



Review

Selecting appropriate weight parameters for nutritional prescription during nutrition support: a scoping review



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ABSTRACT

Nutritional Support (NS) is essential for preserving or restoring nutritional status in clinical settings. Accurate nutritional prescription depends on selecting an appropriate Body Weight (BW), yet clinical factors such as edema, ascites, inflammation, immobility, and obesity can compromise the reliability of Current Body Weight (CBW). Although multiple guidelines exist for NS implementation, there is no clear consensus on which BW should be used across different clinical conditions. To map and summarize evidence regarding the types of BW recommended for nutritional prescription in adults receiving NS. A scoping review was conducted according to PRISMA-ScR guidelines. Four databases (PubMed, Embase, Scopus, Web of Science) were searched without date or language restrictions. Eligible documents included guidelines, consensus statements, reviews, and primary studies reporting BW types used to guide caloric or protein prescriptions for adult patients receiving enteral or parenteral nutrition. Four reviewers independently screened, selected, and extracted data, resolving disagreements through discussion. A total of 16 772 papers were identified and 41 publications met the inclusion criteria. Studies were most frequently conducted in Europe and North America. Ideal body weight (IBW) was the most frequently reported BW parameter (73.2%), especially for patients with obesity, fluid overload, or limited mobility. CBW was recommended primarily for individuals with normal weight and no edema or ascites. Considerable variability exists in BW selection for nutritional prescription. Standardized, pathology-specific guidance is needed to minimize heterogeneity in clinical practice and reduce the risk of inappropriate nutrient delivery.

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Introduction

Nutritional Support (NS) is one of the most important strategies for the maintenance of nutritional status and to treat and prevent malnutrition, either in hospital settings or home care [1]. In order to achieve these goals, when indirect calorimetry is unavailable, nutritional prescriptions are typically based on estimated nutrients and energy needs per kg of body weight (BW), therefore it is important to use an accurate BW, aiming for a more precise prescription [2].

In several clinical conditions, it is difficult to measure the patient's current body weight (CBW), and it can be an obstacle for nutritional prescription, especially for bedridden patients. In such cases, the use of other types of BW can be more suitable, such as ideal body weight (IBW) [3], adjusted body weight (AdBW) [4], dry

body weight (DBW) [5], usual body weight (UBW) or estimated body weight (EBW).

There are several guidelines for the implementation of NS in hospital settings [6,7] and home care [8,9]. However, most provide only general recommendations based on BW, without clearly specifying which type of BW should be considered for different clinical conditions or how nutritional prescription should be conducted when CBW cannot be accurately assessed. Additionally, several clinical conditions can affect BW, such as renal, hepatic and cardiac dysfunction, due to fluid overload [10,11], as well as inflammation, immobilization and sedation [12], these factors should be considered when performing the nutritional prescription.

The use of an inappropriate BW parameter can lead to over- or underestimation of calories and protein requirements, resulting in incorrect enteral or parenteral nutrient delivery, which may increase clinical complications [13,14]. Considering the points discussed

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above, this study aims to identify which BW parameters are recommended in the scientific literature for nutritional prescription according to specific clinical conditions in individuals undergoing NS.

Methods

A scoping review was conducted to identify and map the evidence available on the type of BW to be used in nutritional prescriptions, since it can clarify key concepts and definitions available in the literature [15]. The Preferred Reporting Items for Systematic Reviews and Meta-analyses - Extension for Scoping Reviews (PRISMA-ScR) checklist [16] ([supplementary material](#)) was followed to ensure a transparent and reproducible review process. This review was registered in the Open Science Framework (osf.io/7xs4h).

Data collection

Search strategy

The guiding research question was “Depending on the clinical condition, which BW should be used for nutritional prescription in patients receiving nutritional therapy?” Later, this question was adapted for the PCC (Populations, context and concept) framework [17]. Search terms included: “nutritional support,” “enteral nutrition,” “parenteral nutrition,” “nutritional requirements” and “body weight.” These terms were defined by selected based on prior knowledge with the intention of capturing the most articles about BW used for nutritional prescription in the clinical environment. Systematic search was conducted following four electronic databases (PubMed - via Medline, Embase - via Elsevier, Scopus and Web of Science) without restrictions on publication date, from database inception published, with no set date for the earliest articles, up to the April 14th, 2025, and the search strategy was intentionally broad to maximize sensitivity and ensure comprehensive mapping of the available literature. Grey literature was not searched. The search strategy on each database is available in the [Supplementary Material](#).

Eligibility

Inclusion criteria

Studies for inclusion in this present review were considered if they met the following criteria: 1) Guidelines, consensus, statements or recommendations of NS for any pathology, even if the focus on the title did not mention enteral or parenteral nutrition; 2) Any type of paper focusing on specifying the type of BW used for nutritional prescription in NS; 3) Papers focusing on adults or the elderly; 4) Publications with information about enteral or parenteral prescription. No restrictions were set on language; neither data restrictions were established for the paper retrieval.

