Nutritional Risk & Therapy for Severe & Critical Covid-19 Patients: A Multicenter Retrospective Observational Study

**Publication:** Clinical Nutrition  
**Publish Date:** 1 Oct 2020  
**Authors:** Gang Li, Chen-Liang Zhou, Yuan-Ming Ba, Ye-Ming Wang, Bin Song, Xiao-Bin Cheng, Qiu-Fen Dong, Liu-Lin Wang, Sha-Sha You

This study from Wuhan, China, evaluated the nutritional risk and therapy in 523 severe and critical patients with Covid-19. Of these patients, 211 (40.3%) were admitted to the intensive care unit (ICU) and 115 deaths (22.0%). Patients admitted to the ICU had lower body mass index (BMI) and plasma protein levels. The median Nutrition risk in critically ill (NUTRIC) score of 211 patients in the ICU was 5 (4, 6) and Nutritional Risk Screening (NRS) score was 5 (3, 6). The study results showed that the NUTRIC score independently predicted the risk of death in the hospital (OR = 1.197, 95%CI: 1.091-1.445, p = 0.006) and high NRS score patients had a higher risk of poor outcome in the ICU (OR = 1.880, 95%CI: 1.151-3.070, p = 0.012). Additionally, the in-hospital survival time of patients with albumin level ≤35 g/L was significantly decreased (15.9 d, 95% CI: 13.7-16.3, vs 24.2 d, 95% CI: 22.3-29.7, p < 0.001). This study demonstrated that severe and critical patients with Covid-19 have a high risk of malnutrition, that low BMI and protein levels were significantly associated with adverse events, and that early nutritional risk screening and therapy for patients with Covid-19 are necessary.
Influence of Nutritional Status on the Hospital Length of Stay in Diabetes Mellitus Type-2 Patients

**Publication:** Endocrinology Diabetes Nutrition  
**Publish Date:** 11 Oct 2020  
**Authors:** Cristina Serrano Valles, Juan José López Gómez, Susana García Calvo, Rebeca Jiménez Sahagún, Beatriz Torres, Emilia Gómez Hoyos, Ana Ortolá Buigues, Daniel de Luis Román

This study was conducted in 1,017 patients to examine whether a hospitalized diabetic patient has a worse nutritional status, and to establish the influence of type 2 diabetes mellitus (DM2) on the hospital length of stay in patients with malnutrition. Subjects’ nutritional status was evaluated using the Mini Nutritional Assessment (MNA) questionnaire and the nutritional risk score (NRS). Study results showed that 24.4% of the patients were diabetic and that diabetic patients had a higher body mass index (BMI), a lower total score in the MNA questionnaire [16.5(13.12-19) points vs. 17(14-20) points, P<.01], and a lower NRS score [83.09(77.72-91.12) points vs. 85.78(79.27-92.83) points, p=0.03]. According to the MNA and the NRS, diabetic patients had an increased risk of malnutrition (<17.5 points) [OR=1.39, IC95%(1.04-1.86), p=0.02]; and NRS (<85 points) [OR=1.65, IC 95% (1.07-2.54) p=0.02], respectively, however, when adjusted for age these significant results disappeared. In addition, the study showed that diabetic patients with malnutrition (MNA<17.5) spent longer in hospital [21(12-36) days vs. 17(9-30) days, P=.01].

Protein Intake at the First Day of Full Oral Intake During Hospitalization is Associated with Complications and Hospital Length of Stay

**Publication:** JPEN Journal of Parenteral & Enteral Nutrition  
**Publish Date:** 5 Oct 2020  
**Authors:** Dorian N Dijxhoorn, Vera E IJmker-Hemink, Wietske Kievit, Geert J A Wanten,
Manon G A van den Berg

This post-hoc analysis of a prospective cohort study assessed whether protein intake relative to requirements at the first day of full oral intake is associated with complications and hospital length of stay (LOS) in medical and surgical patients. The study results demonstrated that complications were observed in 92 of 637 (14.4%) patients with a median LOS of 5 days [3.0-7.0]. An absolute increase of 10% protein intake relative to requirements reduced the relative complication risk by 10% (OR, 0.900; 95% CI, 0.83-0.97; p<0.05). Also, LOS was shortened by 0.23 days for each increase of 10% in protein intake relative to requirements (95% CI, -0.3;-0.2; p<0.05). This study showed that protein intake relative to requirements at the first day of full oral intake is associated with the risk of complications and hospital length of stay.

