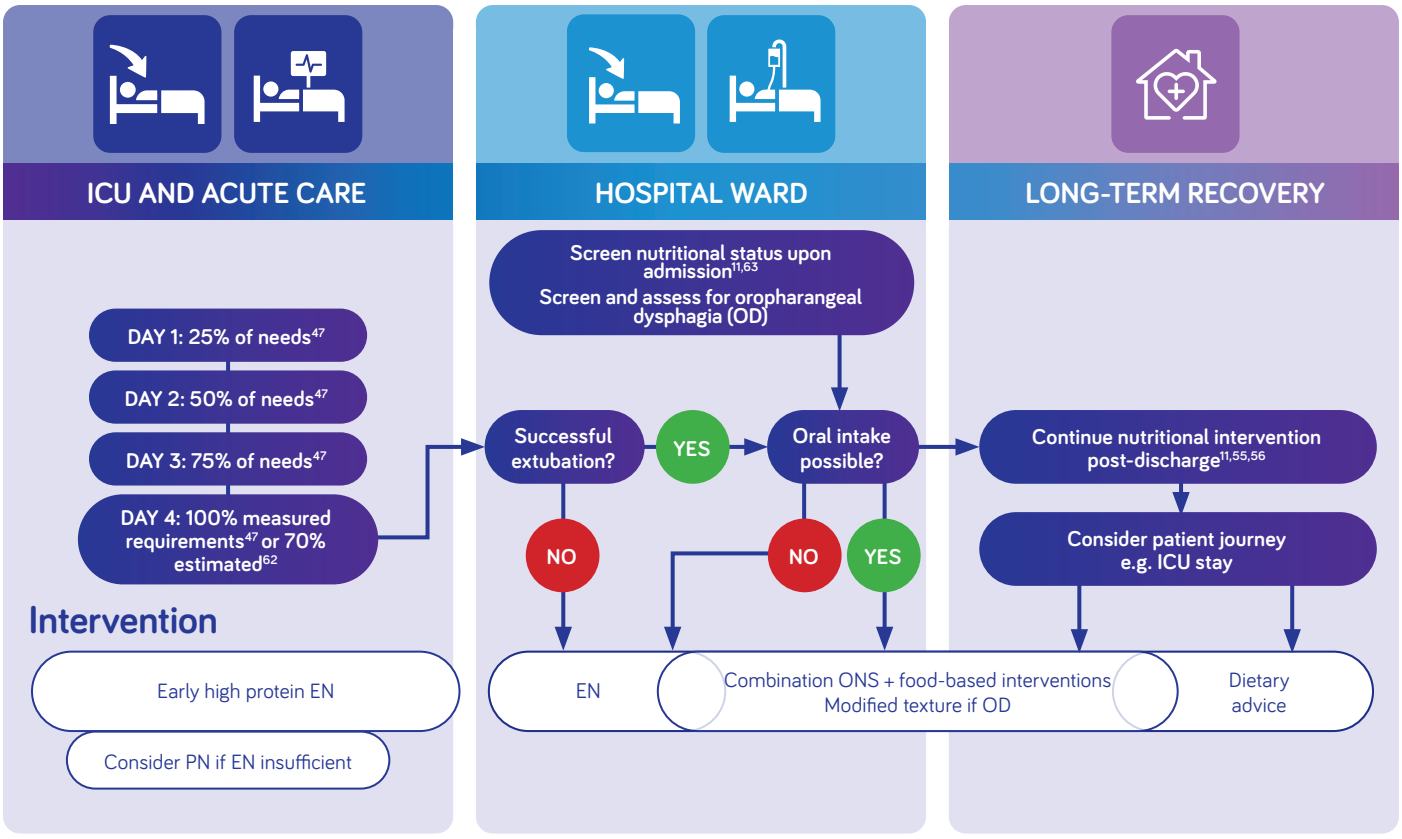
NUTRICIA
LIFE-TRANSFORMING NUTRITION

ASSERTIVE, MULTI-MODAL NUTRITIONAL CARE INDIVIDUALISED TO MEET PATIENTS' NEEDS ACROSS THE CONTINUUM OF CARE

This information is for healthcare professionals only

ASSERTIVE, MULTI-MODAL NUTRITIONAL CARE INDIVIDUALISED TO MEET PATIENTS' NEEDS ACROSS THE CONTINUUM OF CARE



If <50% oral intake[47,62]	If 50-75% oral intake[47, 62]	If >75% oral intake of daily nutritional needs[64,65]
Continue or start EN + oral diet + start ONS	Consider (overnight) EN + start/continue ONS	ONS required reduce/stop EN (if relevant)

Nutritional risk high	Medium/ moderate risk	Low risk
Advice on oral diet + continue for > 4 weeks[11]. If required, continue EN	Advice on oral diet and ONS if required	Advice on healthy diet

Monitoring

- Monitor progress towards individualised goals and escalate/de-escalate nutition intervention as indicated
- Initiate early polymeric EN as 1st line[51,66-68] approach. If required, consider alternative formulae depending on specific patient's need
- Ensure high protein intake for catabolic patients with significant muscle wasting
- Measure REE using indirect calorimetery where possible

- Monitor progress towards individualised goals and escalate/de-escalate nutition intervention as indicated
- Ensure high protein intake for patients due to risk of ongoing muscle wasting
- Careful consideration should be given to avoiding premature removal of feeding tubes, and to ensuring continued care post ICU discharge

- Monitor progress towards individualised goals and escalate/de-escalate nutition intervention as indicated
- Ensure high protein intake and consider muscle-targeted interventions (e.g. vit D, leucine) in patients with low muscle mass or sarcopenia
- Consider pre-existing cardiometabolic condition and individualize advice
- Monitor outcome indicators/measures linked to goals and clear plan for follow up

This visual is an adaptation from "Recovery Focused Nutritional Therapy across the Continuum of Care: Learning from COVID-19" published in Nutrients 2021, 13, 3293.

