



Your partner in supporting the nutritional needs of oncology patients

Malnutrition is common amongst patients receiving oncology treatment.^{1,2}

The World Health Organisation (WHO) defines malnutrition as deficiencies, excesses or imbalances in a person's intake of energy and/or nutrients.

Consequences of malnutrition

- Impaired quality of life^{3,4} and fatigue³
- Reduced performance status and muscle function³
- Increased risk of post-operative complications³
- Impaired immune function⁵
- Malnutrition is a risk factor for diminished responsiveness to therapy and increased toxicity.⁶

Individual dietary counselling has been shown to reduce morbidity and mortality and to improve functional performance and wellbeing.⁷

Nutrition support is often under-utilised in oncology patients.

In a study reviewing worldwide use of nutrition support in oncology patients, only 30–60% of patients were provided some support that were already identified to be at risk of malnutrition.⁸

Malnutrition best practice aims to:⁷



Maintain or improve food intake



Reduce interruptions to treatment



Maintain skeletal muscle mass



Improve quality of life

ESPEN Recommendations 2017

The total energy expenditure of cancer patients will be similar to healthy subjects, generally ranging between 25 and 30 kcal/kg/day.¹⁶
Protein intake should be above 1 g/kg/day and if possible up to 1.5 g/kg/day.
Nutritional intervention is important to increase oral intake in cancer patients that are malnourished or at risk of malnutrition, offering oral nutritional supplements.¹⁶

Nutritional solutions to support your patients' needs during cancer treatment

CHALLENGE	MANAGEMENT TIPS										
			IMPACT®	RESOURCE® REFRESH	RESOURCE® ULTRA CLEAR FRUIT FLAVOURED BEVERAGE	RESOURCE® FRUIT FLAVOURED BEVERAGE	RESOURCE® PROTEIN	RESOURCE® 2.0	RESOURCE® 2.0 + FIBRE	BENEPROTEIN®	RESOURCE® THICKENUP® CLEAR
Surgical	<ul style="list-style-type: none">● Consuming IMPACT® helps to support the body needs of surgery patients by helping to decrease the risk of postoperative infections and reducing hospital length of stay.^{1,4,7}	<ul style="list-style-type: none">● To prevent underfeeding and malnutrition post surgery, early enteral feeding is encouraged.⁹	✓	✓	✓	✓					
Malnutrition / Loss of Appetite / Taste Change	<ul style="list-style-type: none">● Schedule smaller, frequent meals throughout the day e.g. every 2–3 hours.^{5,6}● Prioritise foods higher in energy and protein and eat foods that are most enjoyed.^{5,6,10}	<ul style="list-style-type: none">● Sip fluids throughout the day, and replace water, tea and coffee with fluids that add energy (kilojoules) and protein, such as milk, milkshakes, smoothies, soup and ONS[†].^{5,6,10}		✓	✓	✓		✓	✓	✓	
Mucositis / Dysgeusia	<ul style="list-style-type: none">● A bland, soft diet is recommended.³● Try to limit acidic, spicy, salty, coarse, very sweet and dry foods.³	<ul style="list-style-type: none">● Keeping the mouth moist with frequent sips of water, ice chips, or popsicles as well as ONS[†] that can be enjoyed at any temperature.³		✓							
Xerostomia	<ul style="list-style-type: none">● Try to limit alcohol, drinks with caffeine and acidic juices.^{4,11}● Eat soft, moist foods at cool/room temperature.^{4,11}● Moisten dry foods with broth, sauces, butter or milk.^{4,11}● Reconsider dry, coarse or hard food.^{4,11}	<ul style="list-style-type: none">● Sip fluids with meals and throughout the day.^{4,11}● ONS[†] may be helpful if solid food intake is poor.⁴		✓	✓	✓	✓	✓	✓	✓	
Nausea / Vomiting	<ul style="list-style-type: none">● Try small meals frequently (every 2–3 hours) during the day.¹²● Snack on dry or bland foods e.g. dry biscuits, pretzels, toast or bread, jelly, cooked cereals, boiled rice and soft stewed fruits.¹²● Choose food at cold/room temperature instead of hot, fried, sweet, greasy or spicy foods that have strong smells.¹²	<ul style="list-style-type: none">● Sip small amounts of fluids as often as possible – try dry ginger ale, cold flat lemonade, soda water, Lucozade, sports drinks or chilled tomato juice.¹²● ONS[†] may be helpful particularly if oral food intake is poor.¹²		✓	✓	✓		✓			
Diarrhoea	<ul style="list-style-type: none">● Limit spices like chilli, high fibre foods and beverages like coffee and alcohol which may worsen gut symptoms.^{13,14}● Drink plenty of fluids to prevent dehydration – at least 2 litres of fluid per day including: diluted juice, weak cordial, soup or broth, herbal teas and ONS[†]. Lactose containing drinks may be limited initially depending on tolerance.^{13,14}	<ul style="list-style-type: none">● Oral rehydration drinks to replace lost electrolytes may also be required.^{13,14}		✓	✓	✓	✓	✓		✓	
Dysphagia	<ul style="list-style-type: none">● An assessment by a speech pathologist is necessary to ensure the correct texture modification and thickened fluid is prescribed to prevent choking and aspiration. This may include:<ul style="list-style-type: none">– Thickening liquids to assist with delayed swallow.¹⁵– Making food softer and snacking on soft foods between meals to optimise nutrition.¹⁵– Foods prepared with sauces and gravies especially for patients with xerostomia.¹²	<ul style="list-style-type: none">● Careful and slow chewing while sitting still and upright.¹⁵● Texture modified ONS[†] may be considered if oral food intake is poor.¹⁵									✓