Exclusion criteria

Papers were excluded if: 1) Studies that brought the intervention with the prescription of BW but did not evaluate it as a result; 2) Studies that included pregnant women or amputated individuals.

Data selection

All records were screened independently by two separate teams formed by four reviewers, each team with two people, according to the eligibility criteria. Title and abstract screening

were followed by the retrieval and screening of full text articles. Any disagreements were resolved through discussion between authors. The EndNote X9® was used as a citation manager for titles and abstract screening.

Data extraction

Data was extracted independently by all four authors with a focus on study design, continent, pathology studied, type of BW recommended, reference for the type of BW recommended, conclusion about the type of BW, and type of NS. IBW was extracted as reported in the original studies. No standardized definition or recalculation of IBW was applied by the review authors. A Microsoft Excel® spreadsheet was built to organize all data selected.

Data analysis

All papers were classified according to publication type (primary studies, reviews or guidelines). Afterwards, the analyses focused on the presented pathologies and which type of BW was recommended for nutritional prescription. Our analyses were descriptive, and the reported frequencies represent the number of publications recommending a given strategy rather than the strength of evidence supporting that recommendation.

The selection and inclusion process presented by the flowchart was created using the PRISMA template [15]. Each of the figures were created with Canva (Canva Pty Ltd., Sydney, Australia) and the graph was created using Microsoft Excel®.

Results

Of 16 772 records were identified by the databases, 8026 were removed before screening as for being duplicates. A total of 8746 were screened by researchers reading both the title and abstracts. Of those, 8626 were removed in the first screening. Later, 120 studies were further selected for retrieval. Finally, 41 studies [18–58] were included in the review. The study selection process can be seen in [Figure 1](#).

The included studies were mostly published between 2005 and 2010 (12 [27.3%]) and were more commonly from Europe (16 [39.2%]), and North America (16 [39.2%]). Of all 41 publications identified, 13 (31.7%) are guidelines, 12 (29.26%) were original studies original articles, including prospective (5 [12.19%]) and retrospective cohorts (2 [4.88%]), nine were reviews (21.95%), three were consensus (7.32%), and there was only one recommendation document, one statement, one letter to editor, and one case study (2.44% each). Of all 41 studies included, 5 were conference abstracts (3 [7.32%] as prospective cohorts and 2 [4.88%] as retrospective cohorts), which were included in order to capture emerging or less formally published recommendations that may not yet be available in full-text publications. Studies including critically ill patients with obesity or overweight were the most common, with a total of 10 (24.39%) studies. On the other hand, acute kidney disease (AKD) and head and neck cancer were the least observed pathologies, with one (2.44%) paper each. Only one (2.44%) study [54] discussed general patients using NS, with no other pathology described. The others focused on NS for one specific pathology. All the studies characteristics can be seen in [Table 1](#).

[Figure 2](#) presents the proportion of type of body weight recommended among included studies for NS prescription. As can be seen, the most frequently reported BW for nutritional prescription was the IBW, cited by 30 (73.2%) studies [18–22,24–27,29–38, 40–42,45–48,50,55,56,58], followed by the CBW, cited by 20 (48.8%) of the studies [19,20,24,26,27,29,31–33,37,38,40,42,45,48, 50,52,53,55]. Considering the type of publication, guidelines and

