



CASE STUDY BOOKLET SUPPORTING PEPTISIP ENERGY HP



This information is intended for healthcare professionals only.
Peptisip Energy HP is a Food for Special Medical Purposes for the dietary management of disease related malnutrition in patients with malabsorption and/or maldigestion and must be used under medical supervision.
Accurate at time of publication: October 2022.

NUTRICIA
Peptisip
Energy HP



CASE STUDIES SHOWING REAL WORLD EVIDENCE FOR PEPTISIP ENERGY HP

Peptisip Energy HP is a new peptide-based oral nutritional supplement (ONS) for patients with gastrointestinal (GI) intolerance symptoms. This product has been studied in a variety of patients with complex conditions requiring a peptide-based ONS.

A multi-centre study across the UK provided evidence on the efficacy of Peptisip Energy HP in everyday clinical practice. Within the multi-centre study, 15 adult patients requiring a peptide-based ONS were recruited from both the acute and community settings by their managing healthcare professional across 11 hospital sites¹.

The study was carried out for 28 days and assessed their GI tolerance, nutrient intake, and compliance with Peptisip Energy HP.

Results of four of these patients have been documented in a series of clinical case studies, which are presented in this booklet. The intention of the case studies is to help educate and support healthcare professionals about the role of Peptisip Energy HP, and offer practical guidance on its use in managing patients with GI intolerance symptoms.

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Reference: 1. Nutricia ACBS trial, data on file 2022.

UP TO 45% OF PATIENTS WITH GASTROINTESTINAL (GI) DISORDERS ARE AT RISK OF MALNUTRITION^{1,2}

For patients with GI disorders, ESPEN guidelines emphasise that nutritional support is vital^{3,4}.

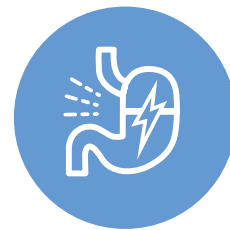
Patients with GI disorders can present with several symptoms, such as diarrhoea, bloating, abdominal pain, and vomiting⁵. Their tolerance to formulations containing whole protein and fats is also often poor^{5,6}.



Diarrhoea



Bloating



Abdominal pain



Vomiting

In patients with GI disorders, when absorption and digestion of nutrients is impaired, peptide-based feeds have been shown to improve tolerance^{5,6}.

A NEW PEPTIDE BASED ORAL NUTRITIONAL SUPPLEMENT (ONS) FOR PATIENTS WITH GI INTOLERANCE

Peptisip Energy HP is a high protein, peptide-based ONS, consisting of 100% hydrolysed whey protein and designed to be well tolerated whilst improving patient compliance¹.

NUTRITIONAL VALUES PER 200ML BOTTLE



Ready-to-drink

Café latte flavour

Dietary suitability:

Gluten and lactose* free

Vegetarian

Halal**

Kosher†

Allergens:

Soy and milk proteins

This table shows selective nutritional information. Please refer to the product data card or label for full details.

References

1. Meijers J.M., Schol J.M., van Bokhorst-de van der Schueren M.A., et al. (2009) Malnutrition prevalence in The Netherlands: results of the annual Dutch national prevalence measurement of care problems. Br J Nutr., 101(3), pp. 417-23.
2. Russell C. and Elia M. (2012) Nutrition screening survey in the UK and Republic of Ireland in 2011. Hospitals, care homes and mental health units [pdf]. BAPEN. Available from: bapen.org.uk/pdfs/nsw/nsw-2011-report [Accessed on: May 2022].
3. Pironi L., Arends J., Bozzetti F., et al (2017) ESPEN guidelines on chronic intestinal failure in adults. Clin Nutr., 36(2), pp.247-307.
4. Forbes A., Eschere J., Herbuterne X. et al. (2017) ESPEN guidelines: Clinical nutrition in inflammatory bowel disease. Clin Nutr., 26(2), pp.321-47.
5. Alexander D.D., Bylsma L.C., Elkayam L., et al. (2006) Nutritional and health benefits of semi elemental diets: A comprehensive summary of the literature. World J Gastrointest Pharmacol Ther., 7(2), pp. 306-19.
6. Nutricia ACBS trial, data on file 2022.

