

Abstracts
Årsmøde i klinisk ernæring 2026
Dansk Selskab for Klinisk Ernæring (DSKE)



A1

Changes in nutrition impact symptoms, and nutritional status during treatment for head and neck cancer – preliminary results

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Rationale: Patients with head and neck cancer (HNC) are at risk of unintended weight loss due to reduced food intake, influenced by nutrition impact symptoms (NIS). This study aimed to assess 1) characteristics of patients with HNC and 2) changes in NIS, weight, muscle mass, and muscle function during cancer treatments.

Methods: Patients from the outpatient clinic were offered an extended nutritional evaluation before dietary counseling and a follow-up evaluation about 1 month later. Nutritional risk was assessed using NRS-2002; malnutrition using GLIM criteria; skeletal muscle mass (SMM) using bioelectrical impedance analysis; muscle function using handgrip strength (HGS) and the 30-second chair-stand test (CTS). NIS were assessed using the EATEN-NIS questionnaire. NIS present (NIS-P) were answered as yes/no, while NIS-limiting intake was rated on a 1-10 scale (NIS-points). Paired data were tested using the Wilcoxon Signed Rank test.

Results: A total of 46 patients with HNC (76% men) were included. They had a median age of 69 (IQR: 60-75) years, and a BMI of 26 (IQR: 22-29) kg/m². A total of n=9 (20%) were at nutritional risk, and of these, n=6 (67%) were malnourished. Reduced HGS and SMM were found in n=11 (23%), and reduced CTS in n=12 (26%) of the patients. At follow-up visit (n=24, 52%), median aggravation was found in NIS-P (4.5 to 6.5, p=0.010), and NIS-points (6.5 to 26.5, p=0.0004). Decreases were found in body weight (75.5 to 73.5 kg, p=0.001), HGS (32.5 to 30.7 kg, p=0.011), and SMM (29.3 to 27.1 kg, p=0.027). No change was found in CTS (15 to 15 repetitions, p=0.519)

Conclusion: Patients with HNC experienced worsening of NIS with accompanying fall in weight, muscle mass, and HGS during cancer treatment. These results highlight that attention to nutritional status and NIS during treatment of patients with HNC should be prioritized.

A2

Effekt af øget indtag af energi og protein efter udskrivelse på hospitalsindlæggelser hos ældre med hoftebrud i ernæringsrisiko: Sekundær analyse af et RCT

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Baggrund: Ældre patienter med hoftebrud har høj risiko for genindlæggelse og er ofte i ernæringsrisiko, hvilket kan forværre sygdomsforløbet. Formålet var at undersøge, om øget indtag af energi og protein efter udskrivelse er forbundet med færre hospitalsindlæggelser.

Metode: Dette studie er en sekundær analyse af et randomiseret klinisk forsøg. Patienter ≥ 65 år med hoftebrud i ernæringsrisiko blev inkluderet. Interventionsgruppen (IG) modtog to ernæringsdrikke dagligt i 12 uger efter udskrivelse (613 kcal og 36,5 g protein/dag), mens kontrolgruppen (KG) fik standardbehandling. Outcomes var hospitalsindlæggelser, tid til første indlæggelse, indlæggelsesvarighed og mortalitet inden for 38 uger. Analyser omfattede intention-to-treat og per-protokol (≥ 75 % compliance i IG). Forskelle blev analyseret med Mann-Whitney-test, og relativ risiko (RR) med 95 % konfidensintervaller (CI) blev beregnet.

Resultater: IG havde et højere dagligt indtag af energi og protein end KG (gennemsnitlig forskel: 161 kcal og 9,8 g protein). Blandt patienter med ≥ 75 % compliance var forskellen 376 kcal og 23 g protein/dag. Efter 38 uger havde 31 % i IG været indlagt mod 47 % i KG (RR 0,72; 95 % CI 0,50-1,03; $p = 0,075$). I per-protokol-analysen var indlæggelser lavere i IG (18 % vs. 44 %; RR 0,69; 95 % CI 0,52-0,92; $p = 0,019$). Tid til første indlæggelse, indlæggelsesvarighed og mortalitet viste ingen forskelle.

Konklusion: Øget indtag af energi og protein efter udskrivelse var forbundet med en tendens til færre hospitalsindlæggelser, særligt blandt patienter med høj compliance. Resultaterne indikerer at ernæringsdrikke efter udskrivelse kan potentielt reducere genindlæggelser hos ældre patienter med hoftebrud i ernæringsrisiko.

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A3

Visual portion selection reveals low expected eating capacity in hospitalized patients regardless of nutritional risk status

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Rationale: Hospitalized patients are frequently at nutritional risk and often fail to meet their energy needs due to fasting, treatment and nutritional impact symptoms. Appetite is influenced not only by physiology, cognition, and medication, but also by food-related factors such as the environment, smell, presentation, and portion size. This study examined hospitalized patients' *expected* eating capacity using standardized meal photographs.