Reduced Mortality Risk in Malnourished Hospitalized Older Adult Patients with COPD Treated with a Specialized Oral Nutritional Supplement: Sub-group Analysis of the NOURISH Study

Publication: Clinical Nutrition
Publish Date: 4 Sept 2020
Authors: Nicolaas E Deutz, Thomas R Ziegler, Eric M Matheson, Laura E Matarese, Kelly A Tappenden, Geraldine E Baggs, Jeffrey L Nelson, Menghua Luo, Refaat Hegazi, Satya S Jonnalagadda, NOURISH Study Group

This study was a post-hoc, sub-group analysis from the NOURISH study cohort examined the effect of a high-protein oral nutritional supplement (ONS) containing HMB (HP-HMB) in malnourished, hospitalized older adults with COPD and to identify predictors of outcomes. Study results showed that in patients with COPD, 30, 60, and 90-day hospital readmission rate did not differ, but in contrast, 30, 60, and 90-day mortality risk was approximately 71% lower with HP-HMB supplementation relative to placebo (1.83%, 2.75%, 2.75% vs. 6.67%, 9.52% and 10.48%, p = 0.0395, 0.0193, 0.0113, resp.). In patients with COPD, compared to placebo, intake of HP-HMB resulted in a significant increase in handgrip strength (+1.56 kg vs. -0.34 kg, p = 0.0413) from discharge to day 30; increased body weight from baseline to hospital discharge (0.66 kg vs. -0.01 kg, p < 0.05) and, improvements in blood nutritional biomarker concentrations.
Utility of Mid-Upper Arm Circumference in Diagnosing Malnutrition in Children With Cystic Fibrosis

**Publication:** Nutrition Clinical Practice  
**Publish Date:** 19 Oct 2020 (online ahead of print)  
**Authors:** Phong RY, Taylor SL, Robinson BA, Jhawar S, Nandalike K.

This retrospective observational outpatient study aimed to compare MUAC z-scores to growth percentile z-scores in children with cystic fibrosis. The authors assessed the application of standard diagnostic indicators in classification of and diagnosing malnutrition in pediatric cystic fibrosis patients. The results of this small study show a role for MUAC z-scores in determining the degree of malnutrition and tracking nutrition status over time.

Human Milk Oligosaccharides: Shaping the Infant Gut Microbiota & Supporting Health

**Publication:** Journal of Functional Foods  
**Publish Date:** Sept 2020  
**Authors:** Walsh C, Lane JA, van Sinderen D, Hickey RM.

This review article summarizes the current knowledge on infant gut health and the role human milk oligosaccharides (HMOs) impact its development. This is a review of the functional aspects of HMOs in recent literature.
Covid-19 is Associated with Clinically Significant Weight Loss & Risk of Malnutrition, Independent of Hospitalisation: A Post-hoc Analysis of a Prospective Cohort Study

**Publication:** Clinical Nutrition  
**Publish Date:** 29 Oct 2020  
**Authors:** Luigi Di Filippo, Rebecca De Lorenzo, Marta D’Amico, Valentina Sofia, Luisa Roveri, Roberto Mele, Alessandro Saibene, Patrizia Rovere-Querini, Caterina Conte

This study assessed the incidence of unintentional weight loss and malnutrition in Covid-19 survivors. The study included a total of 213 patients were included in the analysis; 61 patients (29% of the total) had lost >5% of initial body weight (median weight loss 6.5 [5.0 – 9.0] kg, or 8.1 [6.1 – 10.9]%). Patients who lost weight had greater systemic inflammation (C-reactive protein 62.9 [29.0 – 129.5] vs.48.7 [16.1 – 96.3] mg/dL; p=0.02), impaired renal function (23.7% vs. 8.7% of patients; p=0.003) and longer disease duration (32 [27 – 41] vs. 24 [21 – 30] days; p=0.047) as compared with those patients who did not lose weight. This study demonstrated that Covid-19 might negatively impact body weight and nutritional status. In Covid-19 patients, nutritional evaluation, counselling and treatment should be implemented at initial assessment, throughout the course of disease, and after clinical remission.

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