Curriculum Vitae dr. Michelle Weijzen

Research Statement: a narrative on your scientific career in past, present and future

Short CV

Michelle Weijzen obtained her MSc degree in Health Food Innovation Management at Maastricht University in 2016. Subsequently, her PhD at Maastricht University has focused on protein intake to support muscle health in a clinical setting (1/10/2016-31/08/2022) under supervision of prof. Luc van Loon and dr. Lex Verdijk. This required her to apply a variety of techniques such as dietary intake analysis, tracer infusions, skeletal muscle biopsies, labelled nutrient ingestion, and blood sampling in both healthy and clinical populations. Furthermore, she has applied imaging techniques such as DXA, CT and ultrasound. She is worked as a postdoctoral researcher at REVAL Rehabilitation Research Center, UHasselt (1/11/2022- 30/09/2023) under supervision of prof. Frank Vandenabeele. Her main focus was on muscle metabolism in critically ill patients. Currently, she is an assistant professor at the department of Human Biology, Maastricht University. Her research focuses on the role of nutrition and physical activity in maintaining and improving muscle health in clinical populations, particularly during illness or inactivity. A key aspect is developing and implementing strategies to enhance dietary intake and physical activity, with an emphasis on preventing muscle mass and function loss during hospitalization and recovery.

Publications

Weijzen MEG, van Loon LJC. Reply - Letter to the editor: Access to a pre-sleep protein snack increases daily energy and protein intake in surgical hospitalized patients. Clin Nutr. 2024 Aug;43(8):1888-1889. doi: 10.1016/j.clnu.2024.06.032. Epub 2024 Jun 28. PMID: 38970942.

Weijzen MEG, Kohlen M, Monsegue A, Houtvast DCJ, Nyakayiru J, Beijer S, Geerlings P, Verdijk LB, van Loon LJC. Access to a pre-sleep protein snack increases daily energy and protein intake in surgical hospitalized patients. Clin Nutr. 2024 May;43(5):1073-1078. doi: 10.1016/j.clnu.2024.03.016. Epub 2024 Mar 28. PMID: 38579369.

Fuchs CJ, Trommelen J, **Weijzen MEG**, Smeets JSJ, van Kranenburg J, Verdijk LB, van Loon LJC. Becoming a World Champion Powerlifter at 71 Years of Age: It Is Never Too Late to Start Exercising. Int J Sport Nutr Exerc Metab. 2024 Mar 7:1-9. doi: 10.1123/ijsnem.2023-0230. Epub ahead of print. PMID: 38458181.

Fuchs CJ, Hermans WJH, Nyakayiru J, **Weijzen MEG**, Smeets JSJ, Aussieker T, Senden JM, Wodzig WKHW, Snijders T, Verdijk LB, van Loon LJC. Daily blood flow restriction does not preserve muscle mass and strength during 2 weeks of bed rest. J Physiol. 2024 Feb 27. doi: 10.1113/JP286065. Epub ahead of print. PMID: 38411283.

van Gassel RJ, **Weijzen ME**, Kouw IW, Senden JM, Wodzig WK, Olde Damink SW, van de Poll MC, van Loon LJ. Administration of Free Amino Acids Improves Exogenous Amino Acid Availability when Compared with Intact Protein in Critically Ill Patients: A Randomized Controlled Study. J Nutr. 2024 Feb;154(2):554-564. doi: 10.1016/j.tjnut.2023.12.015. Epub 2023 Dec 15. PMID: 38103646.

Pinckaers PJM, **Weijzen MEG**, Houben LHP, Zorenc AH, Kouw IWK, de Groot LCPGM, Verdijk LB, Snijders T, van Loon LJC. The muscle protein synthetic response following corn protein ingestion does not differ from milk protein in healthy, young adults. Amino Acids. 2024 Feb 5;56(1):8. doi: 10.1007/s00726-023-03377-z. PMID: 38315260; PMCID: PMC10844360.

Holwerda AM, **Weijzen MEG**, Zorenc A, Senden J, Jetten GHJ, Houben LHP, Verdijk LB, VAN Loon LJC. One Week of Single-Leg Immobilization Lowers Muscle Connective Protein Synthesis Rates in Healthy, Young Adults. Med Sci Sports Exerc. 2024 Apr 1;56(4):612-622. doi: 10.1249/MSS.0000000000003342. Epub 2023 Nov 22. PMID: 37994085.

