CLINICAL NUTRITION UPDATE

From **Fresenius Kabi**

In this Issue:

Parenteral Nutrition (PN) Enteral Nutrition (EN) Education

Volume 8 October 2023

This newsletter is intended for health professionals in Southern Ireland only.
If you would rather not receive this regular newsletter from Fresenius Kabi please let your local hospital representative know.

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October Edition

Welcome to the eighth edition of the Fresenius Kabi Clinical Nutrition Update.

Hard to believe it's October already. Hope everyone enjoyed the summer despite all the rain! This newsletter edition will provide service updates on both enteral and parenteral nutrition.

Specific product information may be included to keep you informed of any important product changes or updates.

We would welcome your feedback regarding what you would like to see included so that we can ensure you get the most out of this communication and it remains relevant to you and your teams.

Please address feedback to: **richard.woodside@fresenius-kabi.com**

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Introducing

Megan Purvis
Day in a life as a student in FK

My name is Megan Purvis, and I am a third-year Human Nutrition student from Ulster University Coleraine, currently on placement with Fresenius Kabi. I started my placement year with Fresenius Kabi in August 2022.

I am the Parenteral Nutrition Sales and Marketing Assistant, and my main role is placing the TPN orders for hospitals. My day to day in the Fresenius Kabi office is usually very busy and every day is different, dealing with different queries and taking on different tasks. I have been a part of different projects within the business, my favourite being carrying out the Home Parenteral Nutrition Patient Survey and compiling the results of this to see what we do well and areas for improvement. I have also been involved in creating and compiling the newsletters as well as other marketing projects.

In addition to helping to organise and attend the Fundamentals in Artificial Nutrition event in April, I have also been involved in the organisation of some of the other Fresenius Kabi events this year, including the Oncology Helpline and Gastroenterology webinars, and the Home Artificial Nutrition event (September 2023).

Part of my role is managing the logistics for HCPs attending different conferences and events organised or sponsored by Fresenius Kabi which gives me the opportunity to meet lots of different people. I have gained great experience during my time at Fresenius Kabi which has grown my interest in clinical nutrition, and I have also developed skills which I will carry into my future.

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Introducing

Point of Care pharmacy

Point of Care (an external pharmacy) have worked in partnership with Fresenius Kabi over the last few years to dispense all patients' HPN bags. They fulfil the final steps before the compounded parenteral nutrition and prescribed items reach the patient.

They are also responsible for:

Legal assessment of prescriptions: Ensuring the prescription contains all legal requirements, as per PSI (Pharmaceutical Society of Ireland) legislation, including, Rx in date, signed with wet ink and dated by the prescriber, full patient details etc.

Clinical assessment of prescriptions: Reviewing formulation changes versus previous prescription, monitoring prescribed medications adverse drug reactions reporting, whilst updating and maintaining the patient medication records with clinically relevant details.

Interventions and problem solving: Sourcing alternative medications amid medication shortages. Requesting new prescriptions as required. Querying changes to formulations where appropriate with prescribers and formulation pharmacists when discrepancies arise.

Dispensing and Accuracy check of all bags dispensed: Labelling, assembling and checking contents of PN bags and all items prescribed with a valid Rx.

Patient Counselling: A point of contact for patients should they require information about their medications. The pharmacist will support the patient with their knowledge to empower the patient to make informed decisions about their own healthcare needs, and signpost/refer where necessary.

Record keeping: Record all medicines received as per legislation set out by the PSI. Record batch number and expiry date of all bags received by patients. Maintain copy of all prescriptions for 2 years on site after dispensing and record all interventions on the patient medication record.

EPOD Electronic proof of delivery: Maintain records of delivery to all patients.

Disposal of unused medicines: Unused medicines are returned to the pharmacy for destruction.

Clinical Governance: Reporting to Fresenius Kabi regarding medication shortages, patient specific queries, errors, adverse events, recall procedures in addition to any relevant information.

When to call us:-

1. Prescription validity and legal queries
2. Information on stock availability
3. Information on records of products dispensed to patients by POC pharmacy
4. Correspondence relating to errors

Tel: 01-4689853
Email: pointofcare@healthmail.ie
Opening hours: 09:00-18:00 Monday to Friday closed on bank holidays

Caroline Crowley MPSI
Superintendent Pharmacist

John Walsh
Support pharmacist

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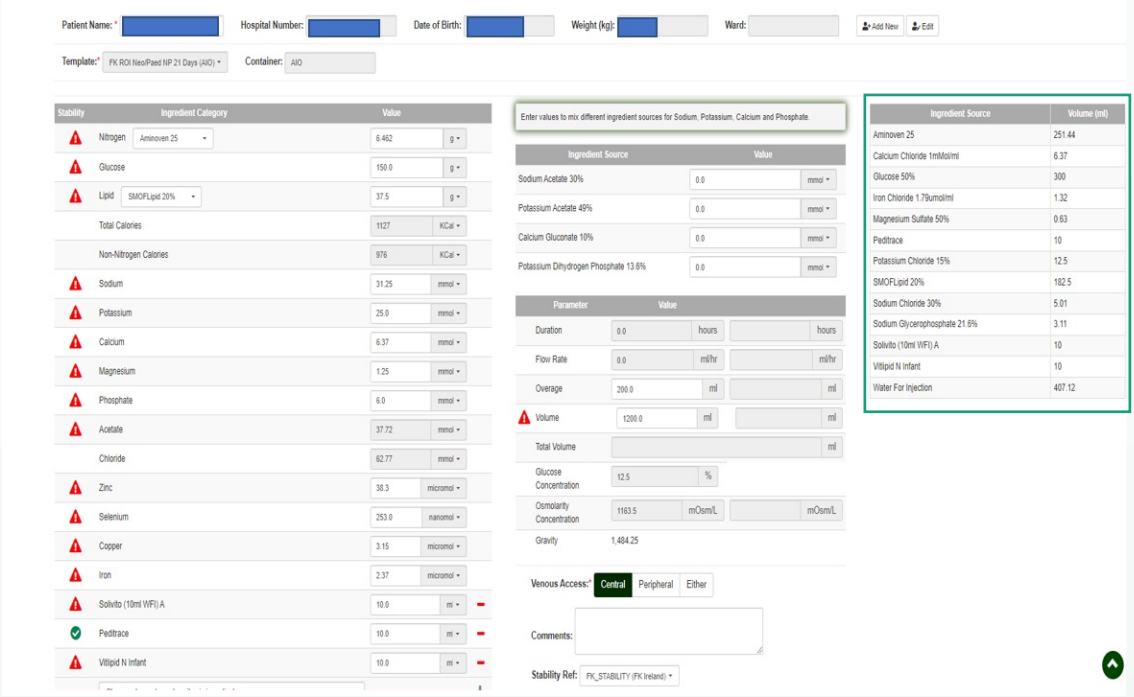
JPN Formulation paperwork