Methods: A total of 134 patients in nutritional risk (NRS-2002) hospitalized for ≥ 4 days were included. Patients estimated their expected intake of the upcoming dinner by choosing between photos representing $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, or $1\frac{1}{4}$ of a standard portion, or by selecting "none" or "total tube/parenteral feeding." The same procedure was applied in the same wards to a cross-sectional sample of 208 unselected medical, surgical, and oncology patients independent of nutritional risk status.

Results: Tube or parenteral nutrition was more common in the nutritional risk group than in the cross-sectional group (25% vs. 5%). In the risk group, 48% expected to eat a quarter portion or less compared with 47% in the cross-sectional group. The proportion expecting to consume $\frac{1}{2}$ portion was 15% and 38%, respectively. Only 10% in both groups expected to eat more than 75% of a standard portion.

Conclusion: Both the nutritionally at-risk group and the cross-sectional group were markedly small eaters, with only 10% expecting to consume $\geq 75\%$ of a standard dinner portion. Notably, almost half of all patients anticipated eating $< 25\%$ of a portion, indicating that extremely low expected intake was not directly linked to nutritional risk status. The results highlight the need for hospital meals with small volumes and high nutrient density and suggest that patients can reliably estimate their eating capacity visually.

Indsendt til ESPEN 2026

A4

Effect of an optimized hospital menu on dietary intake in hospitalized patients: a data-driven approach

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Rationale: A previous study from our institution showed suboptimal energy and protein intake among hospitalized patients at lunch and dinner. A more energy and protein dense menu was implemented with focus on familiarity of the dishes. In this study we evaluated whether these changes improved dietary intake.

Methods: In a hospital-based observational study at a publicly funded tertiary referral center, dietary intake was assessed at lunch and dinner at separate time points before and after optimization of the menu. Data were collected across the same medical and surgical wards as the prior study using an identical protocol in both trials. Intake from lunch and dinner buffet meals was measured using weighed food records at component level, with all items weighed before and after consumption to quantify intake. A total of 533 meals were compared with 392 meals from the previous dataset. Differences in intake were analyzed using linear mixed models accounting for clustering within wards.

Results: Energy and protein intake increased following menu modification. At lunch, energy intake increased by +65 kcal (+26%, $p < 0.001$) and protein by +4.2 g (+41%, $p < 0.001$) without change in food weight. At dinner, energy increased by +204 kcal (+77%, $p < 0.001$) and protein by +4.4 g (+38%, $p < 0.001$). Energy density increased at both meals (+54 and +48 kcal/100 g, $p < 0.001$), while protein content (pr. 100 g) increased at lunch (+3.1 g, $p < 0.001$) but not dinner ($p = 0.069$). Food weight was unchanged at lunch but increased at dinner (+56 g, $p < 0.001$).

Conclusion: Optimization of hospital menus increasing energy and protein density incorporating familiar foods improved dietary intake in hospitalized patients. These findings support menu optimization as an effective to improve nutritional intake in routine clinical care.

Indsendt til ESPEN 2026

A5

Anti-inflammatory diet and exercise seem to improve IBD-patient outcomes: A single-armed study

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Rationale: Western diet and physical inactivity are associated with inflammatory bowel disease (IBD) related to disease activity and fatigue. This study investigated an anti-inflammatory diet combined with physical exercise related to fatigue and disease symptoms, body composition, carbon dioxide emissions (CO₂e) and gut microbiota composition.

Methods: This single-arm intervention study included Crohn's disease and ulcerative colitis outpatients. Participants received counselling on dietary anti-inflammatory principles and exercise at baseline (W0) and were followed at four (W4) and eight weeks (W8). Optional recipes with limited fish, chicken and fermented dairy supported protein intake. Outcomes included fatigue, disease activity, body composition, dietary intake and CO₂e, assessed at baseline and follow-ups. Gut microbial composition and dietary plant intake were profiled using 16S rRNA and trnL amplicon sequencing approach at W0 and W4. Dietary adherence was validated through animal-derived dietary markers detection.

Results: Forty-two completed the study (60.9% female; mean age 40.5±12.1 years). From W0 to W8, disease activity, fatigue, BMI, weight, fat mass, energy intake and CO₂e decreased (p<0.05) and protein intake maintained (p=0.179). Muscle mass (%) and exercise time increased (p<0.001). Fatigue correlated positively with disease activity at W4 and W8, and negatively with muscle mass at all time points (p<0.05). Increased plant genera, elevated bacterial diversity (UC especially) and higher relative abundance of the anti-inflammatory genus *Faecalibacterium* were observed. High adherence to the prescribed dietary regimen was confirmed.

Conclusion: Combining anti-inflammatory diet and exercise reduced fatigue, disease symptoms, fat mass and dietary CO₂e while preserving muscle mass and improving gut health in patients with IBD.

