO in **high molecular weight** forms which require **normal digestive** and absorptive ability and are complete with respect to vitamins minerals, and trace elements.
- **Disease specific:**  
Supplement.
- Example; Glucerna, Nepro, Supplena, Osmolite, Pediasure, Ensure, Jevity, Enrich, Pulmocare

# Pre-digested

- Contains one or more partially digested macronutrients most commonly proteins in varying forms of hydrolysis.
- Ex. Crucial, Alitraq...etc.
- Peptides are hydrolyzed proteins containing varying chain lengths, with most peptide formulas containing a mixture of di and tri peptides.

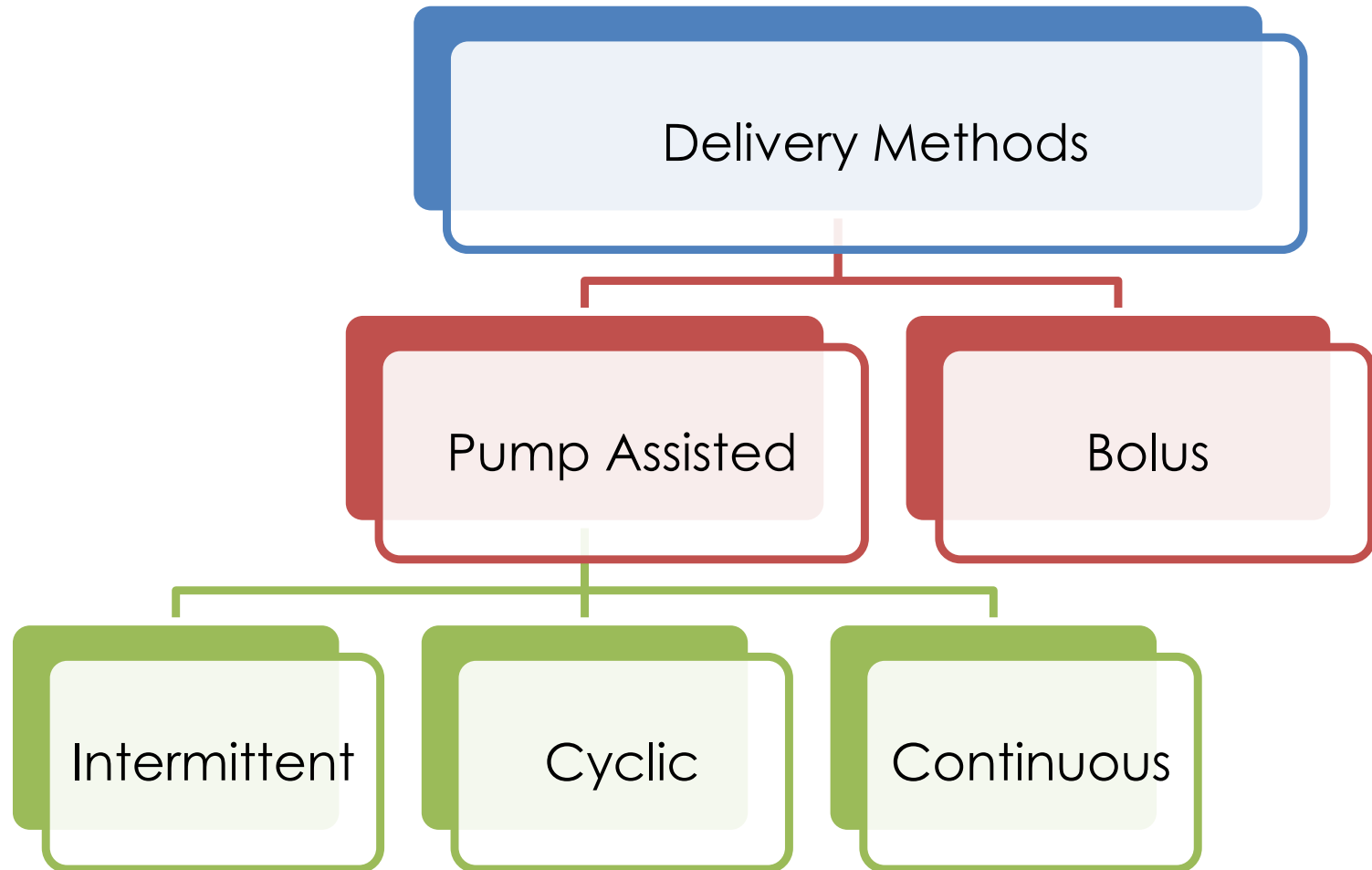
# Pre-digested

- The use of peptide based formulas has been shown to be superior to free AA in promoting greater nitrogen absorption in both healthy and diseased gut.
- The primary indication for an elemental formula is based in the presence of GI dysfunction.
- May be useful in patients with malabsorption, pancreatic dysfunction, and prolonged bowel rest after major abdominal surgery.

# Modular

- Use to modify pre-existing commercial formulas or mixed together to produce a unique enteral formula that meets the patients individual requirements.
- Example. MCT oil, promod, ploycose, Doucal.

# Delivery Methods





# Bolus Feedings

## Definition

Infusion of 240 to 480ml of enteral formula into the stomach through the barrel of a large syringe.

May be scheduled to correspond to typical meal patterns.

- Requires 5 to 20 minutes, usually by gravity.

# Bolus Feedings

## Features

Pts. Begin with  $\frac{1}{2}$  to 1 can per feeding.

Gradually increase by  $\frac{1}{2}$  can / feeding/ day.

# Bolus Feedings

## Indications

For gastric feeding.

For stable pts.

For ambulatory pts.

# Bolus Feedings

## Advantages

- Allows pt. mobility.
- Reduces time for feeding administration.
- Doesn't require a pump for administration
- More physiologic
- Inexpensive and easy to administer.
- Limits feeding time so patient is free to ambulate, participate in rehabilitation, or live a more normal life at home

