HIGH TOLERANCE

HIGH ENERGY

Case study booklet supporting Nutrison PlantBased 2 kcal HP Multi Fibre

High tolerance = 93% of dietitians were satisfied with their patients tolerance. Data on file, 2024. Nutrison PlantBased 2 kcal HP Multi Fibre is a Food for Special Medical Purposes for the dietary management of disease related malnutrition in patients and must be used under medical supervision.

This information is intended for healthcare professionals only.

NUTRICIA
Nutrison
PlantBased
2 kcal HP Multi Fibre

REAL WORLD EVIDENCE FOR NUTRISON PLANTBASED 2 KCAL HP MULTI FIBRE[1]

Nutrison PlantBased 2 kcal HP Multi Fibre is a new, unique, plant-based fibre containing tube feed designed for patients with higher energy and protein needs, and/or fluid restriction.

Evidence for the efficacy of Nutrison PlantBased 2 kcal HP Multi Fibre in everyday clinical practice has come from a multi-centre study in adult, home enteral nutrition patients recruited from community services by their managing dietitian across 17 NHS centres in the UK. The study followed 16 community-based patients for 28 days and assessed their gastrointestinal tolerance, compliance, acceptability, nutrient intake, length of feeding time, dietetic goal and anthropometry with Nutrison PlantBased 2 kcal HP Multi Fibre.

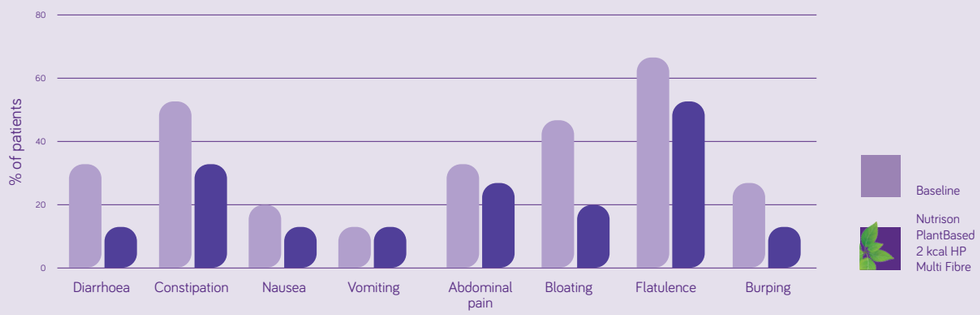
Results from three of these patients have been collated in a series of clinical case studies, which are presented in this booklet. The case studies are intended to help educate healthcare professionals about the role of Nutrison PlantBased 2 kcal HP Multi Fibre and offer practical guidance on its uses.

CONTENTS

NUTRISON PLANTBASED 2 KCAL HP MULTI FIBRE IS WELL TOLERATED WITH EXCELLENT COMPLIANCE[1]

In the UK multi-centre study, Nutrison PlantBased 2 kcal HP Multi Fibre demonstrated;[1]

Incidence of gastrointestinal symptoms reduced[1]

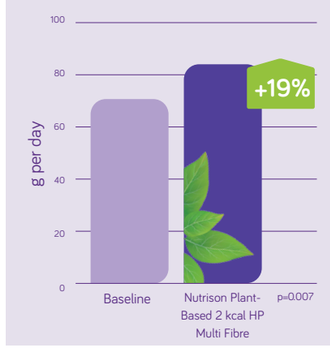


93% of dietitians were satisfied with their patient's tolerance[1]

88% of patients agreed they tolerated the feed well[1]

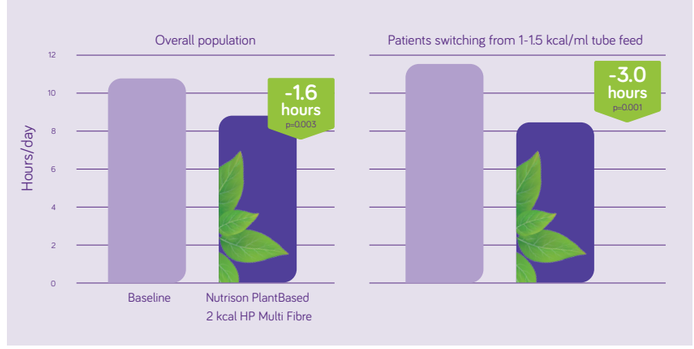
96% compliance versus the dietitian's prescription[1]

Protein



Total mean protein intake significantly increased from 70 g/day at baseline to 81 g/day. The total mean energy intake was maintained. Mean fibre intake increased significantly from 13 g/day to 21 g/day.

