<table>
<tr><th colspan="2">Publication summary</th></tr>
<tr><td>Title</td><td>Effect of high versus standard protein provision on functional recovery in people with critical illness (PRECISe): an investigator-initiated, double-blinded, multicentre, parallel-group, randomised controlled trial in Belgium and the Netherlands</td></tr>
<tr><td>Authors</td><td>JLM Bels, S Thiessen, RJJ van Gassel, A Beishuizen, A De Bie Dekker, V Fraipont, S Lamote, D Ledoux, C Scheeren, E De Waele, ARH van Zanten, L Bormans-Russell, BCT van Bussel, MMJ Dictus, T Fivez, I Harks, ICC van der Horst, J Jonckheer, H Marechal, PB Massion, I Meex, MC Paulus, M Rinket, S van Santen, K Tartaglia, AM Deane, F Demuydt, Z Puthucheary, LCM Vloet, PJM Weijs, SMJ van Kuijk, MCG van de Poll*, D Mesotten*</td></tr>
<tr><td>Publication date + magazine</td><td>Lancet 2024; 404: 659–69</td></tr>
<tr><td>Type of study</td><td>Investigator-initiated, double-blinded, multicentre, parallel-group, RCT</td></tr>
<tr><td>Objective / hypothesis</td><td>To assess whether higher enteral protein provision (HP: 2,0 g/kg per day) would improve health-related quality of life and functional outcomes in critically ill patients who were mechanically ventilated compared with standard enteral protein provision (SP: 1,3 g/kg per day).

Why? Because there is controversial evidence (which is mostly based on observational data) whether or not increased protein provision could improve functional outcomes after critical illness.</td></tr>
<tr><td>Results</td><td>Primary outcome: EQ-5D-5L health utility score at 30 days, 90 days, and 180 days. The ED-5D-5L was lower in patients in the high protein group with a mean difference of -0,05 (p = 0,031).

Overview of ED-5D-5L in the two groups for the 3 different time points:
<table>
<tr><th></th><th>Day 30</th><th>Day 90</th><th>Day 180</th></tr>
<tr><td>SP group</td><td>0,33</td><td>0,38</td><td>0,39</td></tr>
<tr><td>HP group</td><td>0,29</td><td>0,34</td><td>0,36</td></tr>
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Other outcomes:
- No uniform treatment effect on muscle-related outcomes for either of the 2 groups.
- A statistically significant increase in time-to-discharge was found in the high protein group.
- Greater incidence (not significant) of gastro-intestinal intolerance was found in the high protein group.
- A significantly increased use of prokinetics in the high protein group.
- No significant differences in mortality nor differences in adverse events between the two groups</td></tr>
<tr><td>Conclusion</td><td>High enteral protein provision compared with standard enteral protein provision resulted in worse health-related quality of life in critically ill patients and did not improve functional outcomes during 180 days after ICU admission.

The PRECISe trial is the first trial with adequate power to detect a statistically and clinically significant difference in a functional outcome</td></tr>
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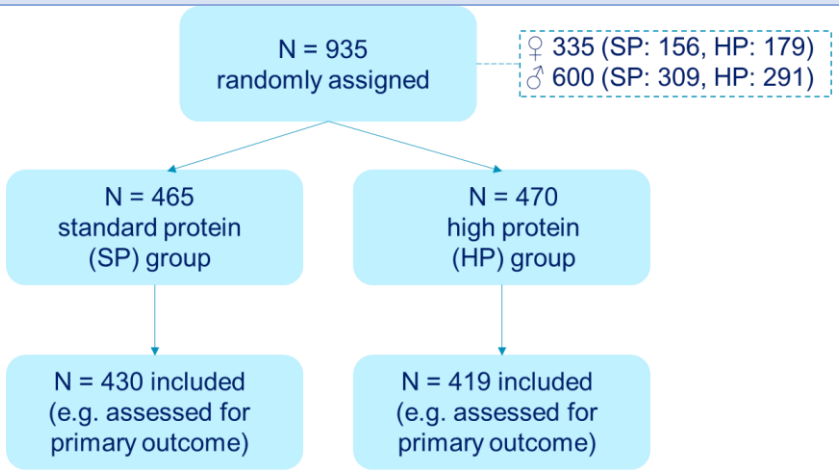
	(there was no large clinical trial available that assessed nutritional intervention in critical care using quality of life as the primary outcome).
Methods	 **Inclusion criteria:** initiation of invasive mechanical ventilation within 24 h of ICU admission and an expected duration of invasive ventilation of 3 days or longer. **Exclusion criteria:** contraindications for enteral nutrition, moribund condition, BMI less than 18 kg/m², kidney failure with a no dialysis code, or hepatic encephalopathy. **Intervention:** patients received isocaloric enteral feeds that contained 1·3 kcal/mL and 0·06 g of protein/mL (ie, standard protein) or 1·3 kcal/mL and 0·10 g of protein/mL (ie, high protein). **Duration of intervention:** limited to the time period during the patient's ICU stay in which they received EN (max. 90 days).
Limitations	"…the difference in EQ-5D-5L health utility scores between study groups was less than the chosen minimum clinically important difference of 0·06. However, there is no consensus on this value, and differences ranging from 0·04 to 0·07 are considered clinically relevant" "…the dose of the study feed was not adjusted for non-nutritional calories, as it would have affected protein dose." > might have caused overfeeding in some patients, but energy delivery was similar between groups.