

Submission on Application A1230 – Very Low Energy Diets (VLED)

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The Bariatric Special Interest Group (SIG) of Dietitians New Zealand is a group of specialist bariatric dietitians working in the area of weight loss surgery throughout New Zealand. In New Zealand, it is the dietitian who recommends the Very Low Energy Diet (VLED) products used and educates the individual on how to use them.

The members of the Bariatric SIG support the amendment of the Food Standards Code to include foods suited for VLED in foods for special medical purposes. Members believe this will benefit consumers because it will ensure that there are safe and well-designed products to help people who wish to lose weight.

However, the Bariatric SIG are concerned to see the proposal relies on the Codex STAN 203-1995 standard (CODEX, 1995), which is inappropriate for the obese population and consequently unsuitable to use in this context. This standard is 26 years old and there has been a considerable increase in our understanding of human nutrition and weight management since then.

The requirements for obese individuals trying to lose weight and following a VLED are specific and different to the general population. The Codex STAN 203-1995 standard (CODEX, 1995) underestimates protein, fibre, and linoleic acid requirements, and if adhered to, by obese individuals following VLED, it could be detrimental to their health. The unsuitability and consequently unsafety of following the Codex STAN 203-1995 is outlined in this submission.

Members of the Bariatric SIG recommend that the proposal is based on the European Union (EU) updated standard EU 2017/1798 (European Commission, 2017) which is aligned in line with current nutrition evidence regarding the requirements of the obese individual following a VLED for weight loss.

Protein

The current application cites the Australasian RDI values for protein requirements for the general population (46g/day for females, 56g/day for males) (Australian NHMRC and NZ

Ministry of Health, 2014) and aligned its recommendations with Codex STAN 203-1995 which prescribes that VLEDs shall provide a minimum of 50 g protein /day (CODEX, 1995). Once you add in the generous provision of 5g protein from the 2 cups per day of permitted vegetables which VLEDs allow for, this brings the minimum amount of protein up to 55g per day. These RDIs are inadequate for obese individuals following a VLED because due to their larger size, their higher net lean body mass requires higher protein targets than a non-obese individual.

Protein Requirements for Obese Individuals

The requirements for protein intake in obese individuals are based on adjusted ideal body weight (AIBW) as follows:

$$AIBW = \text{weight at BMI 25} + (0.25 \times (\text{highest weight} - \text{weight at BMI 25}))$$

For example

Individual A is 1.6m and weighs 90 kg (BMI 35)

$$AIBW = 64 + (0.25 \times (90 - 64)) = 70.5kg$$

Based on the guidelines on protein in the Joslin Clinical Oversight Committee (Hamdy, 2018), Individual A requires 1 g of protein per kg at their AIBW, which equates to 70.5 g of protein per day. If the proposed Codex STAN 203-1995 standard (CODEX, 1995) was adhered to, this is a deficit of 20.5 g of protein per day.

In reality, many individuals following a VLED have a much higher BMI and thus even higher requirements than Individual A above. See Table 1 below which demonstrates how a range of typical patients would require > 50g of protein per day, ranging from 57g to 99g.

Table 1: Examples of protein requirement at different BMI

Height (m)	BMI (kg/m ²)	Weight at BMI in column 2 (kg)	aIBW (kg)	Estimated Protein requirements (g)		
				NRV (female)	NRV (male)	aIBW
1.70	30	87	76	57	64	87
1.70	40	116	83	67	75	83
1.90	35	126	99	74	83	99
1.60	50	128	80	60	67	80

Aligning protein requirements in VLEDs with Codex STAN 203-1995 will result in a shortfall in protein requirements for most individuals. Patients following a VLED prior to undergoing surgery may have even higher protein requirements than those recommended in the EU 2017/1798. Optimal total daily protein intakes for surgery recommended in the 2018 ERAS

Consensus Statement state patients undergoing surgery should consume at least 1.2 g/kg/d (Wischmeyer, 2018)

Aligning the current proposal with Codex (CODEX, 1995) would correlate with intakes of around 0.72g protein/kg/day (using ABW) and a minimum of 17g protein per meal replacement and falls far short of the ERAS Consensus Statement (Wischmeyer, 2018) and recent EU 2017/1798 guidelines.

Our recommendations

- 1) The proposed amendment is aligned with EU 2017/1798 protein targets which require 75g-105g protein per day (European Commission, 2017)
- 2) The amount of protein in each VLED within the standard is increased to a minimum of 25g per product and a higher protein option of 30g per product.
- 2) The promotional materials include information that people who are bigger and larger will need more protein and need to have more than 3 standard meal product replacements.

Fibre

The intake of fibre from the 3 meal replacements and vegetables is estimated at 16g fibre. This is well outside the recommendations for Australia and New Zealand at 30g per day (Australian NHMRC and NZ Ministry of Health, 2019). The existing European Standard is closer to our nutrition guidelines in recommending that intake should not be less than 10g and more than 30g for the daily ration (European Commission, 2017)

Our recommendations

- 1) We propose that the standards are aligned with the EU 2017/1798 which require a 10-30g fibre from the meal replacement (European Commission, 2017) with our specific recommendation that 30g fibre is the target to align meal replacements with the ANZ nutrient reference values (Australian NHMRC and NZ Ministry of Health, 2019)

Linoleic Acid

Again, we are surprised to see reference to the CODEX standard (CODEX, 1995) rather than the more current EU standard which recommends a minimum of 11g linoleic acid per day, and includes an additional advisory of 1.4g per day of α -linolenic acid (European Commission, 2017). As this is an area where the evidence has changed dramatically surely, we should be providing products of higher quality to optimize the success of people using them for weight management.

Our recommendations

- 1) Adopt the formulation of the product as outlined in the European Standard

Summary

We appreciate the work that Nestle has put into giving dietitians the opportunity to train in the use of Optifast in medical weight management, but we also wish to see better outcomes that are focused on sustained change rather than cyclical weight change and believe that creating a higher quality product would best support this group of people in our population.

References

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