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Food Reformulation Task Force: Reformulation Targets for Commercially Available Complementary Foods



Reformulation Targets for Commercially Available Complementary Foods

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Contents

GLOSSARY	2
DEFINITIONS	2
1. INTRODUCTION	3
1.1 Purpose	3
1.2 Scope.....	3
1.3 Background.....	3
1.4 Energy and nutrient reformulation targets for priority food categories	4
1.5 Reformulation of commercially available complementary foods (CACFs)	4
1.6 Target nutrients for reformulation in CACFs.....	6
2. METHODOLOGY	8
3. SUMMARY OF THE POLICY, GUIDANCE AND LEGISLATION CONSIDERED IN SETTING REFORMULATION TARGETS FOR CACFS IN IRELAND	9
3.1 Nutrient and Promotion Profile Model (NPPM).....	9
3.2 Legislation, policy and guidelines relevant to CACFs in Ireland	9
3.3 A review of the nutrient composition of CACFs and their contribution to dietary intakes of sugar and sodium in pre-school children living in Ireland.....	10
4. REFORMULATION TARGETS FOR CACFS IN IRELAND	11
4.1 Reformulation targets for sugar	12
4.2 Reformulation targets for salt/sodium.....	14
4.3 Availability and prominence of appropriate and inappropriate CACFs.....	15
4.4 Time frame to achieve targets and monitor progress.....	16
5. ACKNOWLEDGEMENTS	17
6. APPENDIX	18
Appendix I Examples of appropriate and inappropriate CACFs.....	18
Appendix II Nutritional composition of CACFs on the Irish market in 2021	21
7. REFERENCES	22

List of Tables

Table 1 Reformulation targets for sugar content of CACFs	13
Table 2 Reformulation targets for salt/sodium content of CACFs	14
Table 3 Examples of appropriate and inappropriate CACFs by category	18
Table 4 Mean (SD) nutritional composition per 100 g of CACFs on the Irish market in 2021	21

List of Figures

Figure 1 Nutrient reduction targets for food products prioritised for reformulation in Ireland from 2015–2025.....	4
Figure 2 Methodology followed in the development of reformulation targets for CACFs sold on the Irish market.....	8

Glossary

Term	Text
CACFs	commercially available complementary foods
EC	European Commission
EFSA	European Food Safety Authority
EU	European Union
FRT	Food Reformulation Task Force
FSAI	Food Safety Authority of Ireland
IUNA	Irish Universities Nutrition Alliance
MLs	maximum levels
NPNS	National Pre-school Nutrition Survey
NPPM	Nutrient and Promotion Profile Model
OHID	Office for Health Improvement and Disparities
PHE	Public Health England
SD	standard deviation
WHO	World Health Organization

Definitions

The following definitions are used:

Food

Regulation (EC) No 178/2002, laying down the general principles and requirements of food law, contains a detailed definition of what constitutes food. In short, food is defined as any substance or product, whether processed, partially processed or unprocessed, intended to be, or reasonably expected to be ingested by humans. Food includes drinks and any substance, including water, intentionally incorporated into the food during its manufacture, preparation or treatment (European Parliament, 2002).

Commercially available complementary foods

Commercially available complementary foods (CACFs), in the context of this guidance, means a manufactured food or drink which is marketed as suitable for feeding infants (under 12 months) and young children (12–36 months). Vitamin and mineral supplements targeted to infants and young children, and infant and young child formulas are not included in the definition of CACFs for the purposes of these reformulation targets.

Added sugars

Added sugars are defined by the European Food Safety Authority (EFSA) as “mono- and disaccharides added to foods as ingredients during processing or preparation at home, and sugars eaten separately or added to foods at the table”. Free sugars are defined as “added sugars plus sugars naturally present in honey, syrups, fruit juices and fruit juice concentrates” (EFSA Panel on Nutrition *et al.*, 2022).

Total sugar

Total sugar means all monosaccharides and disaccharides present in food but excludes polyols (European Parliament, 2011).

Salt

Salt means the salt equivalent content calculated using the formula: salt = sodium × 2.5 (European Parliament, 2011).

1. Introduction

1.1 Purpose

This document sets out the reformulation targets for commercially available complementary foods (CACFs) sold on the Irish market.

1.2 Scope

CACFs are foods marketed for infants and young children under the age of 36 months. All foods (excluding infant and young child formula milks, and vitamin and mineral supplements) marketed for infants and young children under 36 months of age fall within the scope of the reformulation targets for CACFs.

