

MEETING PEDIATRIC NUTRITION NEEDS WITH AN ENTERAL FORMULA CONTAINING REAL FOOD

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BACKGROUND

- Enteral nutrition (EN) is critical for growth and development in children unable to meet daily energy and protein needs orally
- Health care professionals and caregivers are asking for enteral formulas that include more real food and easy to recognize ingredients
- Caregivers are blenderizing foods at home more often which can be both complex and time intensive to prepare
- A pediatric fiber-containing formula with real food ingredients was renovated to add more real food, improve the vitamin and mineral content and update to a blend of insoluble (pea hull fiber) and soluble (fructooligosaccharides, inulin and acacia gum) fiber plus fiber from fruits and vegetables (Table 1)

OBJECTIVES

- The purpose of this prospective observational study was to assess the ability to meet energy goals in a clinically stable, pediatric tube-fed population
- Secondary objectives included the ability to meet protein goals, assess formula tolerance, subject mood and frequency and nature of adverse events

| | Study Formula |
|-------------------------------|--|
| Kcal/mL | 1.0 |
| Protein (% kcal) | 15 |
| Carbohydrate (% kcal) | 51 |
| Fiber (g/L) | 8 |
| Fat (% kcal) | 34 |
| Protein Source | Dehydrated chicken powder, milk protein concentrate, pea protein isolate |
| Fiber Source | Pea fiber, gum acacia, FOC, inulin, fiber from fruits and vegetables |
| Fruit & Vegetable Ingredients | Tomatoes, green beans, peaches, carrots, cranberry juice concentrate |

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METHODS

- Clinically stable, tube-fed children (1–13 years) with established enteral access, currently tolerating enteral feeding (EN) and anticipated to require EN to provide at least 90% of their nutritional needs for 7 days were recruited
- Consented subjects were observed on their Pre-Study Formula (PSF) for 1 day (Day -1)
- At study Day 0, study formula (SF) Compleat® Pediatric (Nestlé Health Science, Bridgewater, NJ) was initiated
- Each subject was fed for another 7 days (Day 1–7)
- Caregivers completed a Daily Diary to record study formula intake, gastrointestinal measures (stool frequency/consistency, vomiting, gas, abdominal pain), mood and general health
- Physician assessment of tolerance measures was completed at final visit (Day 8)
- All data analyses were conducted using descriptive statistics. Means, standard deviations, minimum and maximum values calculated for continuous data, and counts and percentages calculated for categorical data.

RESULTS

- Twenty-one children (mean age 6.4 yrs, 57% male) fed via G-tube with feeding disorders secondary to developmental delay or other neurological disorders enrolled in study; one subject withdrew early
- Calorie & protein intake was similar with PSF and SF (1246 vs 1205 kcals/d; 39 vs 48 g/d, respectively) (**Figure 1**)
- Twelve subjects met at least 90% of calorie goal on SF; 8 subjects met 59-85% of goal
- Study formula was not associated with an increase in gastrointestinal symptoms; Formula was well tolerated based on caregiver report
- Stool consistency was reported most frequently as 'Soft' for both PSF and SF, with fewer reports of 'Hard' and 'Watery' for SF (**Figure 2**)
- Caregiver reported subject mood as "happy" or "content" the majority of the time
- No serious adverse events reported

Figure 1: Daily Percentage of Nutritional Goals Met

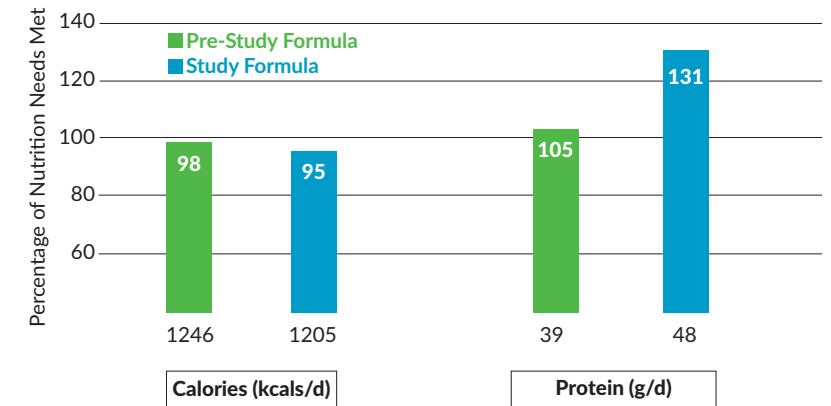
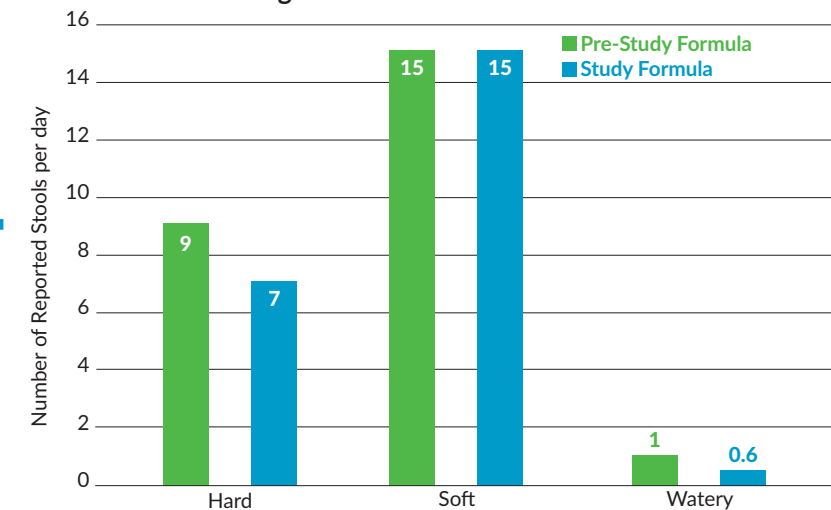


Figure 2: Stool Characteristics*



* For study formula stool characteristics reported as average

CONCLUSION

- Pediatric enteral formula containing food ingredients provided nutritional intake equivalent to pre-study levels in children with neurological medical diagnoses
- Formula was well tolerated
- Study formula provides a convenient alternative for those looking to incorporate real foods into daily enteral diet