# Intermittent Feedings

## Definition

- Enteral formula administered at specified times throughout the day through a pump.
- Generally in smaller volume and at slower rate than a bolus feeding but in larger volume and faster rate than continuous drip feeding.
- Typically 200-300ml is given over 30-60 minutes q4-6hours.
- Precede and follow with 30-ml flush of water.

# Intermittent Feedings

## **Indications:**

- Intolerance to bolus administration.
- Used for patients who have tubes positioned in the small intestine.
- Preparation of patient for rehab services or discharge to home or LTC (long term care) facility.

# Intermittent Feedings

## Advantages

- May enhance quality of life
- Allows greater mobility between feedings.
- More physiologic
- May be better tolerated than bolus

# Continuous feedings

## **Definition:**

Enteral formula administration into the gastrointestinal tract via pump or gravity, usually over 8 to 24 hours per day.



# Continuous feedings

## **Indications:**

- Initiation of feedings in acutely ill patients.
- Transpyloric feedings.
- Compromised gastric function.
- Feeding into small bowel.
- Intolerance to other feeding techniques, or a need for slow infusion rate.

# Continuous feedings

## Advantages

- Improves tolerance of hypertonic formulas.
- Decrease gastric distention & diarrhea.
- Decreases dumping syndrome.
- Decreases risk of aspiration.
- Increased time for nutrient absorption

# Cyclic feedings

## **Definition:**

Administration of enteral formula via continuous drip over a defined period of 8 to 12 hours, usually nocturnally

# Cyclic feedings

## Indications

- Ensure optimal nutrient intake when :
  - Transitioning from enteral support to oral nutrition (enhance appetite during the day).
  - Inadequate oral intake.

# Cyclic feedings

## **Advantages:**

- Achieve nutrient goals with supplementation.
- Facilitates transition of support to oral diet.
- Allows daytime ambulation.
- Encourages patient to eat normal meals and snacks