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An investigation into the current practice of preparing, handling and reconstituting powdered infant milk in the domestic setting in Ireland

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Abstract

It is recommended that infants are exclusively breastfed for the first six months. As the gold-standard in infant feeding, it is the safest and best way of ensuring infants achieve optimal health and development⁽¹⁾. Powdered Infant Formula (PIF) is not sterile and so, can be associated with bacteria such as *Cronobacter* spp^(1–2). This bacterium can have an adverse effect on health in all age groups. However, the FAO/WHO have identified infants 0–12 months as a vulnerable group, with infants less than two months old and all immunocompromised infants regardless of age, being particularly at risk of infection⁽¹⁾.

Guidance set out by the Food Safety Authority of Ireland on the safe preparation of PIF states that it is essential to boil one litre of fresh tap water and let it cool to 70°C, to kill any bacteria in the powder and retain sufficient amounts of nutrients. By preparing, handling and storing PIF in line with the guidance, parents can reduce potential risks of contamination^(1–2).

The aim of this study was to determine the current practice of reconstituting PIF in the domestic setting in Ireland. A sample of parents with a child aged 0–12 months (n = 228) completed a 30-item questionnaire online. Most respondents were first time parents (55%), female (89%), aged 25–44 years (99%) and educated to tertiary level (79%).

The results revealed that 64% (n = 146) of respondents reported to fill the kettle with one litre of fresh tap water, but less than half (45%) follow the guidance, to cool the boiled water to the required 70°C^(1–2). The majority 91% (n = 208), stated that they discard any unused feed within two hours. Furthermore, 29% (n = 67) of respondents reported to use an automatic bottle preparation machine, 75% (n = 171) said they are aware of safety aspects/risks associated with preparing PIF and most (97%, n = 221) felt confident in their ability to safely prepare their infant's PIF feed.

It is evident that there is a need to highlight to all parents the importance of why and how PIF should be prepared and reconstituted at 70°C in accordance with the guidance^(1–2), to minimise potential risks of contamination.

Conflict of Interest

This study was funded by Danone Nutricia Early Life Nutrition.

References

1. FSAI: Food Safety Authority of Ireland Guidance Note 22: Information Relevant to the Development of Guidance Material for the Safe Feeding of Reconstituted Powdered Infant Formula (Revision 2). Available at: www.fsai.ie.
2. Safefood and HSE: How to prepare your baby's bottle. Available at: <https://www.safefood.eu/Publications/Consumer-information/How-to-prepare-your-baby-s-bottle.aspx>