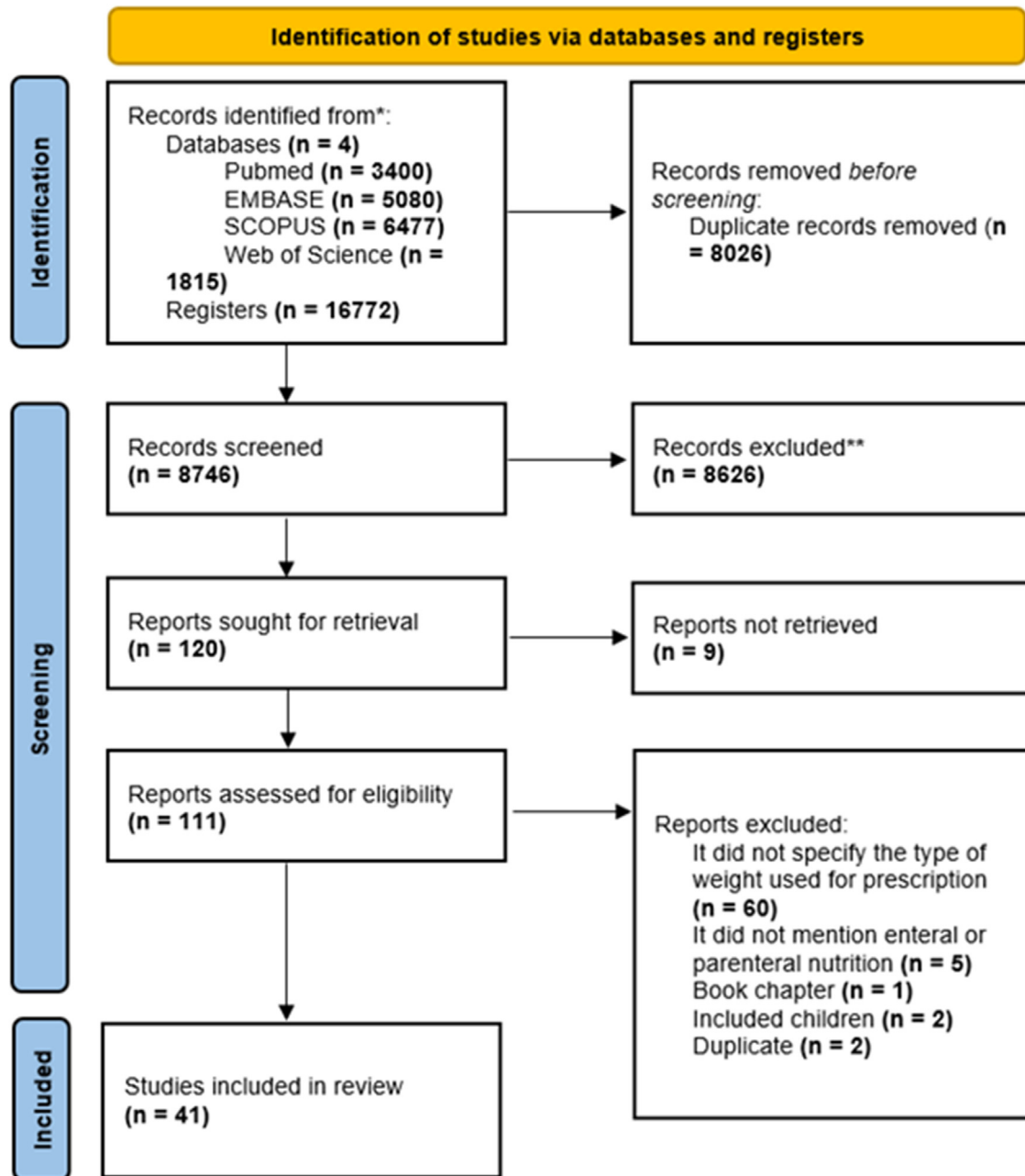


Fig. 1. PRISMA flowchart of study selection.

Legend: Source: Page MJ, et al. BMJ 2021;372:n71. doi: 10.1136/bmj.n71. This work is licensed under CC BY 4.0. To view a copy of this license, visit <https://creativecommons.org/licenses/by/4.0/>

consensus were the main recommendation source for IBW and CBW, followed by reviews recommending IBW and AdBW.

Considering disease-related or clinical conditions (Fig. 3), CBW was the most frequently recommended BW measure for critically ill patients [32,37], especially for those with normal weight [25,28,30]. Some studies suggested the use of CBW for critically ill patients or pulmonary patients with overweight or obesity [18,31,36,41]. CBW was also recommended for kidney [26,47], hepatic [19,23,39] or pulmonary disease [48,52] patients with adequate weight and no edema or ascites.

IBW was highly recommended for pulmonary or critically ill patients [18,21,31,37,41,45,49,55], mainly particularly those with overweight or obesity [25,28–30,34], or even for patients with

ascites [22,32,38,39] or edemas, like in acute and chronic kidney disease [24,26,46,47] (when UBW is not available).

AdBW was predominantly recommended for patients with overweight or obesity in specific clinical conditions as critically ill patients [27,50], pulmonary disease or mechanical ventilation [22,35,36,48,53] and peri and post-surgery patients with obesity or overweight [43]. The percentage of adjustment for the AdBW recommended varied from 25%, 33%, 40% to 50%, with some studies not mentioning the percentage used. Definitions and calculations were extracted as reported by authors of each included paper, and it can be seen in detail in the [Supplementary Material](#).

UBW was recommended in studies involving patients with underweight and/or edema in acute or chronic kidney disease