The box highlighted in green indicates where the information on the stability statement can be found



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Fresenius Kabi Home Parenteral Nutrition

Survey Results

As part of our ongoing commitment to delivering a Homecare service that gives patients the confidence, support and reassurance they need to live with parenteral nutrition at home, we recently ran a survey with our patients to discover how well we are meeting those needs.[1] We asked 61 patients receiving HPN in the Republic of Ireland (ROI) to take part, and 19 responded. The results below summarise the responses of these 19 patients; note not all 19 patients responded to every question.

Patient service

Percentage of surveyed patients who are **satisfied** or **extremely satisfied** with

- Handling complaints or concerns — 97%
- Holiday service — 91%
- The way services are arranged — 100%
- How information is communicated — 100%
- Ease of contacting Homecare Co-ordinators — 93%
- Helpfulness and courtesy of Homecare Co-ordinators — 100%
- Answering queries and sorting out problems — 94%
- Out of hours 24-hour help line — 83%

Delivery service

Percentage of surveyed patients who are **extremely satisfied** with:

- 100% Punctuality of deliveries
- 78% Accuracy of supplies delivered
- 100% Helpfulness and courtesy of delivery driver
- 79% Collection of waste or unused equipment
- 83% Frequency of ancillary delivery
- 73% Ancillary items' quality and ease of use
- 89% Pumps' ease of use
- 76% Reliability of pumps
- 94% **Overall quality of the delivery service**

Key: Up on last year; Down on last year

Nursing service

100% of our surveyed patients are **extremely satisfied** with:

- Training received
- Confidence and quality of support and advice
- Quality of nursing and clinical services
- Professionalism of our nursing team

23% of patients surveyed have **never been** admitted with a line infection. This is down from 57% in 2021

100% of our surveyed patients say their lives have been improved by the Fresenius Kabi Homecare service.

94% of our homecare patients surveyed are **satisfied** or **extremely satisfied** with our service.

24-hour helpline

Percentage of surveyed patients who are **extremely satisfied** with:

- 64% Helpfulness and courtesy of the helpline
- 80% Ability to answer queries and sort problems
- 67% Handling of complaints or concerns
- 65% **Overall quality of the helpline**

Key: Up on last year; Down on last year

***Professional, helpful, accessible and wonderful service** to enable us to live well despite TPN.*

100% of the surveyed patients and the carers would be extremely likely to recommend Homecare to a friend or family member.

*Fresenius Kabi have helped instil **confidence in my ability to do what I do as a carer from home.** The staff we deal with are kind and courteous in what can be a daunting time.*

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We asked, We listened, *We changed*

Below outlines a number of changes Fresenius Kabi plan to implement over the coming weeks/months

A newsletter will be circulated to patients and their carers **every 4-6 weeks** to provide service updates.

A pictorial ancillary guide will be circulated to help ensure the **right product is being ordered.**

New internal process will be implemented to ensure queries are **answered in a more efficient and effective manner.**

The possibility of introducing more **routine nursing reviews** is currently being assessed

Internal training to be completed with the staff covering the **24 helpline** to ensure queries are dealt with in a more efficient and effective manner.

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Date of preparation: July 2023, IE-HPN-2300012 1. Fresenius Kabi Limited. Data on file. July 2023.

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First patient newsletter

We have asked, listened, and actioned

One of the first changes, on the back of the patient survey, is to provide service updates in a timely manner.

A patient newsletter has been designed to capture any changes to the existing service in one place. The aim is to circulate every 4-6 weeks.

(See page 9) A copy of the first edition which was circulated to patients in mid-July.

Fresenius Kabi Home Parenteral Nutrition

Patient Newsletter

July 2023

Welcome to the first Home Parenteral Nutrition (HPN) patient newsletter. This newsletter is intended for those who receive their parenteral nutrition in the home (home parenteral nutrition, HPN) from Fresenius Kabi. The aim is to provide regular updates on Fresenius Kabi's HPN service. We will be setting up an email version in due course.

Please note if you have specific queries relating to your parenteral nutrition then please contact our homecare team or speak to your hospital team. This newsletter does not constitute medical advice.

Homecare Service Survey

Many thanks to all of those who took the time to the complete the survey. Your feedback is important in helping us to shape the service to meet patients' needs in the future. For those who have not yet completed the survey, there is still time. Please hand back your completed surveys to your driver when he arrives with your next HPN delivery.

Ancillaries

To ensure you receive the correct ancillaries as part of your order, please see attached an ancillary picture glossary which shows each item in picture format along with its correct title and product code. We encourage you to use this glossary when placing your order as this will help ensure you receive the correct product. In addition, please only select the items that have been chosen by your hospital to use.

From the week commencing Monday 10th July, ancillary orders must be placed by 5pm on Wednesday 12th July, for delivery with your PN bags the following week. For example, the order must be placed by 5pm on Wednesday 12th July, for delivery on the 19th, 20th or 21st July depending on your delivery day. Any orders received after this cut off will only be processed and sent to you for delivery the week after.

Holiday Service - *It's that time of year again...*

To help ensure we can provide support we request that you notify us of your travels at least 6 weeks in advance.
To maintain the stability of the bags, PN where all the ingredients are mixed together bags must be stored between 2°C-8°C in active cold chain environment (refrigerator). Failure to maintain these storage conditions will result in the bags being unfit for use.

