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Citation:

Windle, A and Burke, D and Ispoglou, T (2023) The Feasibility of an Essential Amino Acid Supplement for Addressing Protein and Energy Deficiencies in Postoperative Elective and Emergency Colorectal Patients. In: 13th International Conference on Frailty & Sarcopenia Research, 22 March 2023 - 24 March 2023, Toulouse.

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Plasma amino acid (AA) were measured by Accutag (Waters) method. Postprandial «areas under the curve» (iAUC) of each AA, Insulin and glucose were calculated, means \pm SE and the difference ($p < 0.05$) between the groups by analysis of variance in repeated measures (one way ANOVA). **Results:** The total amount of leucine ingested is identical between meals: 3, 2.8, 3.1 and 2.9g for Lac and PPF1,2,3. The same is true for valine, isoleucine, lysine and the sum of sulfur AAs (Met and Cys). The ingestion of aromatic AA (Phe and Tyr) and Arg is higher for PPF vs Lac (+68% and +66%) and that of lower Thr for PPF vs Lac, -35%. 2). The iAUC tended to be lower (-24% for Leu; $p < 0.05$ PPF3 vs Lac), -20% for Val (ns), -27% for Ileu, $p < 0.05$ for all PPF vs Lac). For Thr, the difference is accentuated on the iAUC (-66% vs Lac against -35% for the ingested for all the PPFs). For Met and Cys, despite an identical intake between PPF and Lac, no significant increase in their plasma concentration is observed and the iAUC remains zero for all, unlike that of Lac ($p < 0.05$). **Conclusion:** The theoretical construction of mixtures of vegetable proteins allowing an identical intake in Leu to 30g of whey does not allow in vivo in healthy elderly men to obtain the same plasma leucinaemias. Moreover, at the same ingested, the sulfur-containing AAs do not increase with the PPFs, suggesting a very altered and specific bioavailability for these AAs. In conclusion, there is a difference in the use and/or metabolism of certain AAs depending on whether they are of plant or animal origin. This aspect should be taken into account in seniors where AA intake may already be reduced.

P8/5- THE FEASIBILITY OF AN ESSENTIAL AMINO ACID SUPPLEMENT FOR ADDRESSING PROTEIN AND ENERGY DEFICIENCIES IN POSTOPERATIVE ELECTIVE AND EMERGENCY COLORECTAL PATIENTS. Angela Windle(1), Dermot Burke(1), Theocharis Ispoglou(2) ((1) School of Medicine, University of Leeds, UK; (2) Carnegie School of Sport, Leeds Beckett University, UK)

Background: Patients undergoing abdominal surgery are likely to have sarcopenia and reduced appetite, while associated energy and protein intake deficiencies can pose an issue to older surgical patients (Weimann et al, 2021). Protein enhances satiety so it has the potential to exacerbate energy deficiencies. Essential amino acid (EAA) supplements have been proposed as acceptable alternative means to address protein deficiencies since they do not suppress appetite in older adults (Ispoglou et al., 2021). However, it is not known if these supplements are acceptable to surgical patients. **Objectives:** To investigate the feasibility and acceptability of a nutritional supplement in two groups of surgical patients. **Methods:** A feasibility study was conducted in older (>60 years) postoperative elective (n=8) and emergency (n=8) abdominal surgery patients. Mean palatability scores of the supplement were obtained using visual analogue scales (Flint et al. 2000). Patients were then asked to consume the gel twice daily for four weeks. **Results:** Sixteen patients (5 female and 11 male) with a mean age of 68.81 (\pm 6.31) years completed palatability assessments. Elective patients found the gel more acceptable than the emergency patients by

giving better scores in visual appeal, taste, and palatability. The aftertaste score was worse in the emergency group. Half of the elective patients complied with regime, one patient completed two weeks, two completed five and ten days and one patient withdrew. The emergency patients contrasted with elective patients where one person completed the regime. **Conclusion:** The acceptability of the supplement and compliance with the postoperative regime was better in the elective patients. Our data suggests that an EAA supplement could be part of nutritional support for elective patients, however, we would advise clinical trials to further test its efficacy. Postoperative taste is known to alter following colorectal surgery (Welchman et al, 2014), but it has not been previously identified that postoperative patients' taste may differ in elective or emergency cases. Our palatability assessments suggest that a bitter aftertaste, likely due to the addition of EAAs, was more evident to the emergency patients. This further highlights the need for bespoke approaches to develop supplements to address protein deficiencies. **References:** Butterworth, M., Lees, M., Harlow, P., Hind, K., Duckworth, L., & Ispoglou, T. (2019). Acute effects of essential amino acid supplement-based and whey protein supplements on appetite and energy intake in older women. *Appl Physiol Nutr Metab*, 44 (11), pp.1141-1149; Flint, A., Raben, A., Blundell, J. E., & Astrup, A. (2000). Reproducibility, power, and validity of visual analogue scales in assessment of appetite sensations in single test meal studies. *International journal of obesity and related metabolic disorders : journal of the International Association for the Study of Obesity*, 24(1), 38-48; Ispoglou, T., Witard, O. C., Duckworth, L. C. & Lees, M. J. (2021). The efficacy of essential amino acid supplementation for augmenting dietary protein intake in older adults: implications for skeletal muscle mass, strength and function. *Proc Nutr Soc*, 80, 230-242; Weimann, A., Braga, M., Carli, F., Waltzberg, D. Bischoff, S.C. & Singer, P.. (2021) ESPEN practical guideline: Clinical nutrition in surgery. *Clinical Nutrition* 40, pp. 4745-4761; Welchman, S., Hiotis, P., Pengelly, S., Hughes, G., Halford, J., Christiansen, P., & Lewis, S. (2014). Changes in taste preference after colorectal surgery: A longitudinal study. *Clinical Nutrition (Edinburgh, Scotland)*, 34(5), 881-884.