Reference: 1. Nutricia ACBS trial, data on file 2022.

*Lactose level below 300mg/kg.

**Certified by the Halal Food Council of Europe.

†Nutricia has Kosher approval for this product.

NUTRICIA
Peptisip
Energy HP

CLINICAL EVIDENCE

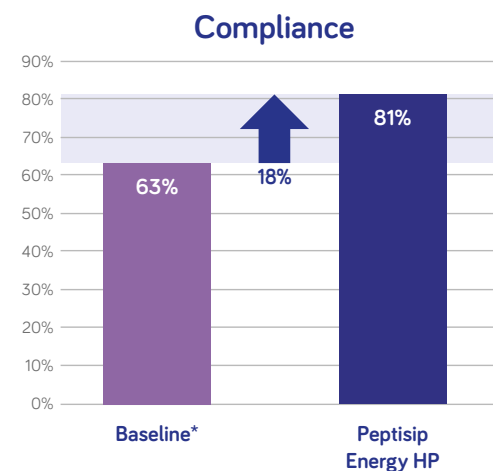
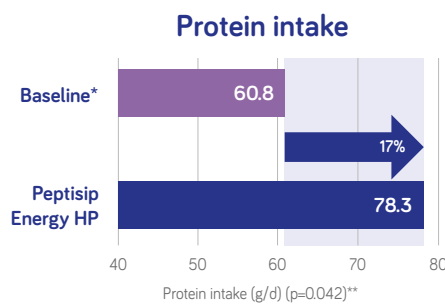
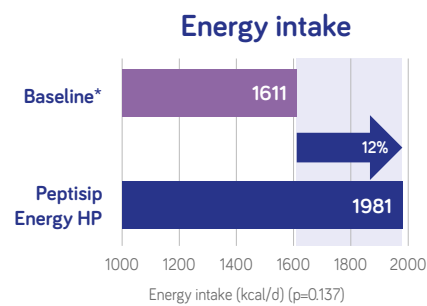
UK MULTI-CENTRE CLINICAL TRIAL

PEPTISIP ENERGY HP HAS BEEN SHOWN TO IMPROVE COMPLIANCE AND INCREASE NUTRITIONAL INTAKE¹

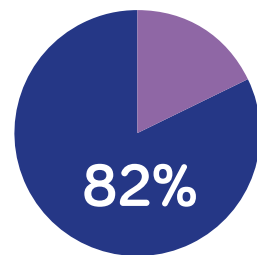
15 adult patients requiring a peptide based ONS to meet their nutritional requirements were recruited across the UK from both the acute and community settings. Recruitment took place by their managing healthcare professional across eleven hospital sites¹.

The study was carried out for 28 days and assessed their GI tolerance, nutrient intake, and compliance with Peptisip Energy HP.

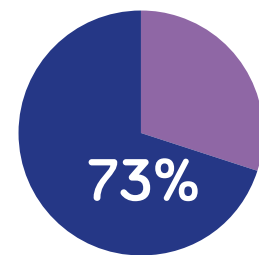
The multi centre study demonstrated higher compliance to Peptisip Energy HP than the prescribed* ONS. The increased compliance of 18% with Peptisip Energy HP led to improved nutritional intake: energy intake increased by 12% and protein intake significantly increased by 17%.**



PEPTISIP ENERGY HP WAS WELL TOLERATED AND ACCEPTED BY TRIAL PARTICIPANTS¹



82% of participants enjoyed the **TEXTURE** of Peptisip Energy HP



73% of participants enjoyed the **TASTE** and **THICKNESS** of Peptisip Energy HP

Reference: 1. Nutricia ACBS trial, data on file 2022.

*Prior to commencing the study patients were taking a different oral nutritional supplement.