ICU ADMISSION

> The primary goal is to prevent complications and support recovery to enable COVID-19 patients to achieve the best possible nutritional, physical, functional and mental health status and to apply learning to date from the COVID-19 pandemic to other patient groups experiencing acute severe illness[1].

DAYS 1-7

To prevent overfeeding which risks poorer outcomes, aim to provide 70% of estimated or 100% of measured requirements reached over 4-5 days in line with international expert guidelines and practical guidance for nutrition support in ICU.[1,2]

FROM DAY 7

However, after day 7 COVID-19 patients are hypermetabolic (120-200% of equation predicted REE even when paralysed [25 ≥35kcal/kg/day])

Monitor progress towards individualised goals and escalate/de-escalate nutrition intervention as indicated

Initiate early polymeric EN as 1st line approach.
If required, consider alternative formulae depending on specific patient's need

Ensure high protein intake for catabolic patients with significant muscle wasting

Measure REE using indirect calorimetery where possible

FOR CRITICALLY ILL PATIENTS

NUTRISON PROTEIN INTENSE

To prevent overfeeding BUT still meet protein requirements, a very high protein feed with low NPC:N ratio is needed

Energy	Protein type	Protein per 100 ml	NPC: Nitrogen Ratio
1.26kcal/ml	Whole protein blend with P4	10g (32%)	54 to 1

Nutritional Guideline: "That in daily practice the amount of protein provided to most ICU patients is less than the loss, and is related to technical difficulties and commercial product composition not adequately enriched with proteins in comparison to the calorie content"[2].

FOR CRITICALLY ILL PATIENTS

NUTRISON PROTEIN ADVANCE

For critically ill and metabolically stressed patients in the post acute phase

Energy	Protein type	Protein per 100 ml	NPC: Nitrogen Ratio	Fibre per 100ml
1.28kcal/ml	Whole protein blend with P4	7.5g (24%)	83 to 1	1.5g MF6 blend

Nutritional Guideline: "During critical illness, 1.3 g/kg protein equivalents per day can be delivered progressively"[2].