Indsendt til ESPEN 2026

A6

Maybe we should refer earlier - clinical outcomes in hospitalized patients referred to dental hygienist

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Rationale: Oral health plays a significant role in the overall well-being of hospitalized patients, and poor oral hygiene can contribute to a range of complications. The aim of this study was to determine whether clinical outcomes in hospitalized patients were associated with the level of oral care provided by a dental hygienist (DH).

Methods: We conducted a prospective cohort quality improvement study in patients referred to DH by doctors, nurses or dieticians. Patients were assigned one of three levels of care: preventative, extended and advanced – based on assessment by the DH. Statistical analysis included the following: Chi2 test and the Kruskal-Wallis H test, simple logistic regression analysis, Poisson regression models and Cox regression.

Results: A total of 483 patients received oral health interventions, where 14.9%, 74,3% and 10.8% received preventative, extended and advanced care, respectively. Compared to preventative care, patients receiving advanced care had higher risk of mortality (HR: 2.37, 95%CI: 1.36-4.12). Among patients readmitted within six months, patients who had received extended or advanced care had shorter length of stay (LOS) (IRR: 0.50, 95%CI: 0.38-0.67) and fewer infection-related diagnosis. No difference was observed regarding LOS during primary hospitalization or number of readmissions.

Conclusion: This study found that poor oral health and the need for advanced care from the DH during hospitalization was associated with higher mortality, whereas extended or advanced care was associated with fewer infections during readmissions as well as shorter LOS during readmission. Further studies should focus on the preventative potential of proactive, structured oral care in hospitals.

Indsendt til ESPEN 2026

B1

Nutritional coverage declines after intensive care unit (ICU) transfer: a retrospective study of enteral nutrition practices

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Rationale: The transition from ICU to general wards is a vulnerable clinical and organizational phase marked by disruption of continuity of care. This study evaluates nutrition planning and adequacy during this transition in patients receiving enteral nutrition.

Methods: A retrospective quality improvement study including adults transferred from the ICU to a pulmonary ward receiving enteral nutrition (May 2023 to January 2025). Data was extracted from electronic medical records. Outcomes included presence of a nutritional plan (documented requirements and prescription) at transfer, time to initiation of enteral feeding on the ward and energy and protein coverage (%) on the day before transfer (day-1) and day+1 and +3.

Results: Fifteen patients were included (median age 73 years, 63% male). A nutrition plan was present in 53% of patients at transfer. Median energy coverage decreased from 82% on day-1 to 46% and 51% on day+1 and +3, respectively. Protein coverage declined from 84% on day -1 to 49% and 55% on day +1 and +3. The proportion achieving $\geq 75\%$ energy coverage decreased from 57% on day -1 to 14% on day+1 (McNemar test, $p=0.07$). Similarly, protein coverage $\geq 75\%$ declined from 64% to 29% ($p=0.06$) but did not reach statistical significance. Median time to first enteral feeding on the ward was 5 hours (IQR 3-20).

Conclusion: Nutritional coverage declined after ICU transfer, potentially due to incomplete nutrition planning and inconsistent timing of feeding initiation. These findings support the need for structured nutritional support during ICU-to-ward transitions.

B2

AI body composition analysis from routine imaging predicts toxicity in patients with colorectal cancer, enabling risk stratification and targeted prehabilitation

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Rationale: Reduced skeletal muscle mass (SMM), reflecting nutritional impairment related to cancer and ageing, is associated with increased risk of adverse outcomes in oncology and represents a marker of nutritional vulnerability. Despite routine availability, CT-based assessment of SMM is not used in clinical practise. This study evaluated an AI-based 3D segmentation tool to extract SMM from diagnostic imaging and assess its association with early severe toxicity, with potential application in nutritional risk stratification and prehabilitation.

Methods: This retrospective study included colorectal cancer patients undergoing FOLFOX/CAPOX treatment at Aalborg University Hospital from 2014-2024. Baseline routine diagnostic CT scans were retrieved along with demographic and treatment-related data. A fully automated 3D segmentation tool (DAFS, Voronoi Inc. Canada) was used to quantify SMM from routine imaging. Primary endpoint was early severe toxicity within first two cycles. Differences in imaging-derived muscle measures between patients with and without early severe toxicity were assessed using two-sample t-tests.

Results: A total of 254 patients were included (52% female, median age 65), of whom 49% experienced severe toxicity. The segmentation tool had a mean processing time of 6 min per patient and performed batch analyses. Patients experiencing early severe toxicity had significantly lower skeletal muscle volume and estimated lean body mass compared to those without toxicity (1665 vs 1901 cm³, p=0.0001; 45.0 vs 49.3 kg, p=0.0007).