Total feed time per day



Daily feeding time significantly reduced from 10.5 to 8.9 hours. Participants on a 1-1.5 kcal/ml baseline tube feed experienced a 3 hour time reduction.

Baseline

Nutrison PlantBased 2 kcal HP Multi Fibre

CASE STUDY 1

A 61-YEAR-OLD MALE; TOTAL STOMACH REMOVAL AND PARTIAL REMOVAL OF THE OESOPHAGUS

Provided by: Jo Bates, Community Rehabilitation Dietitian
North East London Foundation Trust

BACKGROUND

A 61-year-old male enterally fed via jejunostomy was recruited in the community. Following an accidental ingestion of caustic soda in 2017, he required a total stomach removal and partial removal of the oesophagus with a feeding tube inserted due to his inability to meet nutrition and hydration needs. In addition to this, he also suffered with atherosclerotic heart disease, hypertension and previously had a stroke and heart attack in 2016 and 2017, respectively. Despite being able to manage a small oral intake and remain independent and mobile, he suffered ongoing physical pain. Both the patient and his wife struggled with poor health overall, which subsequently affected their mental health and living conditions.

Prior to the accident, the patient weighed 114 kg Body Mass Index (BMI) 39.4 kg/m^2 with significant weight loss occurring due to the trauma, surgery, and tolerance issues despite being NGT fed initially. Upon handover into the community, his weight was ~77 kg BMI 27 kg/m^2. The patient reported he was lactose intolerant without an official diagnosis during the hospital admission and was thus provided with a high energy feed, which was also lactose free. However, his weight continued to decline by a further 15 kg in the following 6 months causing concern. Nutrison Concentrated was provided during this time, but tolerance issues persisted, and he eventually revealed omitting up to 50% of the feed. Once placed on Nutrison Soya Multi Fibre, the patient began taking an adequate volume of feed and his weight began to increase alongside a small oral intake.

Prior to the trial, his weight had been stable for 6 months at around 74 kg and a BMI just above the upper healthy range at 25.7 kg/m^2. Nutritional requirements at the time of recruitment were 1994 kcal/day and 74.4 g – 111 g of protein/day.

BASELINE REGIMEN

The prescribed baseline regimen was 1500 ml of Nutrison Soya Multi Fibre, JEJ fed continuously at 250 ml/hour with a goal intake of 1545 kcal and 60 g protein per day due to assumed undiagnosed lactose intolerance. The patient was tolerating this feed better than the previous options; however, some daily bloating and nausea remained. Despite trialling a range of feeding rates, timing options and medications, he preferred a high-rate evening feeding period to allow some daytime oral intake and freedom for activities. Although, he admitted during the baseline assessment that he would often reach 1000 ml and stop feeding due to feeling unwell. 'Melt-in-the mouth-crisps' were tolerated and eaten daily in large amounts for pleasure as well as some water, lemonade and occasional scrambled egg or chicken. These helped towards maintaining his weight when feed was omitted. However, this caused concern regarding his overall protein, vitamin, and mineral intake. Therefore, due to the omission of feed, his baseline of nutritional intake was approximately 1263 kcal/day and 43.4 g of protein/day (0.6 g/kg), which included 1000 ml of Nutrison Soya Multi Fibre providing 1030 kcal and 40 g protein/day.

RATIONALE AND USE OF NUTRISON PLANTBASED 2 KCAL HP MULTI FIBRE

The patient was tolerating a fibre feed and wanted to continue taking a Multi Fibre product. The dietetic goal was to improve tolerance and therefore compliance with the feed towards meeting estimated nutritional requirements, particularly protein and micronutrients. The higher energy and protein content of the plant-based feed also reduced the volume and feeding time required. Nutrison PlantBased 2 kcal HP Multi Fibre 500 ml was taken continuously providing 1000 kcal and 50 g protein, with ~1000 ml of Nutrison Soya Multi Fibre following this, both at 250 ml/hour rate.