[†]ONS – Oral Nutritional Supplement drinks. The ONS recommendations above for the different challenges are suggestions only and other Nestlé Health Science products may also be appropriate.

Supporting your patients' nutritional needs during treatment



IMPACT® Advanced Recovery

- 1.1 kcal/mL
- Protein: 18g/serve (35% Energy)
- Fewer post operative complications.¹⁷



RESOURCE® Refresh

- 1.5 kcal/mL
- Protein: 10g/serve (13% Energy), 100% whey
- Clear, non-milky fluid
- Refreshing mouth-cooling, soothing effect
- Subtle Peach-Mint Tea flavour.



RESOURCE® ULTRA Clear Fruit Flavoured Beverage

- 1.5 kcal/mL
- Protein: 14g/serve (19% Energy), 100% whey
- Clear, non-milky fluid
- 2 fruit flavours: Apple and Orange.



RESOURCE® Fruit Flavoured Beverage

- 1.05 kcal/mL
- Protein: 9g/serve (15% Energy), 100% whey
- Clear, non-milky fluid
- Low FODMAP
- Fat-free.



RESOURCE® Protein

- 1.25 kcal/mL
- Protein: 18.8g/serve (30% Energy), whey protein
- Low FODMAP*
- 4 flavours for variation.



RESOURCE® 2.0

- 2.0 kcal/mL
- Protein: 19.7g/serve (17% Energy)
- Low FODMAP
- Coffee flavour for variation.



RESOURCE® 2.0 + Fibre

- 2.0 kcal/mL
- Protein: 18g/serve (18% Energy)
- Dietary fibre (FOS/GOS)
- 5 flavours for variation.



BENEPROTEIN®

- Protein: 100% whey
- Food fortification.



RESOURCE® THICKENUP® Clear

- Xanthan gum powder thickener
- For texture modified diets.

*Only RESOURCE® Protein Vanilla Flavour has been tested.

For more information, contact your Nestlé Health Science sales representatives.

