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Opportunities for long day care services to increase resistant starch in 2–3-year-olds

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Resistant starch (RS) is a type of dietary fibre which resists digestion and has many health benefits, such as assisting with managing body weight, reducing the risk of type 2 diabetes, positive bowel health and mental health in adults.^(1,2) Studies exploring fruit and vegetable intake, found adults who consumed RS from fruit and vegetables rather than discretionary foods had better mental health.⁽³⁾ There are limited studies identifying the amount of RS children are consuming and there are currently no recommendations for RS intake for children. The aim of this study was to investigate what the current provision of RS is in Long Day Care (LDC) for 2–3-year-olds, as well as identifying the main food sources, and identifying opportunities to increase RS provision. Minimum and maximum values of RS for each food per 100 g were entered into an existing Foodworks database. Daily meal plans for each LDC, including the minimum and maximum RS values were then exported into Microsoft Excel. RS totals were calculated per centre, per meal, per day, as well as on average over two days for the 30 services. This data was exported into IBM SPSS Statistics for Windows (Version 27.0, Armonk, NY: IBM Corp) for analysis. A Shapiro–Wilk test was performed to assess the normality of the data, which determined normal distribution. A minimum and maximum average RS value were determined as well as the frequency and contribution to RS of foods offered. The mean provision of RS per child per day was 0.93 g (min value) and 2.69 g (max value). The 10 services which provided the highest amount of RS per child/day, 50% met the recommendations for serves of vegetables, and 70% met the recommendations for three or more core food groups. The highest contributing food sources were carrots, white bread/white cereal products, banana and discretionary items such as pastry and commercial crackers. Services meeting the provision recommendations for vegetables, and/or three or more core food groups were more likely to provide more RS per child per day. There is opportunity to increase RS provision in nutrition education material targeting ECEC to promote the inclusion of more wholegrain and rye cereal products in place of white cereal products, as well as including legumes as a possible meat alternative, and limiting discretionary food offerings as this could displace the opportunity for more wholefoods which contain RS, in addition to providing more core foods which support public health messaging and LDC food provision expectations.

References

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3. Rees J, Radavelli Bagatini S, Lo J, *et al.* (2021) *Nutrients* **13** (5), 1447.