Table 1
Included studies characterization

Study	World region*	Sample size	Clinical condition	Type of nutritional support
Guidelines				
Aills et al. [18]	AMRO	-	Post-bariatric	PN
Bischoff et al. [20]	Multicontinental	-	Liver disease	EN and PN
Braga et al. [21]	EURO	-	Pre and post-surgery	EN and PN
Merli et al. [24]	EURO	-	CKD	EN and PN
Fouque et al. [25]	EURO	-	Malnourishment with CKD	EN and PN
Hung et al. [27]	WPRO	-	AKD	EN and PN
McClave et al. [29]	AMRO	-	Adult critically ill patients	EN
McClave et al. [30]	AMRO	-	Critically ill patients with obesity	EN
McClave et al. [31]	AMRO	-	Critically ill patients with obesity	EN and PN
Mesejo et al. [32]	EURO	-	Critically ill patients with obesity	EN and PN
Nanchal et al. [34]	Multicontinental	-	Liver disease	EN and PN
Pérez-Torres et al. [39]	EURO	-	CKD and SARS-CoV-2 infection	EN and PN
Puri et al. [43]	SEARO	-	Chronic Liver Disease	EN and PN
Sabatino et al. [47]	EURO	-	hospitalized AKD or CKD	EN and PN
Shang et al. [49]	WPRO	-	Severe SARS-CoV-2	EN and PN
Talwar et al. [52]	EURO	-	Head and neck cancer	EN and PN
Reviews				
Choban et al. [22]	AMRO	-	Obesity	EN and PN
Enríquez et al. [23]	EURO	-	COPD	EN and PN
Krenitsky [28]	AMRO	-	Obesity	EN and PN
Nelson e Van Way [35]	AMRO	-	Critically ill patients with obesity	EN and PN
Port and Apovian [42]	AMRO	-	Critically ill patients with obesity	EN and PN
Quilliot and Ziegler [44]	EURO	-	Perioperative patients with obesity	EN and PN
Rittler et al. [46]	EURO	-	Critically ill patient with obesity	PN
Weberhofer [54]	EURO	-	Obesity	EN
Weeks [55]	EURO	-	Nutritional support	EN and PN
Weijjs et al. [56]	EURO	-	ICU	PN
Yamamoto et al. [57]	WPRO	-	Heart Failure	EN and PN
Prospective cohort				
Alves, et al. [19]	AMRO	-	ICU overweight or patients with obesity	EN and PN
O'Connell e Erstad [36]	AMRO	7	Overweight patients with mechanical ventilation	EN and PN
Plevak et al. [41]	AMRO	16	Liver disease	EN and PN
Sheean et al. [50]	AMRO	49	ICU	EN and PN
Tignanelli et al. [53]	AMRO	419	Surgical patients with mechanical ventilation	EN and PN
Retrospective cohort				
Plauth et al. [40]	Multicontinental	-	Liver disease	EN and PN
Ritchey et al. [45]	AMRO	177	Post-bariatric	Home PN
Tajchman et al. [51]	AMRO	33	Critically ill Cancer patients with obesity	EN and PN
Abstracts				
Gavin et al. [26]	EURO	23	ICU	EN
Mora et al. [33]	Multicontinental	2711	ICU	EN and PN
Patel et al. [38]	AMRO	100	Critically ill patients in use of PN	PN
Salih et al. [48]	EURO	-	ICU	EN and PN
Young and Vassalos [58]	EURO	-	Cardiothoracic ICU/ patients with obesity	EN and PN
Case study				
Pahwa et al. [37]	AMRO	1	Critically ill patient with obesity	PN

*According to WHO areas; AMRO, Region of the Americas; EURO, European Region; WPRO, Western Pacific Region; SEARO, South-East Asia Region; AKD, acute kidney disease; CKD, chronic kidney disease; SARS-CoV-2, Severe Acute Respiratory Syndrome Coronavirus 2; COPD, chronic obstructive pulmonary disease; ICU, intensive care unit; EN, enteral nutrition; PN, parenteral nutrition.

situations [25,46], but also for critically ill patients [30] and pulmonary conditions [52]. DBW was recommended in only 2 (4.9%) studies [33,42], both involving hepatic diseases, particularly in patients with cirrhosis and ascites. EBW was not recommended in any of the publications included in this review.

Overall, the recommendations for CBW, IBW, AdBW and UBW were predominantly derived from guidelines, whereas the limited evidence for DBW came from reviews and abstracts.

The reason for the recommendation of each type of BW according to body composition and/or fluid status—related can be seen with more details in Table 2. Some papers did not disclose the reason behind the use of specific types of BW; however, most authors defended the use of IBW and AdBW for individuals with excess of liquid or adiposity. The use of CBW was more recommended for patients with normal weight, without edema or ascites. UBW was recommended for individuals of whom CBW was considered unlikely to reflect their actual nutritional requirements, such as

underweight patients and people with excess liquid, like edemas or ascites.

Table 3 provides a summary of the body weight types most frequently recommended according to clinical condition and the rationale reported in the included studies, offering a concise overview of the recommendations identified across the literature.

