

## **Assessment of the Quality of Dietary Protein Consumed by Older Adults Residing in Manitoba Long term Care Homes**

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**Introduction:** Dietary protein supplies amino acids (AA) that are necessary for overall health. While current estimates of protein intake in North America provide evidence that protein needs, in general, are being met, two important caveats should be considered: 1) current estimates of protein intake are based on crude protein, and not corrected for protein quality; and, 2) sub-groups of the population may be at risk for inadequacy. These considerations are particularly relevant to older adults, especially when one considers that new estimates of protein requirements position higher RDA values for seniors (1.2 g/kg/d of high-quality protein).

**Objective:** To assess the quality of protein consumed by older adults residing in long-term care (LTC).

**Methods:** Using data derived from Making the Most of Mealtimes (M3) study, a multi-centre, cross-sectional study of food intake and its determinants in older adults living in Manitoba LTC facilities (n=117), the intake of quality-corrected protein was assessed, using the following assumptions: a) correction for quality used the PD-corrected AAS (PDCAAS) approach, assuming a generic 0.8 digestibility coefficient against food intake data; and, b) quality was corrected for each meal occasion.

**Results:** When uncorrected for quality, 35% of older adults in LTC were below the Estimated Average Requirement for protein. This increased substantially to 71% below the requirement when quality correction factors were applied.

**Conclusions:** Many residents in LTC are not meeting their quality corrected protein requirements. Future research should investigate practical methods for assessing protein quality in a complex foodscape, including the use of digestibility coefficients derived from in vitro assays.

**Significance to the Field of Dietetics:** Residents living in LTC homes are at an increased risk of inadequate protein intake and quality of protein is an issue. Strategies to achieve high-quality protein intakes should be emphasized in menu planning.

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