The following are out of the scope of this guidance as they are beyond the remit of the Food Reformulation Task Force (as set out in *A Roadmap for Food Product Reformulation in Ireland*):

1. Infant and young child formula milks and food supplements.
2. Restriction on the promotion, via claims on labelling and media advertising, of inappropriate CACFs.
3. The level of food processing applied to CACFs.
4. Any recommendations which constitute the development of new infant feeding guidelines in Ireland.

1.3 Background

The Obesity Policy and Action Plan – A Healthy Weight for Ireland, published in 2016, outlines ten steps to be taken within a 10-year time frame to prevent overweight and obesity in Ireland (Department of Health, 2016). Step three of the plan relates to food reformulation and aims to “secure appropriate support from the commercial sector to play its part in obesity prevention and agree food industry reformulation targets and review progress”. To achieve this, a Food Reformulation Subgroup of the Obesity Policy Implementation Oversight Group developed *A Roadmap for Food Product Reformulation in Ireland*, which was published in 2021 (Department of Health, 2021).

To deliver the Roadmap, the Food Reformulation Task Force, a strategic partnership between Healthy Ireland and the Food Safety Authority of Ireland (FSAI), was established in 2022. The Food Reformulation Task Force will implement the Roadmap and monitor progress made in reducing energy (calories), saturated fat, sugar, and salt in priority food categories.

1.4 Energy and nutrient reformulation targets for priority food categories

When referred to in the context of *A Roadmap for Food Product Reformulation in Ireland*, food reformulation means improving the nutritional content of commonly consumed processed foods and drinks (Department of Health, 2021). This is achieved by reducing energy (calories) and target nutrients (saturated fat, sugar, and salt) to improve the nutrient quality of the food supply. Specifically, the Roadmap sets targets for the reduction of energy (calories) and sugar by 20% and salt and saturated fat by 10% between 2015 and 2025 in foods consumed by the general population (see Figure 1).

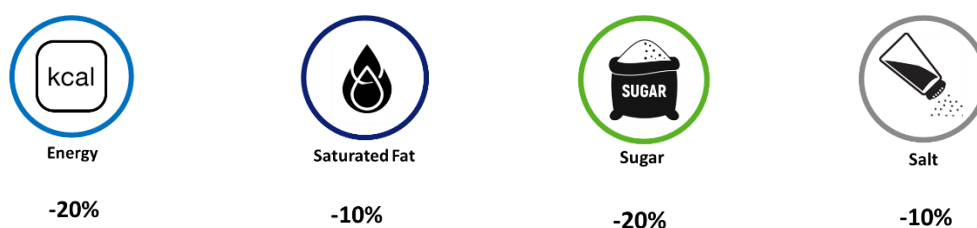


Figure 1 Nutrient reduction targets for food products prioritised for reformulation in Ireland from 2015–2025

The Food Reformulation Task Force published *Priority Food Categories for Food Reformulation in Ireland* in mid-2022 (Food Safety Authority of Ireland, 2023). The 40 priority food categories were identified as being in high priority need of reformulation given their significant contribution to dietary intakes of the target nutrients in the Irish population (aged 1–90 years). A list of the priority food categories for food reformulation in Ireland and the nutrients they are prioritised for are outlined in a report [here](#) (Food Safety Authority of Ireland, 2023).

1.5 Reformulation of commercially available complementary foods (CACFs)

The Roadmap for Food Product Reformulation in Ireland states, “2025 targets will be developed for this category, based on the FSAI’s work in 2012 and repeated in 2018 addressing the nutritional composition and quality of products in this category. Infant milk formula is not included in the Roadmap” (Department of Health, 2021). It outlines that the Food Reformulation Task Force will build on work completed by the FSAI to date in assessing the nutritional composition and

appropriateness of CACFs sold on the Irish market in 2012 and 2018. In addition, the Roadmap states that, where appropriate, the reformulation approach will align with that of Public Health England (PHE)¹ (Public Health England, 2019, Public Health England, 2020).

Infants and young children are a vulnerable population group due to the rapid growth and development during this life stage. Adequate nutrition during this period is essential in ensuring optimal growth and development (Hawkes *et al.*, 2020). Thus, this age group are a nutritionally vulnerable group with unique and complex dietary and nutritional needs (Lyons *et al.*, 2022). First described by Barker ('Barker's hypothesis'), it is now well-established that dietary habits (including taste preferences) formed in early life persist into adulthood and can influence health in later life, including the development of diet-related noncommunicable diseases (NCDs), such as type 2 diabetes, hypertension, and other cardiovascular conditions (Barker, 1990, Hochberg *et al.*, 2011, Branca *et al.*, 2019).