FOR DIABETIC AND HYPERGLYCAEMIC PATIENTS

NUTRISON DIASON ENERGY HP

For Diabetic and/ or hyperglycaemic patients with increased requirements due to metabolic stress

Energy	Carbohydrates per 100ml	% Energy from Carbohydrates	Protein per 100ml	Fibre per 100ml	Contains isomaltulose for low glycaemic and low insulinaemic properties. High levels of MUFAs. Low Glycaemic Index
1.5kcal/ml	12g (31%)	31%	7.7g (21%)	1.5g MF6 blend	

Nutritional Guideline: "The use of diabetic specific enteral formula in ICU patients suffering from Type 2 Diabetes Mellitus seems to improve the glucose profile and may have clinical and economic impact"[2]

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ICU TO HOSPITAL WARD

> Practical guidelines for the nutritional management of acutely unwell inpatients with COVID-19 recommend enteral nutrition (EN) in patients unable to meet nutritional requirements orally with food based strategies and oral nutritional supplements.
>
> Multiple nutritional challenges highlight the need for early individualised nutrition intervention[1].

Monitor progress towards individualised goals and escalate/de-escalate nutrition intervention as indicated

Ensure high protein intake for patients due to risk of ongoing muscle wasting

Careful consideration should be given to avoiding premature removal of feeding tubes, and to ensuring continued care post ICU discharge

ESPEN guidelines on nutritional support for polymorbid internal medicine patients.[3]

Recommendation 3.1
In polymorbid medical inpatients whose nutritional requirements cannot be met orally, EN can be administered. In these cases, the use of EN may be superior to PN because of a lower risk of infectious and non-infectious complications.[2]

FOR MALABSORPTION OR MALDIGESTION PATIENTS

NUTRISON PEPTISORB PLUS HEHP

For tube fed patients requiring a peptide based feed for malabsorption or maldigestion with increased protein and energy requirements

Energy	Protein type	Protein per 100 ml	Fat
1.5kcal/ml	Peptide-based 100% whey	7.5g (20%)	5g of which 60% MCTs

Nutritional Guideline: "PN should not be started until all strategies to maximize EN tolerance have been attempted"[2]

FOR FLUID RESTRICTION OR RENAL IMPAIRMENT

NUTRISON CONCENTRATED

For tube fed patients with fluid restriction or renal impairment requiring low volume and high energy density

Energy	Protein type	Protein per 100 ml	Low electrolytes so suitable for renal patients
2kcal/ml	Whole protein blend with P4	7.5g (15%)	

PATIENTS WITH PRESSURE ULCERS AND WOUNDS

NUTRISON ADVANCED CUBISON

For tube fed patients with pressure ulcers or chronic wounds that required an enriched formula with arginine, zinc, selenium, Vitamin C and other antioxidants.

Also consider Cubitan for patients that can take oral nutritional supplements.

Energy	Protein per 100 ml	Fibre per 100ml
1kcal/ml	5.5g (21%)	1.5g MF6 blend

Nutritional Guideline: "Provide high-calorie, high-protein, arginine, zinc and antioxidant oral nutritional supplements or enteral formula for adults with a ≥ Category/Stage II pressure injury who are malnourished or at risk of malnutrition."[4]

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HOSPITAL WARD (WITH DYSPHAGIA)

> Prolonged orotracheal intubation and tracheostomy are risk factors for dysphagia... Compensatory treatments including texture modified diet, fluid thickening and specific rehabilitation procedures should be provided with EN continued until oral intake is sufficient to meet energy and protein needs[1].

Monitor progress towards individualised goals and escalate/de-escalate nutrition intervention as indicated

Ensure high protein intake for patients due to risk of ongoing muscle wasting

Careful consideration should be given to avoiding premature removal of feeding tubes, and to ensuring continued care post ICU discharge

ESPEN expert statements and practical guidance for nutritional management of individuals with Sars-COV-2 infection.[5]

Statement 10
In ICU patients with dysphagia, texture adapted food can be considered after extubation. If swallowing is proven unsafe, EN should be administered.