Discussion

This scoping review examined the literature, including research studies, guidelines, and expert statements, to identify the clinical conditions in which each type of BW should be used for nutritional prescription in individuals receiving NS. A total of 41 papers provided recommendations regarding BW selection; however, the rationale supporting these recommendations was not always clearly described. Overall, there was limited consensus regarding the most appropriate BW parameter for NS prescription in

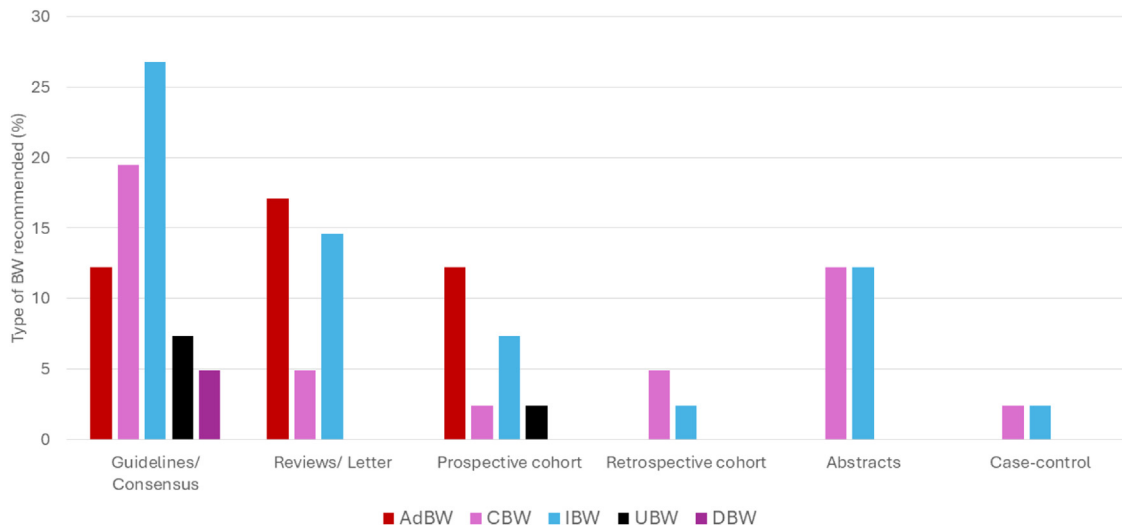


Fig. 2. Proportion of type of body weight recommended among included papers (studies may recommend more than one type of weight). (n= 41).

Legend: IBW: Ideal Body Weight; CBW: Current Body Weight; AdBW: Adjusted Body Weight; UBW: Usual Body Weight; DBW: Dry Body Weight; Source: Image by author

different clinical conditions. Although no clear consensus was identified across the literature, some studies did propose specific recommendations for clinical conditions, allowing the identification of trends in the choice of BW for nutritional prescription. In general, CBW tended to be recommended for individuals without significant alterations in body composition or fluid status, whereas adjusted, ideal, or dry BW were more frequently suggested in populations with obesity, edema, ascites, or other conditions associated with abnormal fluid accumulation. These patterns may reflect current clinical practice an emerging direction in clinical practice, even though the supporting evidence remains limited and inconsistently justified across studies. Importantly, clinical guidelines were the predominant source of recommendations identified in this review, particularly for CBW, IBW, and AdBW.

The 41 studies included in this scoping review demonstrated substantial heterogeneity in the types of BW recommended for nutritional prescription. Inconsistencies were observed not only across different clinical conditions, but also within the same pathology, with studies recommending different BW approaches without standardized criteria. This lack of conceptual and methodological standardization compromises the comparability of findings across studies and limits the reproducibility and applicability of recommendations in clinical practice. As a result, clinicians may face uncertainty when selecting the most appropriate BW for nutritional prescription in specific patient populations. Moreover, the use of an inappropriate BW can result in overestimation or underestimation of energy and protein requirements, potentially exposing patients to complications associated with overfeeding or underfeeding and negatively affecting clinical outcomes [59,60].

The overestimation of energy needs can be harmful, causing the increased risk of metabolic complication, such as hyperglycemia and fat deposition, as well as respiratory complications, like the prolonged need for mechanical ventilation due to the increase in dioxide production [60]. Also, overestimation of energy needs may introduce insulin resistance and increased oxidative stress [4]. Moreover, it is important to take into consideration that the adipose tissue, which is present in overweight or individuals with obesity, requires less energy for its own maintenance than the lean tissue [61]. Caloric and protein underestimation increases the chances of malnutrition in already malnourished patients or even causes malnourishment in well-nourished patients [62].

Overestimation can also be damaging for underweight patients and could increase the refeeding syndrome risk [63] or increase adiposity, which can increase inflammation [59].

The appropriateness of a given BW for nutritional prescription is highly dependent on the clinical context and underlying physiological alterations of each patient population. In individuals with obesity, for example, the use of CBW may overestimate energy and protein requirements due to the disproportionate increase in adipose tissue relative to metabolically active mass, leading some authors to recommend adjusted or ideal BW [64]. Conversely, in patients with fluid retention, such as those with ascites, edema, renal disease, or hepatic insufficiency, CBW may not accurately reflect true body composition because of excess extracellular fluid accumulation [65]. Similar challenges are observed in critically ill patients, whose rapid metabolic changes, inflammatory response, and fluid shifts can substantially alter body weight during hospitalization [66]. In older adults and patients with sarcopenia or cancer, reductions in lean body mass may further limit the accuracy of BW-based estimations, even when body weight appears preserved [67]. Collectively, these findings reinforce the need for individualized assessment and highlight the limitations of applying a single BW approach across diverse clinical conditions.