Weijzen MEG, Hendriks FK, Goessens JPB, Zorenc AHG, Gijsen AP, Kramer IF, van den Bergh JPW, Poeze M, Blokhuis TJ, van Loon LJC. Trabecular, but not cortical, bone tissue protein synthesis rates are lower in the femoral head when compared to the proximal femur following an intracapsular hip fracture. Bone. 2023 Dec;177:116921. doi: 10.1016/j.bone.2023.116921. Epub 2023 Sep 26. PMID: 37769955.

Weijzen MEG, Holwerda AM, Jetten GHJ, Houben LHP, Kerr A, Davis H, Keogh B, Khaldi N, Verdijk LB, van Loon LJC. Vicia faba Peptide Network Supplementation Does Not Differ From Milk Protein in Modulating Changes in Muscle Size During Short-Term Immobilization and Subsequent Remobilization, but Increases Muscle Protein Synthesis Rates During Remobilization in Healthy Young Men. J Nutr. 2023 Jun;153(6):1718-1729. doi: 10.1016/j.tjnut.2023.01.014. Epub 2023 Jan 11. PMID: 37277162. [IF 4.735]

Weijzen, M. E. G., van Gassel, R. J. J., Kouw, I. W. K., Trommelen, J., Gorissen, S. H. M., van Kranenburg, J., Goessens, J. P. B., van de Poll, M. C. G., Verdijk, L. B., & van Loon, L. J. C. (2022). Ingestion of Free Amino Acids Compared with an Equivalent Amount of Intact Protein Results in More Rapid Amino Acid Absorption and Greater Postprandial Plasma Amino Acid Availability Without Affecting Muscle Protein Synthesis Rates in Young Adults in a Double-Blind Randomized Trial. The Journal of nutrition, 152(1), 59–67. https://doi.org/10.1093/jn/nxab305 [IF 4.735]

Trommelen, J., **Weijzen, M. E. G.,** van Kranenburg, J., Ganzevles, R. A., Beelen, M., Verdijk, L. B., & van Loon, L. J. C. (2020). Casein Protein Processing Strongly Modulates Post-Prandial Plasma Amino Acid Responses In Vivo in Humans. Nutrients, 12(8), 2299. https://doi.org/10.3390/nu12082299 [IF 6.706]

Weijzen, M. E. G., Kouw, I. W. K., Geerlings, P., Verdijk, L. B., & van Loon, L. J. C. (2020). During Hospitalization, Older Patients at Risk for Malnutrition Consume <0.65 Grams of Protein per Kilogram Body Weight per Day. Nutrition in clinical practice, 35(4), 655–663. https://doi.org/10.1002/ncp.10542 [IF 3.204]

Weijzen, M. E. G., Kouw, I. W. K., Verschuren, A. A. J., Muyters, R., Geurts, J. A., Emans, P. J., Geerlings, P., Verdijk, L. B., & van Loon, L. J. C. (2019). Protein Intake Falls below 0.6 g•kg-1•d-1 in Healthy, Older Patients Admitted for Elective Hip or Knee Arthroplasty. The journal of nutrition, health & aging, 23(3), 299–305. https://doi.org/10.1007/s12603-019-1157-2 [IF 5.285]

Other scientific output and impact

Scientific awards:

2023 Top 3 abstract at the "Nationaal Voedingscongres"
2020 2nd place Gatorade Sport Science Institute Nutrition Award (GSSI)
2020 Emerging Leader in Nutrition Science Finalist at the American Society of Nutrition (ASN)
2020 Best abstract award (top 5) of the European Society of Parenteral and Enteral Nutrition (ESPEN)
2017 1st place poster award at the "Nationaal Voedingscongres"

Research funds

Project name:	Skeletal muscle wasting in ICU patients (IC-MPS)
Period:	September 2023-August 2025
Funded by:	ESPEN Fellowship
Total sum of contract in Euro's:	Euro 39.820

Project name:	A muscle platform for REVAL: an essential contribution to rehabilitation research!
Date funding acquired:	April 2024
Funded by:	FWO medium-scale research infrastructure
Total sum of contract in Euro's:	Euro 150.063,00