Conclusions: Automated body composition analysis from routine imaging identifies patients with reduced muscle reserves who have an increased risk of early severe toxicity. This approach may support nutritional risk stratification and targeted prehabilitation without additional patient burden.

B3

What else could I choose? Older adults' prerequisites for nutritional self-care

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Rationale: Malnutrition is common among older adults (OAs) receiving homecare services, and its incidence is expected to rise with the growing global OA population. Motivation and education of the OAs themselves may improve their nutritional self-care and thus prevent malnutrition. This study aimed to identify factors influencing the prerequisites for nutritional self-care among OAs living at home.

Methods: 16 Danish OAs, ≥65 years, in home care participated in two semi-structured interviews lasting 9–82 minutes, either in person or by phone. The interviews were part of a feasibility test of an intervention aimed at the early detection of malnutrition risk. All interviews were recorded, transcribed and analysed using qualitative content analysis.

Results: In the study setting, most OAs experienced health issues, including chronic conditions that limited their capacity to improve nutritional self-care. Additionally, decisions about diet and physical activity were often influenced by social connections, habits and cultural norms, rather than by evidence-based knowledge. As an 86-year-old man remarked when asked about his choice of sliced sausage, liver pâté and cheese for his bread: 'What else should I choose?' Furthermore, motivation for some appeared to depend on age; for instance, a 96-year-old woman stated, 'I'm almost 100 years old... now I want my self-determination,' showing reluctance to make significant changes. However, overall, the elderly demonstrated considerable trust in authorities and willingly allowed home care staff to weigh them and ask riskrelated questions.

Conclusion: Several factors limit OAs prerequisites for nutritional self-care: 1) state of health, 2) access to research-based knowledge and 3) age and life situation. Motivational strategies are effective only for some OAs; structural supports tailored to individuals' resources and life situations are needed instead.

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Ernæringsrisiko blandt indlagte patienter: en gentagen flash mob-undersøgelse

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Introduktion: At sikre tilstrækkelig ernæring under indlæggelse er afgørende for optimal restitution og for at reducere komplikationer og mortalitet. Dette understreger vigtigheden af ernæringsbehandling hos patienter i ernæringsrisiko. Studiet havde til formål at: 1) vurdere ernæringsrisiko, ernæringsindtag og prævalensen af underernæring over tid; og 2) sammenligne 30-dages overlevelse i forhold til ernæringsrisiko.

Metoder: Tre tværsnitsundersøgelser på én dag, udført med en flash mob-studie tilgang, blev gennemført på Herlev Hospital i 2019, 2023 (efter indførelse af nyt madkoncept) og 2025. Indlagte patienter ≥ 18 år og indlagt i ≥ 4 dage blev inkluderet, mens patienter fra intensiv-, palliativ-, føde- og akutafdelinger blev ekskluderet. Indsamlede data omfattede ernæringsrisiko (NRS-2002), ernæringsindtag, sygdomsrelateret underernæring (GLIM) samt 30-dages overlevelse.

Resultater: Af de 410 inkluderede patienter var 65 % i ernæringsrisiko i 2019 og 2023, hvilket steg til 75 % i 2025. Patienter i ernæringsrisiko havde længere indlæggelsestid (8 vs. 7 dage, $p=0,003$). Energi- og proteinbehov blev dækket hos henholdsvis 35 % og 24 % af patienterne i 2019, hvilket steg til 70 % og 51 % i 2023, og faldt til 60 % og 47 % i 2025. Andelen klassificeret som underernæret forblev stabil (60 % vs. 59 %). Efter justering for alder, køn, BMI og indlæggelsestid var ernæringsrisiko associeret med lavere 30-dages overlevelse (OR 0,46; 95 % CI 0,23–0,94; $p=0,03$).

Konklusion: Prævalensen af patienter i ernæringsrisiko er steget over tid. Andelen der fik opfyldt energi- og proteinbehov blev forbedret indtil 2023, men faldt i 2025, hvilket tyder på, at ernæringsindsatsen ikke er forbedret og at det nye madkoncept ikke kan stå alene. Lavere overlevelse blandt patienter, der var i ernæringsrisiko, understreger behovet for målrettede ernæringstiltag.

B5

Comparison of dietitian-estimated and indirect calorimetry-derived energy expenditure in patients undergoing treatment for cancer – preliminary results

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Rationale: Patients with cancer are at high risk of unintentional weight loss, which may compromise treatment. In clinical practice, energy requirements are typically estimated using formulas (e.g. kcal/kg), which typically do not incorporate body composition. The aim was to compare estimated and measured expenditure and evaluate the impact of muscle mass.