The conflicting recommendations observed even within the same clinical condition likely reflect differences in the objectives of nutritional therapy, patient characteristics, and the assumptions underlying predictive equations. For example, some authors prioritize avoiding overestimation of energy requirements in patients with obesity or fluid overload by recommending IBW or AdBW, whereas others favor CBW to better account for existing body mass or because this parameter is directly incorporated into the predictive equation or institutional protocol being used. Furthermore, variations in disease severity, body composition, and fluid status within the same diagnostic category may justify different approaches. In the absence of comparative studies demonstrating the superiority of one BW parameter over another, these recommendations remain largely based on expert judgment and clinical reasoning rather than robust empirical evidence.

Another central finding of this review is that the rationale supporting the choice of BW for nutritional prescription was frequently poorly described or absent. In many cases, recommendations appeared to be based primarily on expert

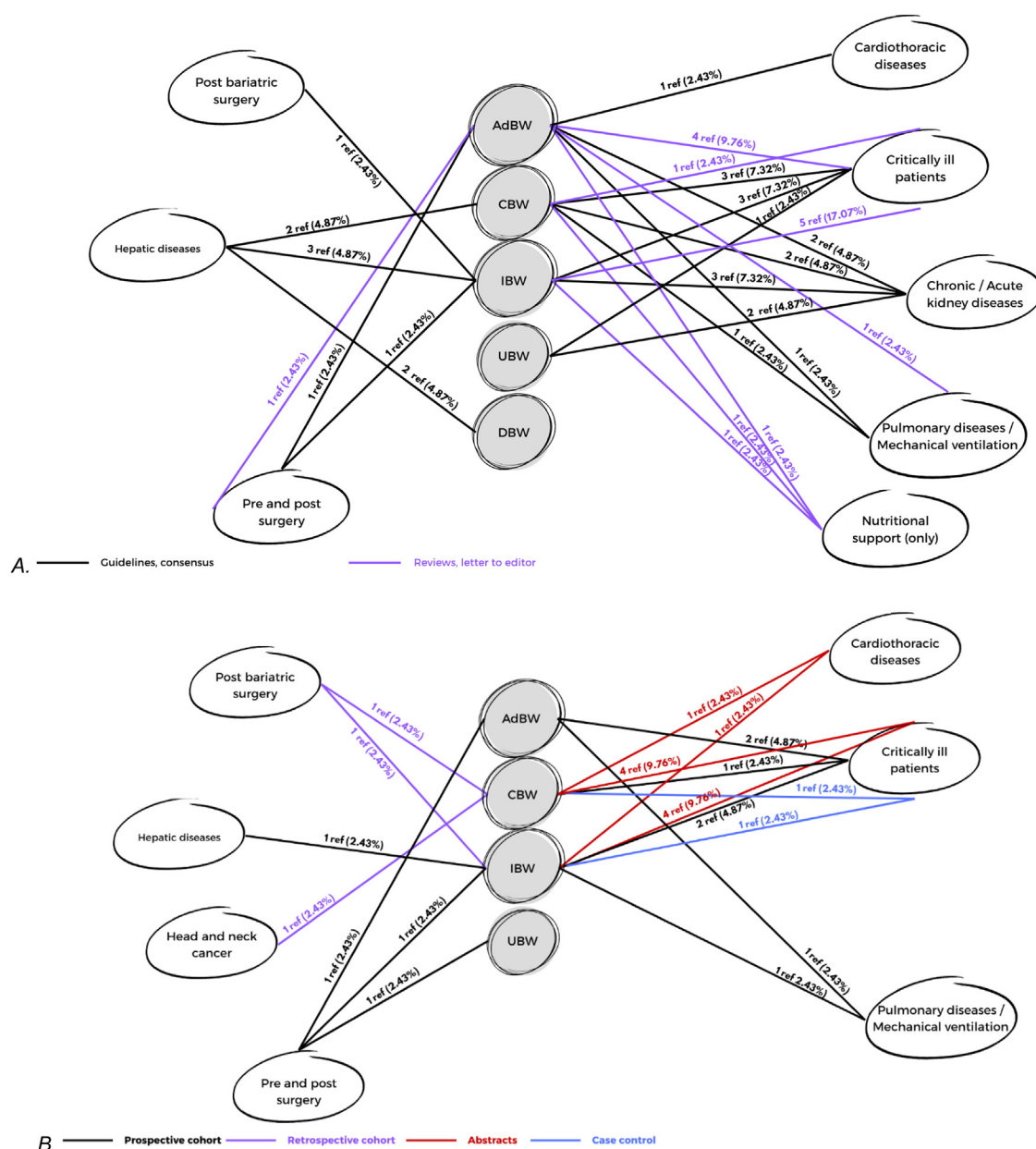


Fig. 3. Summary of the Main BW Recommendations from Included Studies for Each Pathology or Clinical Condition in Nutritional Prescription. (A) Type of BW recommended by guidelines, consensus, reviews and letter to editor. (B) Type of BW recommended by primary studies.