Therefore, the following should be considered:

- Liaise with your dietitian to check if a PN bag with more than one chamber is a suitable alternative. These bags only need to be refrigerated once mixed together..
- How many days your PN bag has stability for, as this could impact on what days you need to travel.
- Does your accommodation have suitable refrigeration? Fresenius Kabi are unable to supply a fridge to a holiday destination.

Within Ireland & the UK, Fresenius Kabi can organise for the PN bags to be delivered to your destination. However, somebody must be available to accept the bags at the agreed time. You will need to provide the contact details of this person and authorisation that you allow these bags to be received on your behalf if you are not there.

For holidays within the EU all PN bags will be delivered to your house along with polystyrene boxes and ice bricks. Fresenius Kabi can provide a letter to the airline outlining why extra storage is required and instructions on how to pack the box with your bags. Fresenius Kabi are not able to transport the HPN bags abroad on your behalf.

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New Centralised Mailbox

TPN Hospital Stock Bag Orders and Queries Centralised Mailbox

We have recently set up a new centralised email address for TPN stock bag orders and queries. We have created this to ensure that there is one central point of contact for all communication regarding our service to you.

To further ensure that all emails are answered in a timely manner and are not missed if your personal contact is absent we will be using the following shared email address going forward: **Ireland-Hospital.TPN-Orders@fresenius-kabi.com**

Please note the fax number will no longer be in effect for ordering but you can still order through the office on the phone number 01 841 3030.

Please do not hesitate to contact us on the above email or phone number if you have any queries regarding this.

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SMOFlipid®

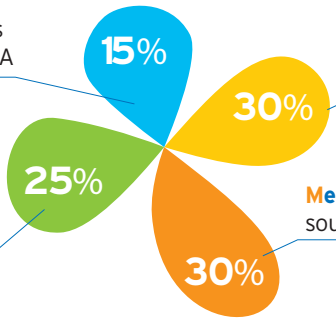
Soya-bean oil, medium-chain triglycerides, olive oil and fish oil[1]

For the supply of energy and essential fatty acids and omega-3 fatty acids to patients, as part of a parenteral nutrition regimen, when oral or enteral nutrition is impossible, insufficient or contra-indicated.

The links to clinically relevant outcomes[2]

Fish oil
provides ω3-fatty acids especially EPA and DHA

Soybean oil
covering essential fatty acid requirements



Olive oil
supply of monosaturated fatty acids

Medium-chain triglycerides (MCT)
source of rapidly available energy

+ additional vitamin E (approx. 200 mg α-tocopherol/L) to counteract lipid peroxidation and oxidative stress[1]

SMOFlipid – a 4-oil mix that provides energy and essential fatty acids, with a profile designed to support recovery.[1] No other lipid emulsion brand has the same 4-oil mix and fatty acid profile as SMOFlipid.[3]

SMOFlipid® – a mix that works

A meta-analysis in adult patients showed that parenteral nutrition containing omega-3 fatty acids demonstrated clinically relevant effects compared to standard† parenteral nutrition.[2*]

30-day mortality rate
(83 vs 101 events; RR 0.84, 95% CI 0.65–1.07; p=NS) - Co-primary endpoint

Shorter length of ICU stay
(Mean stay length reduced by 1.95 days, 95% CI 0.42–3.49; p=0.01)

40% lower risk of infection
(131 vs 215 events; RR 0.60, 95% CI 0.49–0.72; p<0.00001) - Co-primary endpoint

Shorter length of hospital stay
(Mean stay length reduced by 2.14 days, 95% CI 1.36–2.93; p<0.00001)

56% lower sepsis rate
(24 vs 54 events; RR 0.44, 95% CI 0.28–0.70; p=0.0004)

∗ Systematic review and meta-analysis of 49 randomised, controlled trials (3641 ICU or surgical patients. For the outcomes of: infection rate, 24 studies, n=2154, ARR = 8%; 30-day mortality, 20 studies, n=1839, ARR = 2%; sepsis, 9 studies, n=1141, ARR = 6%; LOHS, 26 studies, n-2182; ICU stay, 10 studies, n=822).[2]
† non-ω-3 fatty acid enriched.
ARR, absolute risk reduction; CI, confidence interval; ICU, intensive care unit; NS, not significant; PN, parenteral nutrition; RR, relative risk.