Methods: Patients referred to a clinical dietitian from the oncology outpatient clinic were included. Resting energy expenditure (REE) was measured by indirect calorimetry (IC) and multiplied by an activity factor (AF) to estimate total energy expenditure (TEE). Estimated TEE was calculated by dietitians using weight-based formulas (27-35 kcal/kg) or the Harris-Benedict equation. Adjusted body weight was used for BMI>30. Appendicular skeletal muscle mass index (ASMI) was measured using bioelectrical impedance analysis. Agreement was defined as $\pm 10\%$ of IC-derived TEE. Bland-Altman analysis assessed agreement, and a Kruskal-Wallis test assessed ASMI across discrepancy groups.

Results: A total of 52 patients (75% men) were assessed (33 had head and neck cancer, 11 had pancreatic cancer and 8 had other cancers). Median TEE was 2240 kcal/day [IQR 1980, 2420] when measured by IC and 2150 kcal/day [IQR 1910, 2470] when estimated. Agreement between IC and dietitians' estimates was found in 60% of patients, whereas 27% were underestimated and 14% were overestimated. Bland-Altman analysis showed a mean bias of -64 kcal between estimated and measured TEE (95% LoA -559 - 431 kcal/day). Kruskal-Wallis test suggested lower ASMI in patients with discrepancies in estimated TEE ($p=0.09$).

Conclusion: In patients with cancer, weight-based formulas differed from measured energy expenditure in 40% of the patients, with a trend towards lower ASMI observed in these patients.

Olfactory and gustatory function and nutritional risk during palliative chemotherapy

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Rationale: Smell and taste disturbances are common in patients receiving chemotherapy and may impair food intake and increase the risk of malnutrition. Yet, objective data on olfactory and gustatory function during palliative chemotherapy remain limited. This study aimed to assess olfactory and gustatory function and their association with nutritional risk in patients receiving palliative chemotherapy.

Methods: This prospective cohort study included newly diagnosed patients with lung, pancreatic, ovarian, or colorectal cancer receiving palliative chemotherapy. Nutritional risk was evaluated using Nutritional Risk Screening 2002. Olfactory function was assessed with the Sniffin' Sticks Threshold, Discrimination and Identification (TDI) test. Gustatory function was assessed with a four-item taste identification test (sweet, sour, salty, bitter). Hyposmia was defined as TDI <30.75; hypogeusia as ≥ 1 taste identification error. Patients were tested at baseline and after 12 weeks.

Results: Forty-four patients were included (57% female, median age 67 years). At baseline, 41% were at nutritional risk, 66% had hyposmia and 16% hypogeusia. Mean total TDI was 28 ± 6.2 at baseline and 27.6 ± 6.0 at follow-up ($p=0.67$), with a decline in identification over time ($p = 0.006$). The proportion of patients with hypogeusia increased from 16% at baseline to 25% at follow-up ($p = 0.39$), with errors most often for sour and bitter tastes. Nutritional risk tended to be more frequent in patients with hyposmia than in patients without hyposmia (52% vs. 20%, OR 4.15, $p=0.057$). No differences were observed for hypogeusia (57% vs. 38%, OR 2.15, $p=0.419$).

Conclusions: Hyposmia and hypogeusia are common during palliative chemotherapy, potentially contributing to nutritional risk. Early sensory assessment may help identify patients at risk and guide timely targeted nutritional support.

Indsendt til ESPEN 2026

C1

Allocated dietitians improves food intake in patients in nutritional risk

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Rationale: Adequate nutrition is crucial for hospitalized patients, particularly long-term inpatients at nutritional risk. This study, part of a regional nutrition audit, assessed the coverage of energy and protein needs in patients who had been hospitalized for 4 days or more and were identified as being at nutritional risk using Nutritional Risk Screening 2002 (NRS-2002). This study aims to compare nutritional intake in wards with and without allocated dietitians. Wards with allocated dietitians included hematology and oncology departments, where patients often present with complex disease courses and pronounced challenges in meeting nutritional requirements.

Methods: Registration took place as a single day observation in autumn 2025. 147 patients across the entire hospital with about 600 beds total were at risk patients, who had been hospitalized for 4 days or more. Data were collected using dietary records or, if missing, interviews and staff assessments of intake categorized in quartiles of energy and protein requirements. Patients were stratified by wards with or without allocated dietitians. Sufficient coverage was defined as $\geq 75\%$ of individual energy and protein needs.

Results: On wards with allocated dietitians 88% of patients achieved sufficient energy and 76% patients achieved sufficient protein intake; none received less than 50% of either energy or protein need. On non-allocated dietitian wards 42% patients had sufficient energy intake and 35% sufficient protein intake. A substantial proportion received less than 50% of their requirements: 30% for energy and 46% for protein.

Conclusions: Allocation of dietitians is associated with higher coverage of energy and protein needs in nutritional risk inpatients. At non-allocated dietitian wards have a significant proportion of patients with critically low intake, emphasizing the importance of targeted nutritional interventions.