Legend: BW: Body weight; AdBW: Adjusted Body Weight; CBW: Current Body Weight; IBW: Ideal Body Weight; UBW: Usual Body Weight; DBW: Dry Body Weight; Ref: References; Source: Image by author

opinion, institutional practice, or extrapolation from other clinical populations rather than on robust evidence specifically evaluating the metabolic and clinical implications of different BW approaches. This may reflect the historical incorporation of certain practices into nutritional care without adequate validation through comparative studies. The limited availability of studies directly comparing different BW types further contributes to the persistence of empirically based recommendations and may partially explain the variability observed across the literature.

An important gap in the literature regarding the lack of direct comparative studies evaluating the clinical performance of different BW approaches for nutritional prescription was identified through this review. Few studies assessed whether the use of a specific BW results in more accurate estimation of energy and

protein requirements or improved nutritional adequacy in clinical practice. Moreover, indirect calorimetry is considered the reference standard for estimating energy requirements whenever available. Consequently, the choice of BW for nutritional prescription becomes particularly relevant when indirect calorimetry cannot be performed and predictive equations must be used. However, validation of different BW approaches against reference methods, particularly indirect calorimetry, as well as body composition analysis or other objective measures of metabolic demand, was rarely reported. This limited evidence base makes it difficult to determine which body weight approach is most appropriate for specific patient populations and contributes to the persistence of heterogeneous and empirically driven recommendations in nutritional support practice.

Table 2

Recommended body weight types for each clinical conditions

Pathologies	BW recommended	Reasons for BW recommendation
Critically ill patients	CBW	• Normal weight (BMI < 30 kg/m²): aiming to avoid hyperalimentation [26,29,32] • Obesity – no explanations [19,32,42] • Body or clinical status not specified [33,38] • Normal weight and no edema - avoiding over or underestimation [26]
	IBW	• Overweight or obesity - more accurate measurements [26] • Obesity - avoid hyperalimentation [29] • Avoid underestimation and overestimation of needs [33,30,31] • NI [19,22,33,38,42,46,50,56]
	AdBW	• Obesity: weight-adjusted 25% correction from the Harris-Benedict formula - aiming to control underfeeding and to avoid overfeeding [28] • Weight-adjusted 50% correction from the Harris-Benedict formula - reasonable for estimating actual caloric expenditure [28] • Obesity: Avoid overestimation [50] • NI [19,22,32,46]
	UBW	• NI [31]
Chronic/ Acute kidney diseases	CBW	• NI [48,27]
	IBW	• If UBW is not available – avoid overestimation [47] • Overweight or obesity – aiming to avoid overestimation [27] • NI [48]
	AdBW	• NI [25]
	UBW	• Underweight and/or edema - avoid overnutrition [27,47]
Hepatic diseases	CBW	• Normal weight – safe for 35kcal/kg [24] • No ascites - it will estimate the calories and proteins correctly [20,40]
	IBW	• Cirrhosis and obesity - aiming for adequate weight loss without compromising protein stores [24,34] • Avoids overestimation - it does not consider edema or underestimation [24] • Ascites - to avoid overestimation [20,40,41]
	DBW	• Achieve protein goals and malnutrition [34] • To avoid overestimation [43]
Pulmonary diseases / Mechanical ventilation	CBW	• BMI <30kg/m² - no explanation [49] • Obesity - no explanation [37] • NI [53]
	IBW	• Weight more than 130% but less than 200% of the IBW - avoid overnutrition [36] • Obesity - no explanation [37]
	AdBW	• Avoid overnutrition [23] • Weight more than 130% but less than 200% of the IBW - avoid overnutrition [36] • Obesity - to avoid overnutrition [49,53] or underestimation of energy expenditure [53] • Obesity - no explanation [37] • NI [39,53]
	UBW	• NI [53]
Post bariatric surgery	CBW	• NI [45]
	IBW	• No explanations! [18] • NI [45]
Cardiothoracic diseases	CBW	• NI [58]
	IBW	• NI [58]

(continued)

Table 2 (Continued)

Pathologies	BW recommended	Reasons for BW recommendation
Head and neck cancer	AdBW	• NI [57]
	CBW	• NI [52]
	CBW	• NI [55]
Nutritional support in general	IBW	• NI [55]
	AdBW	• NI [55]
	IBW	• NI [21]
Peri and post-surgery	AdBW	• Obesity or overweight - to avoid overnutrition [44] • NI [20]

CBW, current body weight; IBW, ideal body weight; AdBW, adjusted body weight; UBW, usual body weight; DBW, dry body weight; BW, body weight; NI, not informed; AKD, acute kidney disease.