PRESCRIBING INFORMATION – SMOFlipid 200mg/ml emulsion for infusion. Consult the Summary of Product Characteristics for full information. Additional information is available on request. **Active ingredients**: 1000ml contains: Soya-bean oil (refined) 60g, Medium-chain triglycerides 60g, Olive oil (refined) 50g, Fish oil (rich in omega-3-acids) 30g. 1000ml emulsion contains up to 5 mmol sodium. **Indications:** Supply of energy and essential fatty acids and omega-3 fatty acids to patients, as part of a parenteral nutrition regimen, when oral or enteral nutrition is impossible, insufficient or contraindicated. **Dosage and administration:** Intravenous infusion into a peripheral or central vein. The dosage and infusion rate should be governed by the patient's ability to eliminate fat. Adults – standard dose is 1.0–2.0g fat/kg body weight (bw)/day (5–10 ml/kg bw/day). Recommended infusion rate is 0.125g fat/kg bw/hour and should not exceed 0.15g fat/kg bw/hour, corresponding to 0.75ml SMOFlipid/kg bw/hour. Children – infusion rate should not exceed 0.15g fat/kg bw/hour. Increase daily dose gradually over the first week of administration. The maximum recommended daily dose is 3g fat/kg bw/day, corresponding to 15ml SMOFlipid/kg bw/day. Neonates and infants – initial dose should be 0.5–1.0g fat/kg bw/day followed by a successive increase of 0.5–1.0g fat/kg/bw/day up to 3.0g fat/kg bw/day (corresponding to 15ml SMOFlipid/kg bw/day). The infusion rate should not exceed 0.125g fat/kg bw/hour. In premature and low birthweight neonates, infuse SMOFlipid continuously over about 24 hours. Administer as part of a complete parenteral nutrition treatment including amino acids and glucose. When used in neonates and children below 2 years, the solution (in bags and administration sets) should be protected from light exposure until administration is completed. **Contraindications:** Hypersensitivity to fish-, egg-, soya- or peanut protein, or to any of the active substances or excipients, severe hyperlipidaemia, severe liver insufficiency, severe blood coagulation disorders, severe renal insufficiency without access to hemofiltration or dialysis, acute shock, general contraindications to infusion therapy, unstable conditions (see SmPC). **Special warnings and precautions for use:** Monitor individual's capacity to eliminate fat. Dose reduction or cessation of infusion should be considered if serum or plasma triglyceride concentrations during or after infusion exceed 3mmol/L. Use with caution in conditions of impaired lipid metabolism, in patients with marked risk for hyperlipidemia, in neonates and premature neonates with hyperbilirubinemia and/or pulmonary hypertension. Light exposure of solutions for intravenous parenteral nutrition, especially after admixture with trace elements and/or vitamins, may have adverse effects on clinical outcome in neonates, due to generation of peroxides and other degradation products. Contains soya-bean oil, fish oil and egg phospholipids which may rarely cause allergic reactions. Cross allergic reaction has been seen between soya-bean and peanut. Administration of medium-chain fatty acids alone can result in metabolic acidosis; simultaneous infusion of carbohydrate or a carbohydrate-containing amino acid solution is recommended. Laboratory tests generally associated with monitoring of intravenous nutrition should be checked regularly. Monitor blood platelet counts, liver function tests and serum triglycerides in neonates. Any sign or symptom of anaphylactic reaction should lead to immediate interruption of the infusion. High plasma lipid levels may interfere with some laboratory blood tests. **Undesirable effects:** Common – slight increase in body temperature. Uncommon – lack of appetite, nausea, vomiting, chills. Rare – hypotension, hypertension, dyspnoea, hypersensitivity reactions, heat or cold sensation, paleness, cyanosis, pain in the neck, back, bones, chest and loins. Very rare – priapism. Other adverse reactions can occur (including fat overload syndrome; should signs occur discontinue SMOFlipid), see SmPC for details. **Legal Category**: POM. **Marketing Authorisation Number**: UK – PL 08828/0166. IE – PA 2059/062/001 (Glass bottle), PA 2059/062/002 (Excel bag) **Marketing Authorisation Holder:** UK – Fresenius Kabi Limited, Cestrian Court, Eastgate Way, Manor Park, Runcorn, Cheshire WA7 1NT, UK. IE – Fresenius Kabi Deutschland GmbH, Else-Kroener Strasse 1, Bad Homburg v.d.h. 61352, Germany. **Package Size and Cost:** UK: 100ml £7.44, 250ml £11.90, 500ml – £17.43. **Further information:** Available from Fresenius Kabi Limited, Cestrian Court, Eastgate Way, Manor Park, Runcorn, Cheshire, WA7 1NT. Tel +44 (0)1928 533 533. **Date of preparation:** October 2020 API/SMOF-01

References:
1. SMOFlipid 200mg/ml emulsion for infusion Summary of Product Characteristics.
2. Pradelli L, Mayer K, Klek S, et al. J Parenter Enteral Nutr. 2020 Jan; 44(1):44-57. doi:10/1002/jpen.1672
3. Anez-Bustillos L, et al. Review: Lipid formulations for the adult and pediatric patient: Understanding the differences. Nutrition in Clinical Practice. 2016;31(5):596-609.

Fresenius Kabi Limited. Fresenius Kabi Ireland. Unit 3B Fingal Bay Business Park, Balbriggan, Co. Dublin, Ireland. Phone: +353 (0)1 841 3030 Email: enquiries.Ireland@fresenius-kabi.com

Adverse events should be reported. Reporting forms and information can be found at: **yellowcard.mhra.gov.uk www.hpra.ie/homepage/about-us/report-an-issue**
Adverse events should also be reported to Fresenius Kabi Limited, Cestrian Court, Eastgate Way, Manor Park, Runcorn, Cheshire, WA7 1NT Tel +44 (0)1928 533 533

Product Discontinuations

For information only- product discontinuations

Due to a significant decrease in demand both Dipeptiven and Aminoven 25% will be discontinued and no longer available to order from August 2023

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Collagen Hydrolysates In Sarcopenia

Sarcopenia is a muscle disease rooted in adverse muscle changes that accrue across a lifetime and is defined by low levels of measure for three parameters: muscle strength; muscle quantity/quality and physical performance as an indicator of severity.[1]

A US study in 1998 demonstrated that approximately 30% of individuals over 70 and over 50% of those over 80 years of age had sarcopenia[2].

Management of Sarcopenia

The Nutritional Recommendations for the Management of Sarcopenia published by the Society for Sarcopenia, Cachexia, and Wasting Disease state that exercise (both resistance and aerobic) in combination with adequate protein and energy intake, is the key component of the prevention and management of sarcopenia[3]. Additionally, low vitamin D levels require vitamin D replacement.[3]

Some patients may have a poor appetite and be unable to meet their protein, calorie and vitamin D requirements with food alone. Oral nutritional supplements (ONS) can help ensure these requirements are met. High protein ONS have been found to have a number of functional benefits to patients including improvements in strength and quality of life.[4]

A 2009 study conducted in older persons has shown that a minimum effective dose to stimulate muscle protein synthesis occurs with bolus intake of 20g of protein and a maximum of approximately 30g of protein.[5]

Collagen Hydrolysates in Sarcopenia

Not only are high protein oral nutritional supplements beneficial to certain patients[4] but the type of protein used may also have an influence on body composition. 53 sarcopenic (class I and II) males with an average age of 72 participated in a randomised controlled trial[6], using a collagen peptide (hydrolysate) supplement in combination with resistance training to determine if a collagen peptide was effective in improving muscle strength and fat free mass.