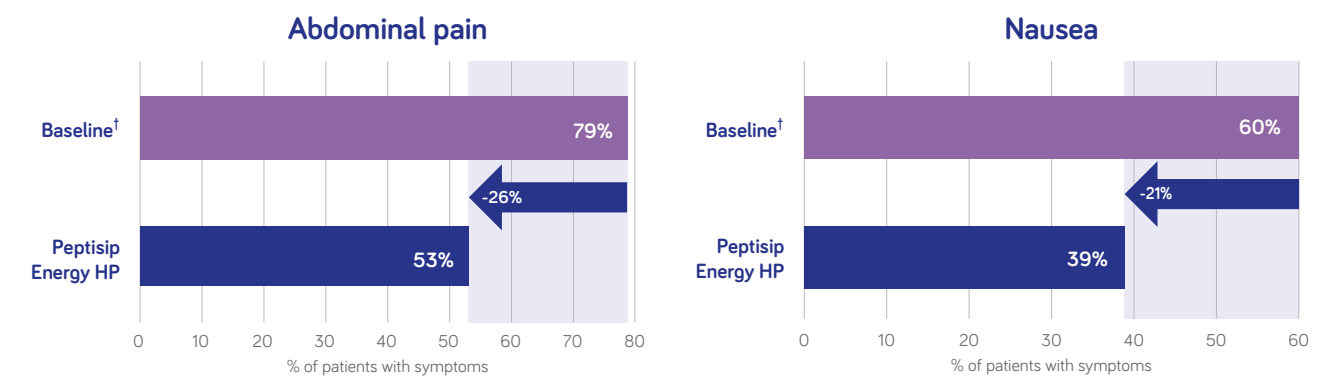
**A p-value of ≤ 0.05 is statistically significant.

CLINICAL EVIDENCE

UK MULTI-CENTRE CLINICAL TRIAL

PEPTISIP ENERGY HP REDUCED THE INTENSITY AND INCIDENCE OF 7 OUT OF 8 GI SYMPTOMS*¹

A SIGNIFICANT REDUCTION WAS SEEN WITH 2 KEY GI SYMPTOMS**¹



26% reduction in number of patients experiencing abdominal pain

21% reduction in number of patients experiencing nausea

A REDUCTION WAS ALSO SEEN IN:¹

- CONSTIPATION
- VOMITING
- FLATULENCE
- DIARRHOEA
- BURPING

Reference: 1. Nutricia ACBS trial, data on file 2022.

*The only exception was bloating.

**A p-value of ≤ 0.05 is statistically significant.

¹Prior to commencing the study patients were taking a different oral nutritional supplement.



CASE STUDY SUMMARY

Case Study	Sex	Age	Primary Condition	Baseline Regimen	Rationale for Peptisip Energy HP	Peptisip Energy HP prescription	Tolerance expected/better	Compliance expected/better
1	F	43	Functional abdominal pain disorder	~500ml Nutrison Energy feed per day on average (750kcal, 30g protein)	To gain weight back to a BMI within healthy limits, and to reduce feed volume and the need for gastrostomy in the long-term	Peptisip Energy HP 200ml (300kcal, 15g protein) to be taken orally, together with the existing 500ml Nutrison Energy per day via her gastrostomy	Yes	Yes
2	F	71	Pancreatico-duodenectomy	Liquid diet	To optimise nutrition using a liquid diet to facilitate increased activity, and prevent any further weight loss in the build up to surgery	Peptisip Energy HP 4 x 200ml per day then reduced to 2 x 200ml per day (1200-600kcal, 60-30g protein)	Yes	Yes
3	M	65	Hilar cholangiocarcinoma	Fortijuce 1 x 200ml (300kcal, 7.8g protein)	To optimise the patient's nutritional intake and ensure he could digest and absorb this nutrition adequately, in order to prevent further nutritional losses	Peptisip Energy HP 1-3 x 200ml per day (300-900kcal, 15-45g protein)	Yes	Yes
4	F	37	Gastroparesis	Fortisip Compact 2 x 125ml (600kcal, 24g protein), taken orally. Nutrison Peptisorb Plus HEHP 500ml (750kcal, 37.5g protein), fed enterally via a jejunal feeding tube	To trial stopping enteral feeding (to rest the stoma site following several infections and the tube falling out) with the option to supplement food intake with a peptide-based ONS similar to that of Nutrison Peptisorb Plus HEHP	Peptisip Energy HP 2 x 200ml per day (600kcal, 30g protein)	Yes	Yes



