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Nutritional Care for Patients with COVID 19: National Obesity Management Clinical Programme and National Clinical Programme for Older Persons.

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Background

There is emerging evidence that nutrition support is crucial in the treatment of patients with COVID- 19, with different levels of support required based on disease severity. Individuals 'at risk' of severe illness with COVID -19 include those over 60 years of age, those with long term medical conditions or individuals who are immunosuppressed. These groups are also at higher risk of malnutrition. Patients with COVID- 19 are at risk of developing acute malnutrition caused by inflammation of acute disease and a reduced food intake/assimilation due to GI symptoms including anorexia, diarrhoea, vomiting and abdominal pain.

Malnutrition due to any cause is associated with a higher hospital admission and re-admission rates as well as increased length of hospital stay. There are many physical effects of malnutrition on the body including reduced muscle strength and fatigue which can lead to reduced respiratory muscle function and in turn poor cough pressure - delaying expectoration and recovery from chest infection. More information in: Nutrition screening and use of oral nutrition support for adults in the acute care setting National Clinical Guideline No. 23, Department of Health (<https://www.gov.ie/en/collection/c9fa9a-national-clinical-guidelines/?referrer=/national-patient-safety-office/ncec/national-clinical-guidelines-2/>).

Nutrition Support for COVID – 19: Self-Management at Home

General Advice

- For advice on infection prevention and control follow latest advice on HSPC Website <https://www2.hse.ie/conditions/coronavirus/coronavirus-treatment.html>
- For people who have tested positive with moderate symptoms for self-management at home:
 - Food safety and good hygiene standards are important. General food safety information for vulnerable groups is available at https://www.fsai.ie/faq/vulnerable_groups.htmls
 - For healthy eating advice for all adults see <https://www.hse.ie/eng/about/who/healthwellbeing/our-priority-programmes/health/healthy-eating-guidelines/>
 - If poor appetite and unintentional weight loss is a problem high protein high energy dietary advice is required. Resources such as a high protein high calorie diet sheet and recipe book is available to view and download for patients at www.hse.ie/nutritionsupports.
 - For complex nutritional care such as renal disease or poorly controlled diabetes will require individualised advice from a dietitian.
 - During illness and recovery Older Persons especially those identified as frail/sarcopenic will have increased protein requirements and if dietary intake is inadequate, they will require supplementation in combination with physical rehabilitation.



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Supplements

- You cannot “boost” your immune system through diet, and no specific food or supplement will prevent you from getting COVID-19
- If you are self-isolating or if you are unable to go outside, you should consider taking a daily supplement containing 10 micrograms Vitamin D to ensure a healthy vitamin D status (for adults and children over the age of one).
- For further information see <https://www.bda.uk.com/resource/covid-19-corona-virus-advice-for-the-general-public.html>. This has also been endorsed by Irish Nutritional & Dietetic Institute (INDI).

Nutrition Support for COVID 19: Acute and Complex Care

Malnutrition is associated with an altered immune system and impaired response to both bacterial and viral illness. Patients in the critical care setting (ICU/HDU) are at high risk of malnutrition and are likely require enteral, parenteral or oral nutrition support (or a combination of these) to meet their nutritional needs. Early evaluation of nutritional status, gastrointestinal function and risk of aspiration along with timely enteral nutritional support are important to the patient’s prognosis. Provision of nutrition to critically ill patients is complex; the dietitian is best placed to provide nutritional advice to the multi-professional team on the optimal way to manage the nutritional needs of all critically ill patients. See <https://www.alnap.org/help-library/handbook-of-covid-19-prevention-and-treatment> for further information.

Guidance for Clinical Settings:

- Malnutrition screening should take place on admission to all clinical settings see <https://learning.indi.ie/mod/folder/view.php?id=379> for care pathways and resources to support this.
- Dietitian directed nutrition interventions should be initiated early for nutritional support to those patients with suspected/confirmed COVID-19 and screened as at risk of malnutrition.
- Intervention will progress through 4 stages of nutrition support depending on the patient’s clinical status. Resources for nutrition assessment, early dietetic intervention, ward based nutrition support and ICU nutrition support have been developed by a specialist group of the INDI and can be accessed via <https://learning.indi.ie/course/view.php?id=47>
- Specific recommendations malnutrition screening and the provision of oral nutrition support in the acute setting are available in Department of Health CG23: Nutrition screening and use of oral nutrition support for adults in the acute care setting National Clinical Guideline No. 23, Department of Health <https://www.gov.ie/en/collection/c9fa9a-national-clinical-guidelines/?referrer=/national-patient-safety-office/ncec/national-clinical-guidelines-2/>
- Hospital food requirements should be determined as per national policy see <https://www.hse.ie/eng/about/who/acute-hospitals-division/food-nutrition-and-hydration-policy-for-adult-patients/>. Patients with COVID may require therapeutic or modified consistency diets.
- Patients who are weak, short of breath or those with an obvious fluctuating oxygenation index will require assistance with eating in all settings
- Provide enteral nutrition (tube feeding) at an early stage for those who are unable to eat. Parenteral nutrition may be indicated where oral and enteral routes are not viable.
- Health care professionals should follow specific guidelines for clinical nutrition in the intensive care unit available from relevant professional bodies IRSPEN www.irspen.ie/coronavirus-news-guidelines-for-nutrition-support-of-icu-patients and at https://www.espen.org/files/ESPEN-Guidelines/ESPEN_guideline-on-clinical-nutrition-in-the-intensive-care-unit.pdf and in older persons, available at https://www.espen.org/files/ESPEN-Guidelines/ESPEN_GL_Geriatrics_ClinNutr2018ip.pdf



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As patients with COVID-19 begin to improve it is important that their nutritional status continues to be monitored and that they are provided with appropriate nutrition support to recover from acute malnutrition. This may include counselling the patient to continue to monitor their body weight after discharge.

- Most hospitals in Ireland are making provisions for the expansion of ICU beds. This will place significant pressure on all MDT members, including dietitians. Dietitians will be required to manage COVID 19 patients across the acute hospitals in both the ICU and broader hospital setting. Consideration should be given as to how dietitians with necessary skills and expertise can be identified and deployed as required with training in place to support them. Planning for increasing ICU dietetic capacity should occur urgently in line with dietetic managers and local critical care planning strategies. Along with staffing, provisions for increasing enteral feeds, enteral feeding pumps and ancillaries for enteral feeding need to be made. Operational pathways need to be developed to protect existing dietitians in their roles, and to support the allocation and training of final year students and return to practice dietitians to provide nutrition support to patients with COVID 19 in both hospital and community settings.
- Planning and procurement for the provision of adequate oral, enteral and parenteral nutrition support including availability of equipment and specialist products is recommended. Access to oral nutritional supplements, enteral and parenteral feeds, feeding systems, associated plastic consumables and medical devices should be considered. There will be increased demand for specialist enteral feeds such as high protein feeds, semi-elemental, renal preparations. BDA Critical Care Specialist Group has developed guidance on management of nutrition and dietetic services during the COVID-19 pandemic including planning services, feeds, pumps and ancillaries, training non-ICU dietitians, communication, nutrition management, non-invasive ventilation and monitoring which can be accessed at https://www.bda.uk.com/resource/critical-care-dietetics-guidance-covid-19.html?utm_source=Twitter&utm_medium=social&utm_campaign=SocialSignIn

Emerging evidence on presence of GI-related COVID - 19 symptoms

- Patients with COVID-19 may have gastrointestinal symptoms (such as abdominal pain and diarrhoea) from an early stage of the disease course. See <https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-guidance-management-patients.html> and <https://www.alnap.org/help-library/handbook-of-covid-19-prevention-and-treatment> for further information.
- Patients with type 2 diabetes appear to be at higher risk for COVID-19 and may require very high insulin doses therefore enteral / parenteral feeding regimens will need to take these factors into account.
- Clinicians should be aware that in a subgroup of patients' gastrointestinal symptoms, such as diarrhoea, abdominal pain and vomiting are prominent early presenting features of COVID-19 in the absence of respiratory symptoms. It has been reported that patients with gastrointestinal symptoms have a longer time from onset to admission and their prognosis is worse than patients without digestive symptoms. (Pan L, Mu M, Ren HG, et al 2000. Clinical characteristics of COVID-19 patients with digestive symptoms in Hubei, China: a descriptive, cross-sectional, multicentre study [published online March 5, 2020]. Am J Gastroenterol. doi:10.14309/ajg.0000000000000620)