Indsendt til ESPEN 2026

C2

Gastric emptying and ghrelin responses to oral nutritional supplements with varying protein content: a pilot crossover study in healthy adults

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Background & Aims: Oral nutritional supplements (ONS) are widely used in clinical practice, yet their effect on gastric emptying and appetite regulation may vary with composition. This study aimed to compare gastric emptying, subjective satiety, and exploratory ghrelin responses following ingestion of four drinks differing in protein and energy content.

Methods: In a single-center crossover study, five healthy adults (23–30 years) consumed four 200 mL drinks on separate days. Gastric emptying was assessed using the paracetamol absorption test (T_{max}, AUC). Subjective appetite and sensory perception were evaluated using visual analogue scales (VAS). Serum total ghrelin was analyzed as an exploratory biomarker using ELISA at multiple time points up to 150 minutes.

Results: Low-protein drinks demonstrated significantly faster gastric emptying, with a shorter T_{max} than high-protein drinks ($p < 0.05$). No significant differences were observed in AUC or VAS-derived satiety scores. However, ghrelin responses differed between drinks. The high-protein drink (16 g/100 mL) induced the most pronounced and sustained suppression of ghrelin, whereas the low-protein drink (lower than 0.5 g/100 mL) showed only transient suppression followed by a marked increase at later time points. Intermediate responses were observed for drinks with moderate protein content (4.5–7 g/100 mL).

Conclusion: Protein and energy content influence gastric emptying and hormonal regulation of appetite. Although subjective satiety did not differ significantly, ghrelin responses suggest enhanced physiological satiety with high-protein formulations. These findings support the importance of considering both gastric emptying and hormonal mechanisms when designing ONS for clinical use.

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C3

“Alle vores patienter, er jo næsten i ernæringsmæssig risiko”: Kliniske lederes perspektiver på afsnitsdiætistens rolle på danske hospitaler - et kvalitativt interviewstudie

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Rationale: Sygdomsrelateret underernæring er en af de væsentligste udfordringer i hospitalsvæsenet og er forbundet med øgede komplikationer, længere og dyrere indlæggelser samt genindlæggelser. I mange år har ernæringsindsatser været blandt de opgaver, som plejepersonalet har haft vanskeligt ved at prioritere i en hverdag præget af stigende klinisk kompleksitet og dokumentationskrav. I 2021 introducerede Aalborg Universitetshospital muligheden for at ansætte kliniske afsnitsdiætister i ledige stillinger normeret til sygeplejersker eller social- og sundhedsassistenter. Formålet med dette studie er at undersøge kliniske lederes (sygeplejefaglige og lægefaglige) perspektiver, på hvordan en afsnitsdiætist kan integreres i afsnittet med fokus på et udviklende arbejdsmiljø og ernæringsfaglig kvalitet for indlagte patienter.

Metode: Data blev indsamlet gennem semistrukturerede interviews i perioden september til december 2025. Data blev analyseret ved tematisk analyse af Braun og Clarke og inspireret af hermeneutisk videnskabsteoretisk tilgang.

Resultater: Interviewene omfattede 12 oversygeplejersker og 8 ledende overlæger. Fire temaer blev identificeret: 1) øget kvalitet og kompetenceløft, 2) en integreret del af teamet, 3) tværfagligt samarbejde og udfordringer, og 4) fremtiden og prioritering af ressourcer.

Konklusion: Baseret på dette interviewstudie udtrykkes der en generel tilfredshed med funktionen ”afsnitsdiætist”, som ses at være med til at løfte kvaliteten og vidensniveauet for ernæringsindsatsen på afdelingerne. Blandt interviewpersonerne opleves det, at udbyttet af den ernæringsfaglige viden anvendes i højere grad ved, at diætisten er en fuldt integreret del af afdelingen, hvor det tværfaglige samarbejde blandt personalegrupperne er essentielt for at få indsatsen til at lykkes.

C4

Hospital food service staff experiences of transitioning to ward-based à la carte service: a qualitative study

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Rationale: Hospital food services are increasingly adopting ward-based à la carte models, sometimes involving ward-based kitchens where meals are prepared and served closer to the patient. While this may enhance patient-centered care and nutritional intake, it also changes the work context and roles of food service staff. This study aimed to explore food service staff's experiences of this transition.

Methods: Semi-structured interviews were conducted with 13 trained food service staff (e.g. catering assistants, chefs) at a Danish regional hospital who had transitioned from large-scale centralized kitchen production to decentralized ward-based à la carte kitchens. Interviews were audio-recorded, transcribed verbatim, and analyzed using qualitative content analysis.

Results: Four themes were identified:

- 1) From Collective Work to Independent Practice with Interdisciplinary Collaboration.
- 2) Patient Contact and Feedback as Sources of Meaning and Job Satisfaction.
- 3) Reduced Physical Strain and Changing Work Demands.
- 4) Changes in the Use of Culinary Skills and Professional Identity.