ESO & ESSD guideline for the diagnosis and treatment of post-stroke dysphagia 2021.[6]

Recommendation 6:
In patients with post-stroke dysphagia, we recommend that texture modified diets and/or thickened liquids are prescribed only based on an appropriate assessment of swallowing.

Recommendation 12:
In stroke patients who tolerate an oral diet and present with a risk of malnutrition or with manifest malnutrition, we suggest to consider the use of oral nutritional supplementation.

Recommendation 13:
In patients with post-stroke dysphagia and insufficient oral intake we suggest an early enteral nutrition via a nasogastric tube.

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DYSPHAGIA AND MALNUTRITION

NUTILIS COMPLETE STAGE 1

High energy, pre-thickened oral nutritional supplement (Stage 1) for patients with swallowing difficulties.

Serving size	Energy	Protein	Fibre
125ml	306kcal	12g	4g

DYSPHAGIA AND MALNUTRITION

NUTILIS COMPLETE STAGE 2

High energy, pre-thicked, pudding style supplement (Stage 2) for patients with swallowing difficulties.

Serving size	Energy	Protein	Fibre
125g	306kcal	12g	4g

DYSPHAGIA AND MALNUTRITION

NUTILIS FRUIT STAGE 3

High energy and high protein, pre-thickened, pudding style supplement (Stage 3) for patients with swallowing difficulties.

Serving size	Energy	Protein	Fibre
150g	206kcal	10g (20%)	3.9g

DYSPHAGIA

NUTILIS CLEAR

Nutilis Clear is an instant, xanthan gum-based thickener for patients with swallowing difficulties or dysphagia

Provides 8.7kcal and 1.1g fibre per 3g scoop

HOSPITAL WARD AND DISCHARGE

> The aim is to limit the development of malnutrition during hospital stay to enable optimal recovery after discharge. There is a need for early, assertive nutrition intervention in critically ill and non-critically ill hospitalised patients to mitigate the symptom, metabolic, nutritional status and nutritional intake factors that contribute to malnutrition, loss of lean body mass and function that in turn impair and delay recovery[1].

Monitor progress towards individualised goals and escalate/de-escalate nutrition intervention as indicated

Ensure high protein intake for patients due to risk of ongoing muscle wasting

Careful consideration should be given to avoiding premature removal of feeding tubes, and to ensuring continued care post ICU discharge

Guidelines
ESPEN expert statements and practical guidance for nutritional management of individuals with Sars-COV-2 infection.[5]

Statement 5
Oral nutritional supplements (ONS) should be used whenever possible to meet patient's needs, when dietary counselling and food fortification are not sufficient to increase dietary intake and reach nutritional goals, ONS shall provide at least 400kcal.day including 30g or more of protein/day and should be continued for at least one month.

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TUBE FED PATIENTS REQUIRING MODERATE ENERGY AND EXTRA PROTEIN

NUTRISON PROTEIN PLUS/MF

For tube fed patients requiring moderate energy and a higher protein containing formula

NUTRISON PROTEIN PLUS

Energy	Protein type	Protein per 100 ml	NPC: Nitrogen Ratio	Fiber per 100 ml
1.25kcal/ml	Whole protein blend with P4	6.3g (20%)	99:1	0

NUTRISON PROTEIN PLUS MF

Energy	Protein type	Protein per 100 ml	NPC: Nitrogen Ratio	Fiber per 100 ml
1.28kcal/ml	Whole protein blend with P4	6.3g (20%)	103:1	1.5g MF6 blend

TUBE FED PATIENTS REQUIRING EXTRA ENERGY AND PROTEIN

NUTRISON PROTEIN PLUS ENERGY/MF

For tube fed patients requiring high energy and a high protein formula

NUTRISON PROTEIN PLUS ENERGY

Energy	Protein type	Protein per 100 ml	NPC: Nitrogen Ratio	Fiber per 100 ml
1.5kcal/ml	Whole protein blend with P4	7.5g (20%)	100:1	0