References: 1. Drover JW et al. J Am Coll Surg. 2011. 2. Marshall et al. KM, Prevalence of malnutrition and impact on clinical outcomes in cancer services: A comparison of two time points, Clinical Nutrition 38 (2019) 644e651. 3. Abhishek et al. Asian Pac J Cancer Prev, 18(8), 2019-2026, 2019, Retrieved February 10, 2020 from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5697454/pdf/APJCP-18-2019.pdf> 4. Cancer Council Nutrition and Cancer Guide, Retrieved February 10, 2020 from https://www.cancer.org.au/content/about_cancer/ebooks/aftercancer/Nutrition_and_Cancer_booklet_May_2016.pdf 5. Doyle et al. Cancer J Clin 2006; 56:323-353 2006 Retrieved February 10, 2020 from https://oralcancerfoundation.org/wp-content/uploads/2016/09/nutrition_physical_activity.pdf 6. Cancer Council NSW Australia – Management of Cancer Side Effects (Loss of Appetite), Retrieved February 10, 2020 from <https://www.cancercouncil.com.au/cancer-information/managing-cancer-side-effects/nutrition-and-cancer/treatment-side-effects-and-nutrition/loss-of-appetite/> 7. Marik PE et al. J Parenter Enteral Nutr, 2010. 8. Yalcin S et al. Nutritional aspects of cancer care in medical oncology patients, Clinical Therapeutics, 2019;41(11). 9. Weimann A et al. ESPEN guideline: Clinical Nutrition in Surgery, Clinical Nutrition, 2017. 10. NIH National Cancer Institute – Nutrition in Cancer Care, Retrieved February 10, 2020 from https://www.cancer.gov/about-cancer/treatment/side-effects/appetite-loss/nutrition-pdq#_312 11. American Cancer Society - Mouth Dryness, Retrieved February 10, 2020 from <https://www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/mouth-problems/dry-mouth.html> 12. Cancer Council NSW Australia – Management of Cancer Side Effects (Nausea and Vomiting) Retrieved February 10, 2020 from <https://www.cancercouncil.com.au/cancer-information/managing-cancer-side-effects/nutrition-and-cancer/treatment-side-effects-and-nutrition/nausea-and-vomiting/> 13. Bossi P et al. Annals of Oncology, 29 Supp.4, 2018, Retrieved February 10, 2020 from https://academic.oup.com/annonc/article/29/Supplement_4/iv126/5041967/ 14. This is a consensus document from Dietitian/ Nutritionists from the Nutrition Education Materials Online, "NEMO" team, Department of Health Queensland, Retrieved February 10, 2020 from https://www.health.qld.gov.au/_data/assets/pdf_file/0027/152478/oncol-diarrhoea.pdf 15. Cancer Council NSW Australia – Management of Cancer Side Effects (Difficulty Swallowing), Retrieved February 10, 2020 from <https://www.cancercouncil.com.au/stomach-cancer/managing-side-effects/difficulty-swallowing/> 16. Arends J et al. ESPEN guidelines on nutrition in cancer patients, Clinical Nutrition 2016. 17. Waitzberg DL et al. Post Surgical Infections are Reduced with Specialised Nutrition Support, World J Surgery 2006;30(8):1592-1604.

IMPACT® Advanced Recovery and BENEPROTEIN® are food for special medical purposes specifically formulated for medical conditions where nutritional needs cannot be met by diet modification alone. Must be used under the supervision of a healthcare professional.

RESOURCE® Refresh is a food for special medical purposes specifically formulated for the dietary management of oncology patients with radio or chemotherapy related taste alterations, with/or at risk of malnutrition. Must be used under medical supervision.

RESOURCE® ULTRA Clear Fruit Flavoured Beverage, RESOURCE® Fruit Flavoured Beverage, RESOURCE® Protein, RESOURCE® 2.0 and RESOURCE® 2.0 + Fibre are food for special medical purposes specifically formulated for medical conditions where nutritional needs cannot be met through diet modification alone. Must be used under medical supervision.

RESOURCE® THICKENUP® Clear is a food for special medical purposes for the dietary management of people with swallowing difficulties. Must be used under medical supervision.

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