4-WEEK RESULTS

	Requirement	Baseline Intake (Nutrison Soya Multi Fibre)	Endpoint Intake (Nutrison PlantBased 2 kcal HP Multi Fibre and Nutrison Soya Multi Fibre)
Energy (kcal/day)	1994	1263 (1030)	2396 (2030)
Protein (g/day)	74.4	43.4 (40)	94.7 (90)

After 4 weeks, the patient's body weight had increased to 76 kg and a BMI of 26.29 kg/m^2. Daily energy intake had increased to 2396 kcal and 94.7 g of protein (1.2 g/kg body weight). Approximately halfway through the study, the patient started to take Nutrison PlantBased 2 kcal HP Multi Fibre earlier in the afternoon to allow for a break before continuing with Nutrison Soya Multi Fibre in the evening. The patient observed that the 500 ml study feed, did not cause any tolerance issues, therefore he was 100% compliant with taking the daily dose. Together with up to 1000 ml of Nutrison Soya Multi Fibre during the study, the patient often exceeded energy requirements, resulting in a slight weight gain, and fulfilling protein, vitamins, and mineral needs. Time spent feeding reduced from 6 hours to just over 5 hours, which the patient was also very happy about and he was very keen to continue taking the study feed permanently. Nutrison Soya Multi Fibre was stopped and the volume of Nutrison PlantBased 2 kcal HP Multi Fibre was increased to 1000 ml/day, acting as his sole source of nutrition, which is complete for vitamins and minerals in <750 ml. The feeding time further reduced to 4 hours and the patient fully tolerated his feed for the first time in 6 years which was a huge improvement to his quality of life. No other changes in the patient's medical condition were observed regarding decline or presence of infection during the 4-week study, however overall oral intake gradually declined over the following 6 months due to reoccurring issues from oesophageal surgery. The higher calorie, higher protein content of the Nutrison PlantBased 2 kcal HP Multi Fibre was integral in maintaining his nutritional status during this time. At the 6-month follow-up, the patient was still tolerating the feed very well and remarked that *"he can feel that his body tolerates it better"*.

SUMMARY

The dietetic goal was achieved with the prescribed dose of 500 ml Nutrison PlantBased 2 kcal HP Multi Fibre fully tolerated each day, therefore the patient achieved 100% compliance during the study. This enabled the patient to meet estimated nutritional requirements for both macro and micro-nutrients and therefore more nutritious for the patient, which was a historical issue with other feed options. The patient remains on 1000 ml of Nutrison PlantBased 2 kcal HP Multi Fibre, which has also improved his mental wellbeing by not experiencing nausea and bloating each day. Nutrison PlantBased 2 kcal HP Multi Fibre, is nutritionally complete in <750 ml with the added benefit of the high calorie and protein formula resulting in a smaller prescribed volume and reduced feeding time which the patient was very happy about and keen to remain on long term.

CASE STUDY 2

A 62-YEAR-OLD MALE; OESOPHAGEAL CANCER

Provided by: Naomi Hatchett, Macmillan Oncology Dietitian
Calderdale & Huddersfield NHS Trust

BACKGROUND

A 62-year-old male was recruited in the community, who had been established on jejunostomy feeding for 6 months following an oesophagectomy for oesophageal cancer. He required a prolonged period of enteral feeding due to post-operative anastomotic strictures requiring regular dilatation, and throughout his ongoing treatment trajectory, which included 25 days of targeted radiotherapy during the time on the trial, resulting in ongoing dysphagia and odynophagia.

On recruitment, his weight was 62.4 kg with a Body Mass Index (BMI) of 19.1 kg/m^2. His weight on diagnosis was 68 kg approximately 1 year prior, with ongoing gradual weight loss following 4 cycles neoadjuvant chemotherapy, oesophagectomy, and 4 cycles of adjuvant chemotherapy by the time of recruitment.

Prior to diagnosis, his dietary preference was a vegan or plant-based diet, however, due to the significant nutritional implications of his disease and treatment, this was relaxed by the patient. He continued to lead a very active lifestyle where he was able.

His nutritional requirements were calculated as 2495 kcal/day (40 kcal/kg) and 94 g protein/day (1.5 g/kg/day) considering his current treatment, activity levels and baseline intake.

His baseline feed was Nutrison Peptisorb Plus HEHP 1500 ml at 125 ml/hour due to a post-operative chyle leak, but this had been deemed to have subsequently resolved. Alongside the feed, he was able to tolerate small amounts of soft diet, however the quantities varied from day to day.