NUTRISON PROTEIN PLUS ENERGY MF

Energy	Protein type	Protein per 100 ml	NPC: Nitrogen Ratio	Fiber per 100 ml
1.53kcal/ml	Whole protein blend	7.5g (20%)	100:1	1.5g MF6 blend

Nutritional Guideline: "In polymorbid medical inpatients and in older persons with reasonable prognosis, whose nutritional requirements cannot be met orally, enteral nutrition (EN) should be administered."[3]

FIRST-LINE ONS CHOICE FOR PATIENTS WITH, OR AT RISK OF DISEASE RELATED MALNUTRITION (DRM)

FORTIMEL COMPACT PROTEIN

- High energy, high protein ONS
- Low volume with > 7 different flavours

An ideal solution for better adherence

Serving (ml)	Energy (kcal/serving)	Protein (g/serving)	% Energy from Protein
125ml	300kcal	18g	24%

Nutritional Guideline: "In malnourished polymorbid medical inpatients or those at risk of malnutrition, nutritional support shall be continued after hospital discharge in order to maintain or improve body weight and nutritional status"[3]

DISCHARGE, REHABILITATION AND RECOVERY

> Low muscle mass is associated with higher rates of infections, poorer tolerance to chemotherapy, hospitalisation, fractures, reduced quality of life, and reduced survival with implications for patient outcomes and healthcare utilisation.
>
> Recommended treatment to target muscle mass and function required a multi-modal approach with a focus on optimal protein intake, resistance training and Vitamin D.[1]

- Monitor progress towards individualised goals and escalate/de-escalate nutrition intervention as needed
- **Ensure high protein intake and consider muscle-targeted interventions (eg. vit D, leucine) in patients with low muscle mass or sarcopenia**
- Consider pre-existing cardiometabolic condition and individualize advice
- Monitor outcome indicators/measures linked to goals and clear plan for follow up

Protein intake and exercise for optimal muscle function with aging: Recommendations from the ESPEN Expert Group[7]

"High protein nutrition in combination with exercise is considered optimal for maintaining muscle function"

RECOVERY AT HOME FOR PATIENTS WITH PROLONGED RECOVERY, IMPACTING ON STRENGTH, MOBILITY AND INDEPENDENCE

FORTIFIT

High-protein ONS, containing ActiSyn™, a unique combination of nutrients (100% whey protein, leucine and vitamin D) designed to stimulate muscle protein synthesis.

ActiSyn

NEW BRANDING COMING SOON

Serving (ml)	Energy (kcal/serving)	Protein (g/serving)	Leucine (g/serving)	Vitamin D (µg/serving)
40g in 125ml water	150kcal	21g	3g	20 µg

Nutritional Guideline: "Nutritional support should be continued post hospital discharge to maintain or improve functional status and quality of life" [3]

DRM PLUS MUSCLE REHABILITATION NEEDS FOR PATIENTS WITH DRM & MUSCLE LOSS

FORTIMEL ADVANCED

High-energy and high-protein ONS, containing ActiSyn™: a unique combination of nutrients (100% whey protein, leucine and vitamin D) designed to stimulate muscle protein synthesis.

ActiSyn

Serving (ml)	Energy (kcal/serving)	Protein (g/serving)	Leucine (g/serving)	Vitamin D (µg/serving)
200ml	302kcal	21g	3g	10 µg

Nutritional Guideline: "In malnourished polymorbid medical inpatients or those at high risk of malnutrition, nutrient-specific ONS should be administered, when they may maintain muscle mass, reduce mortality or improve quality of life."[3]

> "A recent study showed benefits of a muscle-targeted ONS (20g whey protein, 2.8g leucine, 800 IU Vitamin D, 500mg calcium) compared to iso-caloric placebo in sarcopenic patients during a rehabilitation program.
>
> The muscle-targeted ONS led to a reduction in rehab duration (-27%), shorter length of stay (-10 days), more patients discharged home (+24%)"[8]

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For a full view of all available oral nutritional supplements, click here

For a full view of tube portfolio, click here

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