CASE STUDY 1

A 43-YEAR-OLD FEMALE WITH FUNCTIONAL ABDOMINAL PAIN DISORDER

Provided by: Anna Julian, Advanced Specialist Dietitian (Gastroenterology).
NHS Greater Glasgow and Clyde, Glasgow.

BACKGROUND

A 43-year-old female was recruited during an inpatient admission with functional abdominal pain. The patient presented in 2018 with significant weight loss (~30% body weight), and was experiencing abdominal pain which fluctuated in nature and was associated with eating and drinking. She underwent extensive investigation with no clear cause found, however the pain persisted.

Prior to the trial, nutritional support was provided initially via a food first approach, and then using polymeric oral nutritional supplements. However poor tolerance resulted in ongoing weight loss and suboptimal energy levels. A trial of NG feeding was successful in halting weight loss and improving subjective energy levels, and so the patient opted for a gastrostomy tube. This was placed in January 2020.

At recruitment, the patient wanted to see some weight gain. In addition, after a number of infections at the gastrostomy site, the patient was keen to reduce her reliance on tube feeding and consider removal of the tube. Prior to recruitment, the patient's weight was 49.3kg (18.79kg/m²) and had been stable for 6 months using an energy-dense, polymeric feed. Her nutritional requirements for weight stability were estimated to be 1250kcal/day (based on regular monitoring) and 49g protein/day at 1g protein/kg/day. These requirements were met using ~500ml Nutrison Energy feed per day on average (750kcal and 30g protein) and a small oral intake.

RATIONALE AND USE OF PEPTISIP ENERGY HP

The patient had two nutritional goals: In the short-term, to gain weight back to a BMI within healthy limits, and in the long-term, to reduce feed volume and the need for her gastrostomy.

The patient was prescribed 200ml of Peptisip Energy HP (providing 300kcal, 15g protein) to be taken orally, together with the existing 500ml Nutrison Energy per day via her gastrostomy. It was the patient's wish to trial a new product via the oral route, with the aim that if a peptide-based product was better tolerated than past Oral Nutritional Supplements, both goals may be achievable. The additional

200ml/day was determined to be a realistic volume, and 300kcal an appropriate amount of energy to promote weight gain.

RESULTS & DISCUSSION

The patient completed the 28 day intervention trial, reporting 100% compliance with the Peptisip Energy HP prescription.

Nutrient intake (energy and protein) remained stable whilst taking Peptisip Energy HP according to the patient's dietary recalls.

A slight decline in weight was observed from 49.3kg at baseline to 47.6kg at the end of the intervention which requires monitoring, but may be due to naturally occurring fluctuations. However, tolerance to Peptisip Energy HP was rated highly by the patient, suggesting a switch to a peptide-based product may support her long-term aim to stop gastrostomy feeding and thus improve her quality of life.

SUMMARY

Tolerance to Peptisip Energy HP was good, and the product palatable, with the patient reporting the overall taste and smooth consistency of Peptisip Energy HP was much better than previous products. No adverse or serious adverse events were reported by the patient whilst taking Peptisip Energy HP.

In addition, the patient reported increased energy levels and an improvement in her general wellbeing whilst taking Peptisip Energy HP. At the trial's conclusion, the patient was aiming to increase her Peptisip Energy HP prescription in an effort to increase her oral intake, reduce feed volume, and meet her long-term goal of gastrostomy removal.

CASE STUDY 2

A 71-YEAR-OLD FEMALE WITH PANCREATICO-DUODENECTOMY

Provided by: Mary Phillips, Senior Specialist Dietitian (Hepato-Pancreatico-Biliary Surgery).
Royal Surrey County Hospital.