During the 12 week study all participants completed a resistance exercise program three times per week in addition to their normal food intake. One group was supplemented daily with 15g collagen hydrolysate and the other group with a placebo. The study demonstrated that supplementation with a collagen peptide further increased the benefits of resistance training in elderly people affected by muscle loss. The collagen peptide group showed a statistically significantly higher increase in fat free mass (Figure 1) and functional muscle strength (Figure 2) compared to placebo.[6]

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Collagen Hydrolysates In Sarcopenia

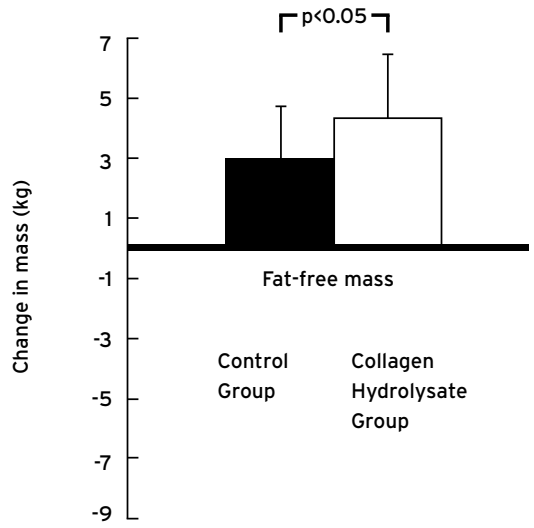

Figure 1: Fat free mass improvement using collagen peptide.

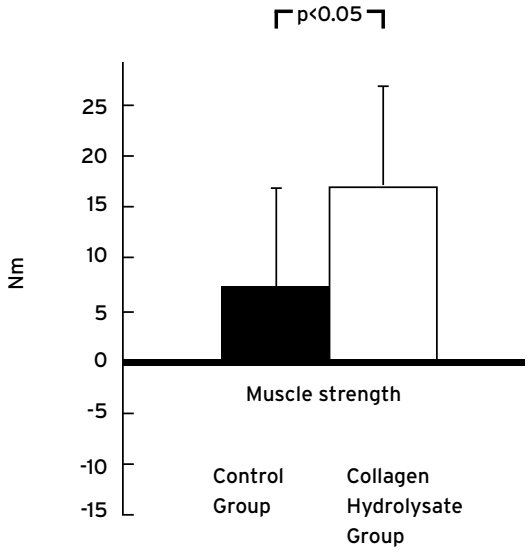

Figure 2: Muscle strength improvement using collagen peptide.

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Collagen Hydrolysates In Sarcopenia

The conclusion from this study is that collagen peptide supplementation, in combination with resistance training, improves body composition by increasing fat free mass and muscle strength, compared to placebo in elderly patients with sarcopenia classes I and II.[6]

A small study by Hays et al (2009)[7] compared taking a collagen supplement to provide approximately 50% of total protein requirements (based on 0.8g protein per kg of body weight) to the same amount of protein from a whey protein source, in elderly women.

The collagen hydrolysate group demonstrated a positive effect on nitrogen balance and preservation of lean body mass compared with whey protein group. The effect may be a consequence of the high proportion of readily available amino acids that have a low molecular weight in collagen peptides than that of whey on a gram-per-gram basis. It may also be due to the high proportion of nitrogen in collagen hydrolysate. Of note is that the participants' weight was maintained in the collagen hydrolysate group, whereas in the whey group, body weight decreased which would be a disadvantage to the malnourished sarcopenic patient group.[7]

For those sarcopenic patients who cannot meet their nutritional requirements from food alone, Fresubin® 3.2 kcal Drink is a high protein ONS providing 20g protein in 1 x 125ml bottle from a unique protein combination of collagen hydrolysate and milk protein. When combined with exercise, it could possibly lead to improvements in muscle strength and fat free mass in sarcopenic patients.

1. Cruz-Jentoft AJ, Bahat G, Bauer J, Boirie Y, Bruyère O, Cederholm T, Cooper C, Landi F, Rolland Y, Sayer AA, Schneider SM, Sieber CC, Topinkova E, Vandewoude M, Visser M, Zamboni M; Writing Group for the European Working Group on Sarcopenia in Older People 2 (EWGSOP2), and the Extended Group for EWGSOP2. Sarcopenia: revised European consensus on definition and diagnosis. Age Ageing. 2019 Jan 1;48(1):16-31.
2. Baumgartner RN, Koehler KM, Gallagher D, Romero L, Heymsfield SB, Ross RR, Garry PJ, Lindeman RD. Epidemiology of sarcopenia among the elderly in New Mexico. AM J Epidemiol. 1998, 147:755-763
3. Morley JE, Argiles JM, Evans WJ, Bhasin S, Cella D, Deutz NE, et al. Nutritional recommendations for the management of sarcopenia. J Am Med Dir Assoc. 2010;11(6):391-6.
4. Cawood AL, Elia M, Stratton RJ. Systematic review and meta-analysis of the effects of high protein oral nutritional supplements. Ageing Res Rev. 2012 Apr;11(2):278-96.
5. Paddon-Jones D, Rasmussen BB. Dietary protein recommendations and the prevention of sarcopenia. Current opinion in clinical nutrition and metabolic care. 2009;12(1):86-90.
6. Zdzieblik D, Oesser S, Baumstark MW, Gollhofer A, Konig D. Collagen peptide supplementation in combination with resistance training improves body composition and increases muscle strength in elderly sarcopenic men: a randomised controlled trial. Br J Nutr. 2015;114(8):1237-45.
7. Hays NP, Kim H, Wells AM, Kajkenova O, Evans WJ. Effects of whey and fortified collagen hydrolysate protein supplements on nitrogen balance and body composition in older women. J Am Diet Assoc. 2009;109(6):1082-7.

IE-Fre3.2-2300007 | July 2023

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Fresubin® 3.2 kcal Drink is the only high protein ONS* to contain a collagen hydrolysate protein blend

20 g of protein per 125 ml

3.2 kcal/ml – high energy density

No additional PCRS approval needed

Low volume – 125 ml

Contains a full range of micronutrients including zinc and vitamin D. Also contains arginine

Compliance level: 94% and 96% of prescribed volume[1]

Can be taken as a shot – 3 x 40 ml per day

*Oral nutritional supplement. Excludes high protein modular supplements and shots.