Participants described a shift from strong collegial communities to more independent work requiring collaboration with healthcare staff. While many missed the social environment and preparing meals from scratch, they valued increased responsibility and patient contact as key sources of meaning. The transition reduced physical demands but introduced new challenges related to time pressure, coordination, and relational aspects of interacting with vulnerable patients.

Conclusions: The transition from centralized production to ward-based à la carte service fundamentally reshapes food service staff roles, competencies, and collaborative practices. This calls for targeted training in patient interaction and interdisciplinary collaboration to support improved nutritional care.

C5

Home enteral nutrition clinic (HENC) in numbers: a retrospective analysis of patient characteristics

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Rationale: Late 2023, a centralized clinic for adult patients receiving home enteral nutrition was established at Rigshospitalet as a single point of contact for patients, relatives, and professionals. The clinic provides individualized dietetic counselling, tailoring nutritional treatment to daily life at home, including guidance on appropriate feeding equipment and nutritional products. This study describes the characteristics of patients referred during the first six months of operation.

Methods: This retrospective observational study included consecutive patients referred to HENC between 1 February 2024 and 1 August 2024. Inclusion criteria were referral upon discharge with a minimum of one contact with a dietitian, either virtually or face-to-face.

Results: During the six-month study period, 91 patients were referred to the clinic; 76 had a nasogastric tube and 15 had a gastrostomy. Age at referral ranged from 20 to 90 years (median 68 years). Among the 86 patients with available historical weight data from the preceding six months, 64% had experienced weight loss (median 7.3 kg). The primary underlying diagnosis was oncological disease in 77 patients, including those undergoing active treatment, receiving palliative care, or experiencing long-term treatment-related sequelae. The remaining 14 patients had mixed medical or neurological conditions. Most feeding tubes (n=73) were placed during hospital admission (median length of stay 10 days), while 18 patients had tube placement in an outpatient setting. More than half of the referred patients had no prior contact with a dietitian before tube placement.

Conclusion: This first characterization of the patient population referred to the HENC at Rigshospitalet reflects the hospital's highly specialized clinical profile, with a predominance of oncological patients and a substantial degree of pre-referral weight loss.

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C6

Effect of allocated dietitians on nutritional adequacy in hospitalized patients: a real-world observational study

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Rationale: Organizational factors may influence nutritional intake in hospitalized patients, but the impact of structured dietitian involvement in routine care remains unclear. At our institution, allocated dietitians are present in hematology and oncology wards, where they have primary responsibility for nutritional care, including systematic screening of all patients and structured follow-up of those at nutritional risk. We evaluated whether this model improves nutritional adequacy.

Methods: In a hospital-based observational study at a publicly funded tertiary referral center, data were collected from seven medical and surgical wards, three with allocated dietitians and four without. Full-day dietary intake was recorded using weighed food records at component level, with direct observation by trained study personnel during daytime hours (07:00–19:00) and structured registration overnight by nursing staff. A total of 289 full-day observations from 135 patients were included. Nutritional adequacy was defined as $\geq 75\%$ of estimated energy and protein requirements. Differences between wards with and without dietitians were analyzed using mixed-effects logistic regression accounting for repeated measures within patients.

Results: Wards with allocated dietitians had higher odds of patients meeting $\geq 75\%$ of protein requirements (OR 3.34, $p=0.036$). Odds of meeting $\geq 75\%$ of energy requirements were also higher (OR 2.25, $p=0.121$), although this did not reach statistical significance.

Conclusion: Wards with allocated dietitians were associated with improved nutritional adequacy, particularly for protein intake. These findings support the use of allocated dietitians as an effective and clinically relevant strategy to improve nutritional care, particularly in settings with a high burden of nutritional risk.

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C7

Effect of an expanded breakfast buffet on daily energy and protein intake in hospitalized patients: a crossover quality improvement study

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Rationale: Hospitalized patients often fail to meet energy and protein requirements; breakfast following the overnight fast may be an opportunity to improve intake. This study evaluated whether an expanded breakfast buffet increases total daily energy and protein intake.

Methods: A quasi-randomized crossover study was conducted in seven medical and surgical wards at a publicly funded tertiary referral centre. Breakfast alternated daily between the standard hospital buffet and an expanded buffet offering a wider selection of energy- and protein-rich foods. Patients were observed for up to four consecutive days during admission, allowing exposure to both conditions. Dietary intake was assessed using weighed food records across all meals, with full-day intake recorded through direct observation during daytime (07:00–19:00) and structured nursing staff registration overnight. Only days with complete dietary registration were included (e.g., excluding fasting or partial days). Within-patient differences were analysed using linear mixed models.