BACKGROUND

A 71-year-old female who had undergone a pylorus preserving pancreatico-duodenectomy 4 years previously for pre-malignant disease. Since then she has experienced significant abdominal discomfort and change in bowel habit. She had been investigated for coeliac disease, bile acid malabsorption and small intestinal bacterial overgrowth. These tests were negative, but investigations had revealed gastroparesis, with an extensive build-up of partially digested food visible at endoscopy and a dilated stomach on CT scan. She did not have diabetes. She lived with her partner and was independent of activities of daily living.

She was due to undergo a revision of her gastro-jejunostomy with distal gastrectomy. She was referred to the dietitian for pre-operative nutritional support.

Her weight was 63kg (BMI 22.9 kg/m²). Her weight was stable but she was unable to gain any weight. Her normal weight prior to her initial surgery was 79kg (20% weight loss over 4 years). She was persistently nauseated with severe reflux symptoms, and intermittently vomited. Initial oral intake was estimated at 280kcal, 14.5g protein (requirements 1890kcal; 94g protein).

RATIONALE AND USE OF PEPTISIP ENERGY HP

The dietetic aim was to optimise nutrition using a liquid diet to facilitate increased activity, and prevent any further weight loss in the build up to surgery. She was keen to avoid the insertion of a feeding tube, but the plan was in place that should she lose any further weight, she would be admitted for pre-operative naso-jejunal feeding.

The patient was only managing small volumes of liquid diet, and whilst this helped manage her nausea, she was struggling to take her pancreatic enzymes at appropriate times with these. She experienced erratic bowel habit with some loose pale stools and intermittent constipation. As it is not possible to accurately assess the absorption of the polymeric ONS, and given the limited time scale to surgery and the steady improvements needed, the decision to try a peptide ONS was made. She was weighed weekly and was making efforts to walk further and use the stairs several times per day.

RESULTS

After 3 weeks her oral intake had improved with the use of a blender (1432kcal, 48.1g protein), and the peptide ONS regime was reduced from 4 bottles to 2 bottles per day. After 6 weeks of peptide ONS the patient had maintained her weight (63kg and 22.9 kg/m²), and been able to increase her physical activity. Her bowel symptoms were well controlled, with no evidence of malabsorption and no constipation. She reported to be feeling stronger, and successfully underwent her surgery. She was fed via a naso-jejunal tube post operatively before being weaned back onto a soft diet with further use of peptide ONS until oral diet was adequate for this to be stopped.

SUMMARY

The use of a peptide ONS in this context facilitated the delivery of an energy and protein intake closer to her requirements, and whilst insufficient to achieve weight gain, they did facilitate increased physical activity as part of her improvement in fitness prior to surgery without the need for a naso-jejunal feeding tube.

Where rapid improvements are required in a short time period, such as in this case, the use of a peptide ONS may be considered to reduce the potential for malabsorption, which would slow down the rate of nutritional progress.

CASE STUDY 3

A 65-YEAR OLD MALE WITH HILAR CHOLANGIOCARCINOMA

Provided by: Emily Button, Specialist Dietitian (Hepato-Pancreatico-Biliary Surgery). Addenbrooke's Hospital, Cambridge University Hospitals NHS Trust.

BACKGROUND

A 65-year-old male was admitted with symptoms of obstructive jaundice which was later diagnosed as hilar cholangiocarcinoma (cancer of the bile duct). He underwent a percutaneous transhepatic cholangiogram (PTC) and biliary drainage. This helped to relieve his jaundice, but his high biliary losses (>1L per day) put him at risk of electrolyte imbalance and fat malabsorption. Bile reinfusion was therefore advised and after discussion and instructions on how to do this, he managed to drink some of his bile after each of his meals (reinfusing approximately 500mls in total per day).