Reference:
1. Koch C et al. Journal of Nutritional Oncology. 2018; 3(3): 120-129.

IE-Fre3.2-2300010 | ROI July 2023

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UNITED for clinical nutrition
by Fresenius Kabi

United For Clinical Nutrition EuroPN Survey[1,2]:

Characterising the current use of medical nutrition and its impact on clinical outcomes

The EuroPN study was instigated, sponsored, funded, and logistically supported by Fresenius Kabi. Fresenius Kabi had no influence over the data collection and/or its interpretation.

Study Design†

The largest known data collection initiative in the field of medical nutrition therapy in critically ill adults[1]

This prospective, observational cohort study represents the largest known data collection initiative for gathering real world evidence about medical nutrition and its association with the clinical outcomes of critically ill adult patients with an ICU LOS ≥5 days[1,2].

11
European countries

77
Intensive care units

1172
Patients analysed

†Critically ill adults with a BMI of ≥18.5 and ≤45kg/m², median APACHE II 18.5, median SOFA 7.0, number of patients on IMV between days 1-3 of ICU admission was 813. Primary outcome - median calorie and protein balances as a percentage deviation from ESPEN targets until ICU discharge, death or maximum day 15 of ICU stay. Intakes calculated from all nutritional sources. Associations modelled between three categories of daily calorie and protein intake (low: <10kcal/kg, <0.8g/kg; moderate: 10-20kcal/kg, 0.8-1.2g/kg; high: >20kcal/kg, >1.2g/kg) and time-varying hazard ratios of 90-day mortality and successful weaning from IMV. Early nutrition: days 1-4 of ICU stay, late nutrition: days 5-15[2].

Results

Medical nutrition* therapy was progressively increased as suggested by the ESPEN ICU guideline**

Day 2

Median Start

Parenteral and/or Enteral Nutrition Therapy were started on median **day 2 after ICU admission**.

83%

Calorie Targets

Patients received on average **83% of calorie targets** suggested by ESPEN.

65%

Protein Targets

Patients received on average **65% of protein targets** suggested by ESPEN.

*Macronutrient intake from enteral and parenteral nutrition and non-nutritional sources were analysed.Intakes were calculated from 15 days of data, with imputations if patients were discharged from ICU prior to day 15

**Targets set as: progressive increase in calories until estimated daily energy expenditure 25kcal/kg; protein 0.6g/kg on day 1, 0.9g/kg days 2 and 3, and 1.3g/kg days 4-15.

Results of associations between nutritional intakes and clinical outcomes:

Survival: Daily calorie intake of 10-20kcal/kg was associated with longer survival time on day 19 compared to 'low' calorie intake (Min HR 0.15; 95% CI: 0.05;0.39)

Mechanical Ventilation: A daily caloric intake of 10-20kcal/kg irrespective of time was associated with shorter time on IMV on day 12 (maximum HR 4.59 [95% CI: 1.5;14.09]

Protein intake of 0.8-1.2g/kg on days 1-15 was associated with earlier weaning from IMV on day 12 than any 'low' intake period (Max HR 2.60; 95% CI: 1.09;6.23)

References

1. Hiesmayr M, Csomos A, Dams K, et al. Protocol for a prospective cohort study on the use of clinical nutrition and assessment of long term clinical and functional outcomes in critically ill adult patients. Clinical Nutrition ESPEN 2021; 43:104-110.
2. Matejovic, M, Huet, O, Dams, K, et al. Medical nutrition therapy and clinical outcomes in critically ill adults: a European multinational, prospective observational cohort study (EuroPN). Critical Care. 2022;26(143).

Abbreviations

ICU: Intensive care unit
LOS: Length of stay
ESPEN: European Society for Clinical Nutrition and Metabolism
APACHE II Score: Acute Physiology and Chronic Health Evaluation
SOFA: Sequential Organ Failure Assessment
IMV: Invasive Mechanical Ventilation
BMI: Body mass index
HR: Hazard Ratio

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Nutrition in Intensive Care Unit (ICU)

Nutrition in the ICU: ESPEN Workshop May 09-10, 2023 UZ Brussel (University Ziekenhuis Brussels)

On 9th to 10th May 2023, Alison Murray (Senior Critical Care Dietitian at Our Lady of Lourdes Hospital Drogheda) and Aideen O'Hagan (Dietitian at Antrim Area Hospital) attended the two day 'Nutrition in the ICU: ESPEN Workshop' in UZ (University Ziekenhuis) in Brussels and have summarised it below.

The ESPEN (European Society for Clinical Nutrition and Metabolism) conference in Brussels 2023 provided a unique "hands on" workshop on practical aspects of nutrition in the ICU

Over the course of the 2-day meeting there were exciting opportunities to experience firsthand the use of different technologies to assess nutritional status.

The workshop focused on having a more personalized approach to the delivery of nutritional care using different techniques including indirect calorimetry, CT/US scan and bioelectric impedance. Throughout the two days there were also interactive group discussions with the expert panel giving their views and advice about the implementation of more personalized nutritional care in ICU.

"To measure is to know" (Professor Dr. Elisabeth De Waele, Clinical Nutrition & ICU, UZ Brussels)

Indirect Calorimetry is the gold standard of measuring resting energy expenditure and on the first day of the conference Professor Dr. Elisabeth De Waele spoke about the benefits of using this method to provide a more personalised, tailored approach to the delivery of nutritional care. Equations fail to predict REE (Resting energy expenditure) in ICU unlike indirect calorimetry which enables precision feeding and a more guided energy delivery.

This method avoids over/under feeding and is associated with reduced short-term mortality and better outcomes. Professor Dr. Elisabeth De Waele recommended IC should be carried out on day 3 of ICU admission and once weekly.

There were practical sessions which allowed the delegates to practise using the various technologies. We had the opportunity to see Indirect Calorimetry being used in the ICU at the University Hospital, Brussels. This provided useful insights into the application and use of this technique. We also gained practical experience using a US scanner to measure muscle mass and bioelectric impedance to assess body composition.