Results: 71 patients contributed paired data. The expanded breakfast increased energy (+150 kcal, $p < 0.001$) and protein (+6.1 g, $p < 0.001$) intake, with no compensation at later meals. This translated into higher total daily intake, with increases of +207 kcal ($p = 0.008$) and +7.5 g protein ($p = 0.012$). Energy and protein adequacy improved by +9.2 and +7.6 percentage points ($p = 0.015$ for both). Effects were most pronounced among patients with the lowest baseline intake, indicating greatest benefit in those at highest nutritional risk.

Conclusion: An expanded breakfast buffet increased total daily energy and protein intake. This simple and scalable intervention represents a promising strategy to improve nutritional intake in routine clinical care, with potential for broader application across hospital meals.

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Magnesium status in adults: a scoping review of assessment methods and clinical challenges

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Rationale: Magnesium deficiency is associated with multiple clinical conditions, and several patient groups are at increased risk due to malabsorption, diarrhoea, and medication interactions. Accurate assessment is important in clinical and nutritional care; however, detection remains challenging. Plasma magnesium is widely used but may not reflect intracellular depletion. Alternative methods exist, but their clinical applicability remains unclear. This scoping review aims to describe methods that assess magnesium status and to explore challenges in identifying deficiency in clinical practice.

Methods: A scoping review will be conducted in accordance with PRISMA-ScR guidelines. Searches will be performed in MEDLINE, Embase, Scopus, the Cochrane Library, and CINAHL. Studies that assess magnesium status in adults using biochemical or clinical methods will be included. Data will be charted on measurement methods, biological compartment (extracellular vs intracellular), analytical techniques, and clinical applicability. Findings will be synthesised descriptively, focusing on patterns, limitations, and knowledge gaps.

Results: We expect a range of methods, including plasma, intracellular (e.g. erythrocytes, PBMC), urinary, and reference-based measures. Preliminary findings suggest substantial heterogeneity, limited use of reference standards, and inconsistencies in interpretation across populations. Plasma magnesium may underestimate deficiency, while intracellular methods show variability and limited standardisation. Practical constraints further limit clinical use.

Conclusions: Current methods that assess magnesium status have important limitations in detecting deficiency in clinical practice. This review highlights the need for more reliable and clinically applicable approaches to support patient management and nutritional care.

Acid/base homeostasis in patients with an ileostomy: evaluation of urinary net acid excretion

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Rationale: Due to altered intestinal anatomy, persons with an ileostomy lose water and electrolytes and are often chronically volume depleted, leading to increased risk of chronic kidney disease (CKD). Preliminary data show higher urinary net acid excretion (NAE) in patients with ileostomy than in healthy controls, indicating excessive intestinal bicarbonate loss. This might contribute to the progression of CKD. The prevalence and clinical impact of elevated urinary NAE remains unknown.

Methods: This cross-sectional study aims to estimate the proportion of ileostomy patients with elevated NAE compared with healthy controls using 24-hour collections and urine sample. Net endogenous acid production, calculated from urinary urea (carbamide) and potassium, and venous blood gas analysis will help determine whether elevated NAE reflects chronic intestinal bicarbonate loss causing renal compensation.

Results: Preliminary data suggest higher NAE, larger NAE–NEAP difference and lower plasma bicarbonate in the ileostomy group, consistent with bicarbonate loss and renal impairment. These results are preliminary and require final statistical analysis and adjustment for confounding. Data acquisition is ongoing.

Discussion: If confirmed, findings from this study will form the basis for future studies addressing the consequences of elevated NAE and guide targeted interventions to correct it. Ultimately, urinary NAE may provide a clinic-ready function marker to evaluate acid/base status in people living with an ileostomy.

C10

Feasibility test of a screening intervention for early detection of malnutrition risk among community-dwelling older adults

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Rationale: Malnutrition is common among older adults (OAs) receiving home care services. Although early detection and multiple interventions are recommended, a persistent gap remains between recommendations and routine practice. We developed and feasibility tested an intervention for early detection of malnutrition risk (including a screening procedure) among OAs aged ≥ 65 years, in home care. To address the research-practice gap, we applied a hybrid feasibility–implementation design and embedded an implementation strategy (including learning activities). This abstract report preliminary results from the feasibility test.

Methods: The Medical Research Council framework for complex intervention research guided the study design. The study was conducted within a Danish home care setting. Various methods were used to gather data. Qualitative data were examined using qualitative content analysis, while quantitative data were analysed descriptively.

Results: Preliminary findings indicate that staff could deliver the screening procedure as intended, and the learning activities from the implementation strategy appeared well-suited to support their competence development. However, various contextual factors challenged both the implementation strategy and screening procedure, including time constraints, leadership support, culture and organisational structures. OAs expressed willingness to participate, while variations in their capacity to engage in preventive nutritional activities, indicating a need for adaptations.

Conclusion: The intervention shows promise for use in home care settings, provided that key components are adapted to available resources, staff capacity, organisational structures and local practice culture. These findings support stepwise targeted and facilitated development to support uptake. Furthermore, organisational support is essential for securing intervention resources.