During the period of the introduction of complementary foods there is a transition from a predominantly milk-based diet to a food-based diet in order to ensure optimal nutrition and acceptance of food required for lifelong health. The Scientific Committee of the FSAI have published scientific recommendations for a national infant feeding policy and scientific recommendations for food-based dietary guidelines for 1–5-year-olds in Ireland, which outline best practice for infant and young child feeding in the Irish context to ensure the transition from a milk-based to a food-based diet is seamless (Food Safety Authority of Ireland, 2011, Food Safety Authority of Ireland, 2020). Infant and young child feeding guidelines state foods high in fat, salt and sugar are not recommended as weaning foods and that no added sugar or salt should be used as ingredients in complementary foods (Food Safety Authority of Ireland, 2012, Department of Health, 2020).

Despite this, a review of CACFs sold on the Irish market in 2012, 2017 and 2021, described in [Section 3.3](#), found products high in added sugar and salt, which is not in keeping with infant feeding guidance (Bennett *et al.*, 2012, Geraghty *et al.*, 2018, Taleghani *et al.*, 2018, Curtis-Davis *et al.*, 2022, McGovern *et al.*, 2022). These studies found CACFs that were inappropriate for this age group, such as chocolate puddings, gravies, and confectionery. In addition, the acceptability of snacks/finger foods that melt in the mouth and reduce the risk of choking has led to an increase in CACFs on the market that mimic foods on the top shelf of the children's food pyramid, such as crisps (Department of Health, 2020). This has normalised the regular consumption from early life of foods

¹ Now referred to as the Office for Health Improvement and Disparities (OHID).

on the top shelf of the children's food pyramid, which are high in fat, sugar and salt and are not recommended in the diets of infants and young children. This situation is not unique to Ireland, and in response, the World Health Organization (WHO) Regional Office for Europe and the University of Leeds developed and published the Nutrient and Promotion Profile Model (NPPM), which, amongst other aims, seeks to improve the nutrient quality of CACFs (World Health Organization, 2022). Addressing this issue is important, as children under the age of 36 months are a vulnerable population, and developing a taste preference for sugar and salt in early childhood can increase the risk of obesity and chronic disease in later life.

Given the vulnerability of infants and young children under the age of 36 months, there are legislative rules, including nutrition composition and ingredient requirements, for commercial foods targeting this age group, including:

1. *Regulation (EU) No 609/2013 Foods for Specific Groups (European Parliament, 2013).*
2. *Commission Directive 2006/125/EC of 5 December 2006 on processed cereal-based foods and baby foods for infants and young children (European Commission, 2006).*

Although a revision of the legislative guidance on the nutritional composition of processed cereal-based foods and baby foods for infants and young children is expected, it has been significantly delayed. When these new legislative measures are introduced, they should be adhered to. In the meantime, reformulation targets are required in Ireland to address the inappropriate nature of some CACFs currently on the Irish market. **It is important to state that as required by General Food Law and outlined in Regulation (EC) No 178/2002 Article 14, CACFs placed on the Irish market must be safe.**

1.6 Target nutrients for reformulation in CACFs

The Roadmap for Food Product Reformulation in Ireland sets out reformulation targets of a 20% reduction in energy (calories) and sugar and a 10% reduction in saturated fat and salt. These targets cannot be applied directly to CACFs as infants and young children are a vulnerable group with high nutrient requirements but a relatively small capacity to consume food (Food Safety Authority of Ireland, 2011, Food Safety Authority of Ireland, 2020). For this reason, low-energy and low-fat diets and foods are not suitable for this group, who need energy-dense nutritious foods to meet their nutrient requirements (World Health Organization, 2022). There is limited evidence that saturated fatty acids have any health effects in infants and young children (Astrup *et al.*, 2019), and given this, the WHO NPPM does not set thresholds for saturated fat content of CACFs. However, it is expected that sources of saturated fat in the diets of this age group are nutritious foods and not inappropriate CACFs. The NPPM sets a minimum, rather than maximum, energy (calorie) threshold, as energy

density is a concern for these foods. **Given this, reformulation targets for the reduction of saturated fat and energy are not considered to be required for CACFs, and the reformulation of sugar and salt in appropriate CACFs is prioritised.**

As described, there are inappropriate CACFs with high fat, sugar and salt content sold on the Irish market that mimic foods on the top shelf of the children's food pyramid e.g. cakes, crisps and confectionery. Inappropriate CACFs, which are nutrient-poor and high in fat, sugar and salt, are unnecessary in the diets of infants and young children, as they provide limited nutrient value and displace more nutritious foods. Manufacturers of CACFs should offer products that are appropriate for this age group and should avoid placing CACFs on the market that contain added sugar and salt and/or mimic foods on the top shelf of the children's food pyramid. **Manufacturers and retailers should rebalance their product portfolios towards products that are appropriate for this age group. Examples of appropriate and inappropriate CACFs are outlined in [Appendix I](#).**