The patient's baseline weight was 94.4kg and his BMI was 28.2kg/m². He had unintentionally lost 9.2% of his body weight over the previous 1-2 months prior to the trial. Reasons for weight loss included suppressed appetite, nausea, frequent fasting prior to procedures, as well as likely malabsorption. NG feeding with a 1.33kcal/ml peptide based feed was initially trialled alongside bile reinfusion but he complained of bloating and biliary reflux. NJ feeding was better tolerated but when this tube accidentally came out after only a couple of days, the patient refused having another tube placed as he did not like having a tube in his nose. At this time however, his tolerance of oral intake was improving and he was now managing 3 small meals per day. This meant that we could aim towards meeting his nutritional requirements orally with the addition of oral nutritional supplements. Prior to the patient recruiting onto the trial, he was commenced on Fortijuice; each 200ml bottle providing 300kcal, 7.8g protein, but nil fat which was significant given his high biliary losses.

At the time of recruitment to the trial, the patient was an inpatient awaiting further investigations to help determine his surgical pathway.

RATIONALE AND USE OF PEPTISIP ENERGY HP

The goal was to optimise the patient's nutritional intake and ensure he could digest and absorb this nutrition adequately, in order to prevent further nutritional losses. Whilst bile reinfusion helped him eat more freely and optimise his fat digestion, he still had significant biliary losses (approximately 500ml per day which was not reinfused). Although he tolerated Fortijuice with no issues, it felt worthwhile to swap to Peptisip Energy HP which contains almost double the protein content of Fortijuice (15g versus 7.8g). Although it is not fat free, 60% of the fat is in the form of MCTs which do not require bile salts for their absorption. Additionally, Peptisip Energy HP is nutritionally complete in vitamins and

minerals compared to Fortijuice which is not. The patient was initially prescribed 1x200ml of Peptisip Energy HP to be taken orally (providing 300kcal/day and 15g protein/day).

RESULTS

Over the 28 day trial period, the patient increased his intake of Peptisip Energy HP from 1 bottle (200ml) to 3 bottles (600ml) per day, as he tolerated it very well. He also found it mixed well with and improved the palatability of his bile which he needed to drink. Overall, the patient's tolerance and compliance to Peptisip Energy HP was reported as excellent.

The table below shows how his nutritional intake improved over the trial period and how Peptisip Energy HP helped him to meet his energy and protein requirements.

	Requirement	Baseline intake	Endpoint intake
Energy (kcal/day)	2290	1473	2337 (38.5% energy from Peptisip Energy HP)
Protein (g/day)	95-114	52	116 (38.7% protein from Peptisip Energy HP)

The patient's weight dropped slightly compared to baseline but from day 7-28 of taking Peptisip Energy HP, his weight started to stabilise. This was the first time his weight had plateaued following his previous significant and rapid weight loss.

After further investigations, the patient was sadly no longer on a surgical pathway. His PTC drain was internalised (a stent was placed) and he was discharged home for follow up with the oncologists for consideration of chemotherapy.

SUMMARY

The patient presented with significant weight loss and was at risk of further nutritional losses in view of his suboptimal intake and high biliary losses. Optimising the patient's nutritional intake with Peptisip Energy HP, alongside bile reinfusion, helped to stabilise his weight. He tolerated Peptisip Energy HP very well and stated that he preferred it to other oral nutritional supplements he had tried previously.

CASE STUDY 4

A 37-YEAR OLD FEMALE WITH GASTROPARESIS

Provided by: Lisa Green, Clinical Lead Community Dietitian. Calderdale & Huddersfield NHS Trust.

BACKGROUND

A 37-year-old female was recruited in the community following successful trial on a peptide based enteral feed. She was diagnosed with gastroparesis in 2014, and since 2015 she has been enterally fed via jejunal tube. At diagnosis in 2014 her weight was 47kg and her BMI was 17.1kg/m². Prior to joining the trial her weight had been stable for 6 months at around 68kg and her BMI was within the healthy range of 24.6kg/m².