Professor Singer highlighted the benefits of using nitrogen excretion as a tool to measure protein utilization. It has been shown that 2% muscle loss per day can occur in critically ill patients and inadequate protein provision is associated with poorer outcomes.

Professor Dr. Elisabeth De Waele spoke about the adequacy of feeding and encouraged clinicians to review the sufficiency of the nutritional therapy which is being provided to the ICU patient. Studies have shown that all over the world iatrogenic underfeeding of ventilated patients happens, and malnutrition will severely undermine treatment and outcome.

The closing sessions ended with interactive open discussions amongst the group which included clinicians and dietitians working in ICUs from around the world. We discussed our daily practice, challenges and how different units were implementing the ESPEN guidelines within their units. The 2-day workshop gave a unique opportunity to get hands on experience of using exciting, advanced technologies to provide precision nutrition aimed at helping improve the outcome of critically ill patients.

Fundamentals in Artificial Nutrition Event

On 19th April 2023 we held the Fresenius Kabi organised and funded Fundamentals in Artificial Nutrition event at The Spencer Hotel in Dublin. At this meeting we had a range of HCPs presenting and educating others based on their own knowledge and experience as well as discussing case studies.

Our first speaker was Aine Kelly who is a Clinical Specialist Dietitian at Tallaght University Hospital. Aine presented on the 'Key Considerations When Assessing a Patient'. During her talk, the following were discussed: nutrition disorders and nutrition related diseases, including malnutrition and undernutrition, sarcopenia and frailty, and micronutrient abnormalities. The session also provided useful information concerning the importance and scope (anthropometry, biochemistry, clinical and dietary factors) of a nutritional assessment, and the utility of an NFPA (Nutrition Focused Physical Assessment) during an assessment and when using this tool is particularly useful.

Patrice McNamara is a Clinical Specialist Dietitian at St James's Hospital, Dublin. Patrice McNamara's presentation was titled 'Key Considerations when Choosing a Feeding Route' and throughout the presentation the importance of reviewing the risks, benefits, and goals of nutrition support at regular intervals to ensure patient needs are met was highlighted. Another key topic was the use of oral, enteral, or parenteral nutrition support for those who are malnourished, whether a modality be used alone or in combination with another feeding route. Patrice also discussed the indications and contraindications for both parenteral and enteral nutrition as well as feeding tubes and parenteral nutrition access routes.

Sarah Jane Nelson is the Principal Dietitian and Clinical Team Lead for Nutritional Support/ Intestinal Failure at Belfast Health and Social Care Trust. Sarah Jane presented 'Biochemical Monitoring for Nutrition Support' and within this presentation she discussed electrolyte disturbances, sites for absorption of nutrients, composition of body secretions, hydration status, cause and management of sodium disturbances, and micronutrients. The take home message was that frequent and effective monitoring is very important in reducing patient complications.

Pete Turner, who is the Clinical Lead Dietitian at Ulster Hospital, posed the question 'Is Refeeding Still a Consideration?'. During this presentation, Pete discussed the pathophysiology of refeeding, the likelihood of serious complications, appropriate fluid and electrolyte provision and patient monitoring. The presentation was concluded with the notion that even though serious complications are extremely rare, preventing and managing refeeding syndrome are still extremely important for HCPs.

Alan Wilson is a Clinical Pharmacist for the Belfast Trust and presented on 'Drugs and Nutrition Support'. In the presentation he discussed the pharmacological treatment of patients requiring nutritional support, the role of a pharmacist, drug absorption sites and other useful subjects including a focus on PPIs (Proton Pump Inhibitors), drug administration via feeding tubes, and how different patients can be affected. The presentation also provided an insight into a pharmacist's perspective as well as suggestions for practice, including ascertaining whether prescribed medicines are necessary from a clinical perspective.

Keira Higgins is a Clinical Specialist Dietitian at Tallaght University Hospital. Keira presented on 'Fluid Management'. During the presentation the following were discussed: the physiology of fluid homeostasis, how to conduct a fluid assessment, fluid management, intravenous fluids, fluid management in surgical patients and high output stomas. The case study presented also provided useful insight into the importance of a fluid assessment and discharge plan to accommodate this.

Overall, this event was extremely educational, and the presentations were highly informative and engaging.

INDI/Fresenius Kabi Research symposium

The 2023 INDI/Fresenius Kabi Research symposium took place on the 8th May in Trinity College. The aim of this annual event is to celebrate the wealth of dietetic research being carried out in Ireland. Although this event has now been running for eight years, it was the first in-person meeting in three years. It was fantastic to see so many new and old faces and the benefit of an in-person event in providing an opportunity for healthcare professionals to get together and discuss clinical issues was more than apparent.

Special Interest Group of the Year:

The Gastrointestinal Interest Group (represented here by Yvonne Hickey from and Sarah Keogh- Gastroenterology Group of INDI) Research

Research & Quality Improvement in Practice Award:

Blended Tube Feeding by The Children & Adults with Disabilities Interest Group (represented on the night by Mairead O'Sulivan- online, INDI)

Best Oral Presentation of Posters 1st Place:
Clodagh Scannell (University College Cork)

Runners Up:
Molly Doran (University Hospital Limerick)
Lorraine Kelly (Midlands Regional Hospital Portlaoise)

The Research Symposium was initiated and organised by INDI in collaboration with Fresenius Kabi Limited. The meeting was funded by Fresenius Kabi, but no honorarium has been paid to speakers.

The recording of the event is available to view on The Fresenius Kabi and INDI Reseach Symposium | Clinical Nutrition by Fresenius Kabi

Well done to all those who submitted a poster/presentation but a special congratulations to the winners on the night

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Connect Programme

A survey carried out in 2018 in the UK revealed that 55% of secondary care dietitians said they were not confident discussing the appropriateness of prescribing parenteral nutrition with colleagues, whilst 35% did not feel confident referring patients to senior colleagues in the Nutrition Support Team.

The Connect Programme was created and is funded by Fresenius Kabi to help enable more experienced dietitians to coach their less experienced colleagues to address concerns related to communicating with peers and senior personnel more confidently. This six-week course is designed to help you develop leadership skills by gaining a better understanding of the principles of coaching.