Table 3

Summary of findings

Clinical scenario	Most frequently recommended BW	Alternative BW reported	Main rationale reported in the literature
Normal weight, no edema/ascites	Current body weight	NI	Reflects actual metabolically active mass
Overweight/obesity	Ideal BW / Adjusted BW	Current BW (some studies)	Avoid overestimation of energy/protein requirements
Edema/ascites	Ideal BW / Dry BW / Usual BW	NI	Current BW may overestimate requirements due to fluid retention
Critical illness	Current BW or Ideal BW	Adjusted BW (obesity)	Recommendations vary according to body composition and fluid status
Kidney disease	Current BW (without edema); Usual or Ideal BW (with edema)	NI	Depends on fluid overload
Liver disease	Dry BW or Ideal BW (ascites)	Current BW (without ascites)	Fluid retention affects measured weight

CBW, current body weight; IBW, ideal body weight; AdBW, adjusted body weight; UBW, usual body weight; DBW, dry body weight; BW, body weight; NI, not informed.

This is a well conducted review, and it was performed following established recommendations for scoping reviews and it was reported following the PRISMA-ScR guidelines [16], which were fundamental to ensure a more robust process. The use of four databases for search strengthened the work because it ensured a broader view of the available studies on this topic. The inclusion of not only original articles and reviews, but also guidelines, statements and protocols, guarantees that no information was left out. The research team was trained, and the main researcher presents expertise in conducting systematic reviews. Although its several strengths, there are also limitations of this study. First, differences in clinical settings and patient characteristics might not have been fully captured. The lack of explicit rationale for BW selection in several papers further constrained the depth of analysis. Moreover, translation nuances and subjective interpretation during data extraction could have introduced minor inconsistencies. To reduce this limitation, every study found in the first search was thoroughly analyzed by two of the authors each and all questions were resolved by a group discussion. Second, although the initial search retrieved a large number of records ($n = 8746$), only 41 met the predefined inclusion criteria. This reflects the intentionally sensitive search strategy adopted to maximize the identification of potentially relevant studies, given the heterogeneous terminology used to describe body weight for nutritional prescription. While this approach increased the screening workload, it reduced the likelihood of missing eligible publications. Third, many of the studies found did not bring a reason for the use for prescription of each type of weight. This made it harder to conclude as to why a specific

type of BW was better or worse for any pathology. Finally, there was no formal quality assessment of the included evidence, which is consistent with the methodology of scoping reviews. The included publications comprised original studies, reviews, clinical guidelines, expert statements, institutional protocols, and conference abstracts, all of which differ in methodological rigor and certainty of evidence. In particular, conference abstracts often provide limited methodological information and do not undergo the same level of peer review and reporting as full-text publications. Consequently, recommendations derived from these sources should be interpreted with caution. Therefore, the findings of the present review should be interpreted as a descriptive synthesis of how body weight is currently recommended in the literature rather than as a hierarchy of evidence quality or certainty.

Conclusion

In conclusion, this scoping review identified substantial heterogeneity in the types of BW recommended for nutritional prescription in individuals receiving NS across different clinical conditions. Although IBW and CBW were the most frequently cited approaches, the choice of BW varied considerably according to body composition, fluid status, and underlying disease. Overall, CBW tended to be recommended for individuals with normal weight and without significant fluid imbalance, whereas IBW and AdBW were more commonly suggested for patients with overweight, obesity, edema, or ascites. However, despite the identification of these trends, there was no clear consensus or standardized

hierarchy regarding the most appropriate BW for nutritional prescription in specific clinical settings. Furthermore, the rationale supporting BW selection was often poorly described, and recommendations were largely based on guidelines, expert opinion, or extrapolation from other populations rather than on robust comparative evidence. The scarcity of prospective and validation studies limits the ability to determine the clinical superiority of one BW approach over another and contributes to variability in practice. Future research should prioritize prospective comparative studies evaluating different BW approaches against reference methods, particularly indirect calorimetry, while incorporating body composition assessment and clinically relevant outcomes to establish evidence-based recommendations for nutritional prescription. Until stronger evidence becomes available, the choice of BW for nutritional prescription should remain individualized and guided by clinical judgment and patient-specific characteristics.

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Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Bruna Guerra Campolina reports financial support was provided by Minas Gerais State Foundation of Support to the Research. If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

CRediT authorship contribution statement

Bruna Guerra Campolina: Writing – review & editing, Writing – original draft, Methodology, Investigation, Conceptualization. **Luciana de Abreu Silva:** Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation. **Gabriela Heloísa Bordenski:** Writing – review & editing, Writing – original draft, Visualization, Methodology, Investigation. **Adriane Moreira Machado:** Writing – review & editing, Writing – original draft, Methodology, Investigation. **Camila Kümmel Duarte:** Writing – review & editing, Writing – original draft, Supervision, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization.

Supplementary materials

Supplementary material associated with this article can be found in the online version at [doi:10.1016/j.nut.2026.113424](https://doi.org/10.1016/j.nut.2026.113424).

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