Baseline feed intake: 2250 kcal/day, 113 g/protein/day

Total baseline intake: 2714 kcal/day, 131 g/protein/day

RATIONALE AND USE OF NUTRISON PLANTBASED 2 KCAL HP MULTI FIBRE

The patient had been keen to continue with a vegan diet during treatment, however no suitable tube feeds were available, therefore the patient relaxed his preferences. At the time the closest plant-based feed would have been Nutrison Soya, however a high feed volume and prolonged time continuously feeding would have been required. In view of his experiences having to navigate his preferences, he consented to the use of a high-energy plant-based feed for the remainder of his treatment.

The patient was prescribed 1000 ml Nutrison PlantBased 2 kcal HP Multi Fibre continuously at a rate of 100 ml/hour for 10 hours, providing 2000 kcal, and 100 g protein, anticipating the remainder of his nutritional intake would be from oral intake, which at baseline was approximately 500 kcal and 20 g protein.

DIETETIC GOAL WHILE ON TRIAL

To maintain weight and gastrointestinal (GI) tolerance to enteral feeding, whilst able to accommodate the patients' dietary preferences.

RESULTS AND DISCUSSION

After 28 days on the trial product, the dietetic goal was met. The endpoint weight was 62.7 kg, BMI 19.2 kg/m^2. No adverse GI symptoms were reported, and the patient tolerated the feed with nil concerns.

During the trial, the patient completed his radiotherapy, with reduced oral intake until week 3, achieving resolution of the ability to tolerate intake by the end of the trial, resulting in an increased total intake by the end of the trial.

	Nutritional requirements	Baseline intake (Feed + Oral)	Endpoint intake (Feed + Oral)
Energy (kcal/day)	2495	2714	3168
Protein (g/day)	94	130	137

The perceived benefits of receiving the trial feed were that it overall reduced time spent continuously feeding, allowing for increased oral intake when able to tolerate an oral diet. The patient was grateful to be able to receive a vegan feed, which had a positive impact on his quality of life and relationship with his nutritional care during treatment.

The patient would have been happy to continue with the trial feed long-term and reflected that they had wished it had been available at the start of their treatment. Due to continued improvement with oral intake, he required the feed for only 4 weeks post-trial, and subsequently had his feeding jejunostomy removed.

SUMMARY

In summary, following the 4-week trial, both patient and dietetic goals were met.

The provision of a high-energy and protein plant-based feed allowed the patient to meet his nutritional needs, while accommodating his previous dietary preferences that he had needed to adapt due to no suitable enteral feed being available at the start of his treatment journey.

Clinically, he made significant improvements and was able to recommence oral intake and wean off enteral feeding.

CASE STUDY 3

A 22-YEAR-OLD MALE; WITH LEARNING DISABILITIES

Provided by: Rebecca Martin, Advanced Dietitian
North East Yorkshire Partnership NHS Foundation Trust

BACKGROUND

The patient was a 22-year-old male with multiple profound learning disabilities secondary to chromosome deletions, who resides in the family home. He was attending day services during the week along with respite care and his family are the main carers. He also has idiopathic scoliosis, cataracts, impaired vision, hearing loss and is non-verbal.

The patient has been receiving his enteral feed through a Percutaneous Endoscopic Gastrostomy (PEG) tube since early childhood due to severe dysphagia, resulting in unsafe oral intake. All nutrition and fluid requirements are met through enteral feeding. He has a history of poor tolerance to enteral feeds evidenced by symptoms of diarrhoea, constipation, and potential abdominal pain, determined by periods of unsettled behaviour. He has difficulty gaining weight due to his high energy expenditure from constant body movements.

Baseline anthropometry: 25.5 kg and an underweight Body Mass Index (BMI) (difficult to accurately measure due to severe physical disabilities and scoliosis).

Nutritional requirements at baseline: 1500 kcal/day and 56 g of protein (2.2 g/kg body weight).

BASELINE REGIMEN

A variety of enteral tube feeds with different concentrations, protein sources and fibre content were initiated with this patient due to his history of poor tolerance. Prior to the trial, the patient was receiving 1500 ml of Nutrison Soya Multi Fibre, a soy-based tube feed, which was well tolerated with improvements seen in agitation levels and the patient bowels were more settled.

Due to the low concentration of his tube feed (1 kcal/ml), the patient required a large volume of feed to meet energy requirements. The patient had difficulties feeding at a high rate as this could cause reflux and vomiting. As a result, the patient would have to feed overnight, increasing the overall feeding time. The patient's time not receiving feed, which was used for time out of his wheelchair, personal cares, and other activities where it was difficult to be attached to a pump, was significantly impacted. Having more feed during the night also resulted in a greater frequency of the patient pulling his tube out. The patient's weight was gradually declining as he rarely received 100% of his feed as prescribed. Bolus feeding with small volumes of highly concentrated Oral Nutritional Supplements (ONS) was tried, but the patient could not tolerate any variation of these.