Her nutritional requirements at the time of recruitment was: 2100kcal/day and 70g protein/day. The patient was eating little and often due to symptoms associated with gastroparesis. Prescribed at baseline was a low volume oral nutritional supplement - (Fortisip Compact 2 x 125ml - 600kcal/day, 24g protein/day) which was fed enterally via a jejunal feeding tube with Nutrison Peptisorb plus HEHP (500ml, 750kcal/day, 37.5g protein/day). The patient reported good tolerance and compliance with the current feeding regimen.

RATIONALE AND USE OF PEPTISIP ENERGY HP

The patient had responded well to a peptide-based, high energy enteral feed. As a result of this her symptoms of bloating and nausea reduced, and she was eating and enjoying more food orally. This has had a positive impact psychologically and her nutritional status improved.

Several infections at the jejunal stoma site and the tube falling out led to a stressful experience in A&E. Also, the patient suffered psychologically with foul smelling infected discharge from the stoma site. As a result of this we agreed to trial stopping enteral feeding (to rest the stoma site) with the option to supplement food intake with the oral version of Nutrison Peptisorb plus HEHP. The patient was prescribed 2 x 200ml bottles of Peptisip Energy HP per day to supplement oral intake.

DIETETIC GOAL WHILE ON TRIAL

The dietetic goal whilst on the trial was to maintain weight and improve wellbeing on a full oral diet and supplement.

RESULTS

The body weight at the endpoint was 69kg and BMI was 24.7 kg/m². This represented a slight increase in weight and the patient also reported that they felt their weight was unchanged.

From a dietetic perspective, tolerance was reported to be very good and compliance good. The patient managed 2x200ml bottle per day.

	Requirement	Baseline intake	Endpoint intake
Energy (kcal/day)	2100	1540	1626
Protein (g/day)	70	73.7	76

In total the patient completed 28 days on the trial and compliance to Peptisip Energy HP was 88%.

The patient reported that symptoms of constipation and nausea improved. Additionally, there were no adverse events recorded while taking Peptisip Energy HP.

Patient reported that Peptisip Energy HP improved appetite and reduced symptoms allowing the patient to have more food orally.

SUMMARY

The dietetic goal was achieved. As a result of improved oral intake, improved symptoms and nutritional status, patient had the jejunal tube removed permanently. This was an outcome we were never expecting, and the patients' quality of life improved exponentially.

The patient tolerated Peptisip Energy HP well, and wanted to continue taking Peptisip Energy HP. She reported that her GI symptoms got better or stayed the same. She liked the taste of the ONS and reported that she seemed to tolerate it well as it enabled her to have more oral intake/ has improved her appetite. The patient's main feedback was that more flavours would be good to have.

PART OF THE HIGH ENERGY, HIGH PROTEIN RANGE OF PEPTIDE-BASED FEEDS FROM NUTRICIA

Offering support to GI patients throughout the whole recovery process.






PRESCRIBING ORDER CODES

Flavour	Case Size	Homeward Code	Community Code	Hospital Code
Café Latte	24 x 200ml	161910	4190708	PEP271L

Alternatively, order a free sample direct to you or your patient.*

NUTRICIA SAMPLING SERVICE

Each sample pack includes information for your patients to help them understand why they need the product and how best to take it.

-  **Wide range of products** available for you to order
-  **Free and fast delivery**
-  **Delivery direct to patients' homes** for ease and convenience
-  **Patient support materials** available in the packs

Place your sample order* today by visiting www.nutricia.co.uk/sampling-service or by scanning the QR code.



	Peptisip Energy HP 200ml ready-to-drink ONS	Nutrison Peptisorb Plus HEHP 500ml/1000ml ready-to-use tube feed
High energy: 1.5kcal/ml	✓	✓
High protein: 7.5g/100ml	✓	✓
100% whey protein	✓	✓
60% readily absorbed MCT fats	✓	✓
Semi-elemental feed	✓	✓
Nutritionally complete	✓	✓

This table shows selective product information. Please refer to the product data cards for full details.

*Product can be provided to patients upon the request of a healthcare professional. They are intended for the purpose of professional evaluation only.

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

Nutricia Ltd, White Horse Business Park, Trowbridge, Wiltshire, BA14 0XQ.

SCC4119-10/22



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