The Connect Programme an online educational event run over six weeks that aims to further develop your leadership and coaching skills as a lead dietitian in parenteral nutrition.

Delivered by an accredited trainer, the programme is designed to enable you to support members of your team and help them grow in confidence in their role.

As team lead, this offers the opportunity to refresh and learn new communication skills to help further your professional practice and motivate, direct, advise and support members of your team.

On completion of the course, which includes interactive virtual sessions and a series of short assignments, you will be awarded an attendance certificate.

WEEK 1
Understanding the principles of coaching, Part 1

Module 1
Differences in approaches to different interactions
Module 2
Shared experience

WEEK 2
Understanding the principles of coaching, Part 2

Module 3
Barriers to effective coaching

WEEK 3
Effective communication in coaching

Module 1
Understanding the communication skills required for effective coaching

WEEK 4
360° Communication skills, Part 1

Module 1
Communication with superiors, peers and more junior members of the team

WEEK 5
360° Communication skills, Part 2

Module 2
Coaching below, sideways and above

WEEK 6
Integrating coaching in your organisation

Module 1
Coaching contract
Module 2
Fit with local policy
Module 3
Boundaries
Module 4
Things to consider; Human Resources (HR) and General Data Protection Regulation (GDPR)

Vist **www.clinicalnutritionbyfreseniuskabi.ie** to register your interest for the upcoming course scheduled for November/December 2023.

Places for the Connect Programme are strictly limited to 15 per course and registration will be closed once these spaces are filled.

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Clinical Nutrition

clinical nutrition
By Fresenius Kabi

This year there will be combination of face to face and virtual events.

MARCH (Now available on demand)
Oncology helpline (virtual) 22nd March 4-5.30pm. This will be available to view on demand in due course.

APRIL (Now available on demand)
Fundamentals in Artificial Nutrition (Face to Face) Wed 19th April 9-4pm.

MAY (Now available on demand)
INDI/FK research Symposium (Face to Face) Mon 8th May 5-9pm.

MAY
Connect Programme is a 6 week course that will run for 90 mins on a Tuesday between 8.30 and 10am for 6 weeks.

JUNE
Gastroenterology (virtual) 22nd June 3.30-5pm

SEPTEMBER
Fundamentals in home artificial nutrition (Face to Face) 20th Sept 9-4pm

OCTOBER
ICU (virtual) 19th Oct 3.30-5.00

NOVEMBER/ DECEMBER
Connect Programme is a 6 week course that will run for 90 mins on a Tue between 4.00-5.30pm for 6 weeks.

Our face to face meetings will focus on the latest research whereas the virtual events will be a series of case studies followed by an opportunity to discuss your complex patients with the field expert. These events are instigated and funded by Fresenius Kabi developed in conjunction with the event speakers / experts. The exception to this is the Connect Programme which has been devised by Fresenius Kabi.

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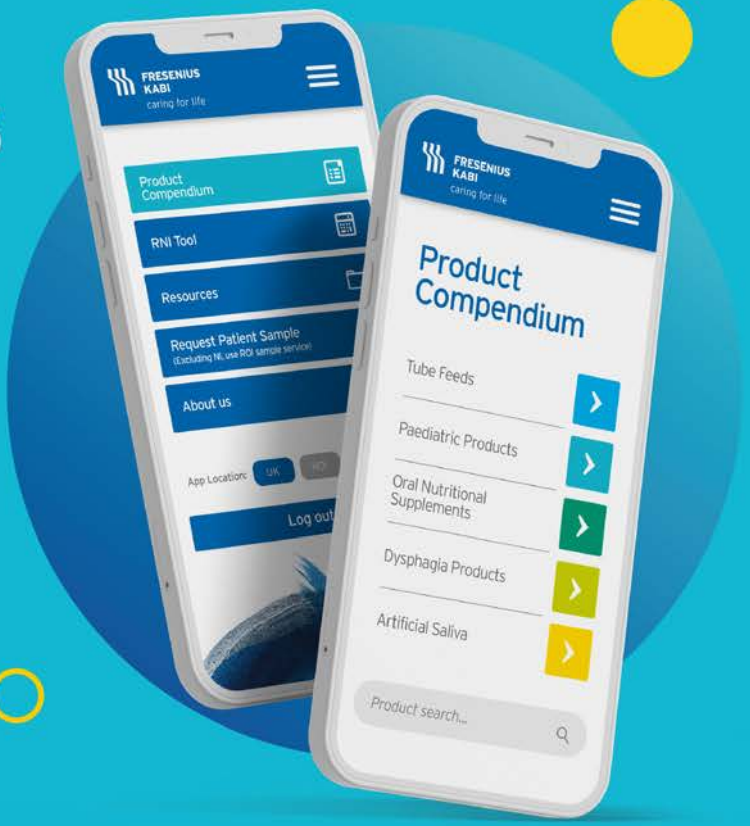
Fresenius Kabi's Enteral Nutrition Product App

Our all new App for mobile, tablet and desktop features detailed up to date product information.

Scan me for product information



Features and functions include:

- **User friendly** quick download and registration, designed with easy navigation to access the information you need
- **Quick product search** function for detailed up to date product information
- **Nutritional information** per 100ml, per pack size and per recommended daily dose
- **Allergen information** up to date allergen details on the full product range
- **Resource folder** with print function
- **Patient sample form** with easy access
- **UK and ROI** versions available

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Olive's Personal Note

I hope everyone has enjoyed the summer. It has been a busy year so far in Fresenius Kabi. We have had a successful first Connect Course in coaching. I personally completed the course and I would recommend it. We have had some exciting CPD opportunities to date this Autumn with a Home Artificial Nutrition Study Day which took place in the Ashling Hotel on September 20th and a virtual ICU webinar is planned for October 19th. Keep an eye on www.clinicalnutritionbyfreseniuskabi.ie for upcoming details.

I will be in contact over the coming weeks to arrange meetings and look forward to catching up. As always please don't hesitate to contact me.

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If you would rather not receive this regular newsletter from Fresenius Kabi
please let your local hospital representative know.

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