RATIONALE AND USE OF NUTRISON PLANTBASED 2 KCAL HP MULTI FIBRE

The patient was switched to Nutrison PlantBased 2 kcal HP Multi Fibre as his baseline feed was also fibre-containing and he was already tolerating it well. The high energy, low volume aspect of Nutrison PlantBased 2 kcal HP Multi Fibre was chosen with the goal of improving compliance and achieving full feed volume delivery. Providing additional calories in a small volume should not only improve energy intake, but it should also reduce the amount of time attached to the feeding pump and subsequently promote weight gain.

Trial Feeding Regimen: 500 ml of Nutrison PlantBased 2 kcal HP Multi Fibre continuously at 50-125 ml/hour rate, providing 1000 kcal and 50 g protein, alongside 700 ml/day of Nutrison Soya Multi Fibre.

DIETETIC GOAL WHILE ON TRIAL

To reduce the length of time attached to the feeding pump to improve quality of life. To increase weight and to maintain gastrointestinal (GI) tolerance.

4-WEEK RESULTS

End point anthropometry: 26.3 kg and an increase in estimated BMI.

	Requirement	Baseline intake	Endpoint intake
Energy (kcal/day)	1500	1545	1721
Protein (g/day)	56	60	78

As a result of having a more concentrated feed, daily energy intake increased to 1721 kcal and protein intake to 78 g of protein (3 g/kg body weight). This resulted in a continued and gradual weight gain during and after the trial period. With regards to tolerance, the patient appeared to tolerate Nutrison PlantBased 2 kcal HP Multi Fibre better than his previous feed, visibly rubbing his stomach less. Initially, the reduction in water content by 14.1 g/100ml of the plant-based feed caused some constipation, but this was resolved with additional water flushes. Less feed was required overnight, which reduced incidences of the patient pulling out his tube. Family carers reported feeling less stressed because of the weight gain and the knowledge that the intake of calories was greater. They also felt less strain as carers as less time was needed to monitor the patient whilst feeding. The family also reported being pleased that the feed was plant-based as it is guaranteed to be Halal, which was important to the family. As the feed worked so well for the patient and his family, he continued this feed after the trial period had ended.

SUMMARY

The opportunity for this patient to trial this feed came just at the right time. Through many months of trialling different feeds, we had discovered that a soy-based tube feed was the best available option. However, with only a 1kcal/ml feed to choose from, this posed problems with volume and being attached to a pump for prolonged periods of time. Quality of life improved for the patient as well as his family and carers. His health outcomes vastly improved, and it was fantastic that he could continue to benefit from this feed after the trial period had ended.

INTRODUCING NUTRISON PLANTBASED 2 KCAL HP MULTI FIBRE

Ireland's first and only plant-based 2 kcal tube feed[2]

High energy
2 kcal/ml

Unique[2]

High protein
10 g per
100 ml

100%
plant-based

With MF6

High quality
plant protein
55% soy
45% pea

Nutritionally
complete
in <750 ml†

Low volume,
concentrated
feed

HIGH TOLERANCE
HIGH ENERGY

High tolerance = 93% of dietitians were satisfied with their patients tolerance. Data on file, 2024

NUTRISON PLANTBASED 2 KCAL HP MULTI FIBRE: NUTRITIONAL VALUE PER 100 ML

Energy	200 kcal
Protein	10 g
Carbohydrate	18.5 g
Lactose	<0.010 g
Fat	9.3 g
EPA + DHA	90 mg
Fibre	1.5 g
Calcium	148 mg (3.69 mmol)
Iron	2.13 mg
Vitamin D	2.66 µg
Vitamin B12	0.57 µg
Osmolarity	540 mOsmol/l
Presentation	500 ml OpTri Bottle
ACBS approval	Yes

- Vegan
- Halal certified
- Kosher approved

Scan to learn more

Less volume. Less time. More of what matters.

1. Nutricia UK ACBS trial, data on file 2024. 2. MIMS Ireland, April 2025

†Nutritionally complete in <750ml. Using a 19-49 year old male RNI for a comparator (excluding Na, K, Cl).

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We extend our sincere thanks to those who participated in the trial and made it possible to bring this product to market.

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Accurate at time of publication: April 2025.

CL3670

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More of what matters.