2. Methodology

To define reformulation targets for CACFs on the Irish market, the following steps were undertaken:

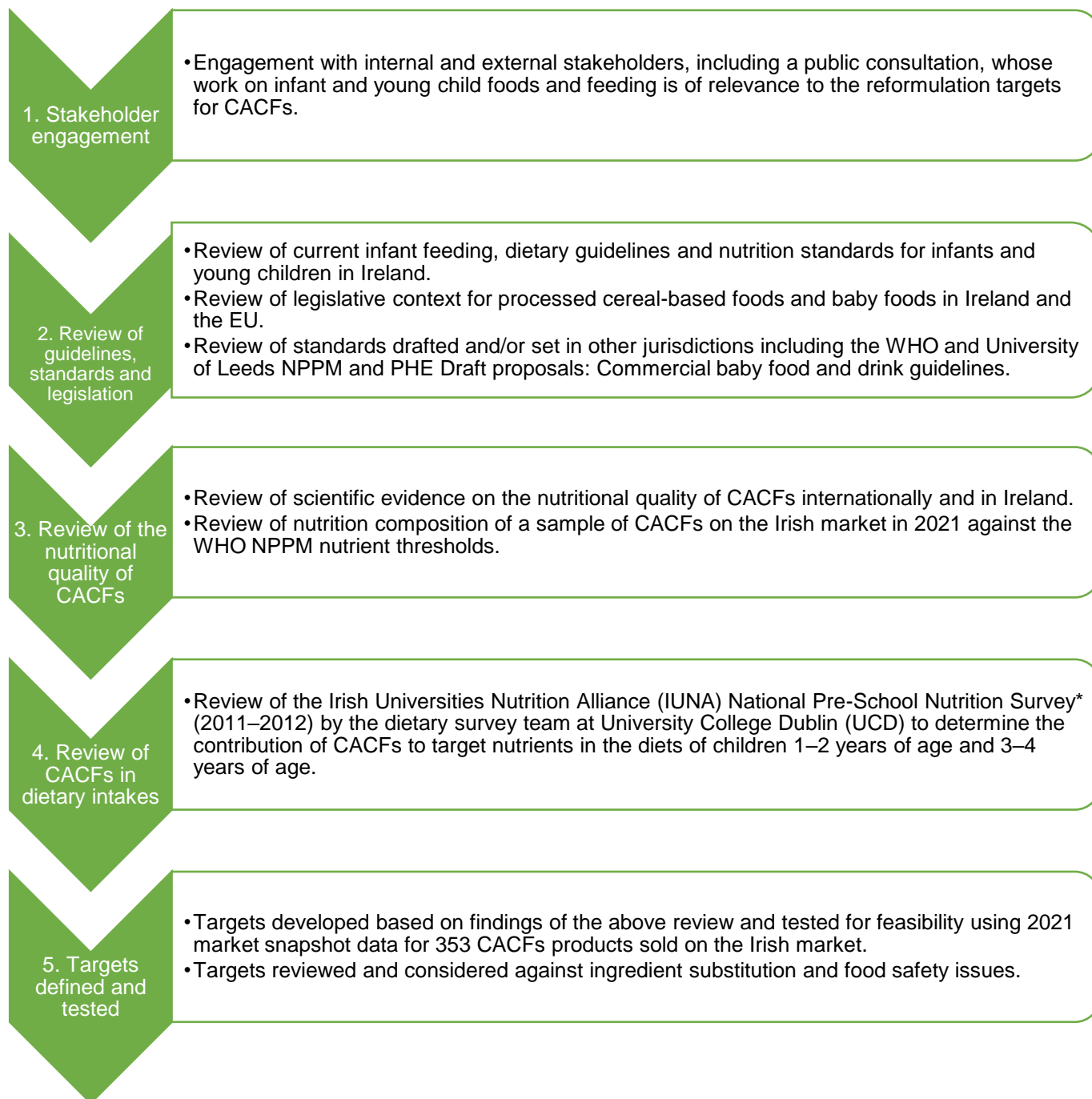


Figure 2 Methodology followed in the development of reformulation targets for CACFs sold on the Irish market

* NPNS includes 9 food categories specific to infant and young child foods as well as the standard 68 NPNS food categories.

3. Summary of the policy, guidance and legislation considered in setting reformulation targets for CACFs in Ireland

3.1 Nutrient and Promotion Profile Model (NPPM)

The WHO and the University of Leeds published the NPPM for commercial complementary foods in the diets of infants and young children aged under 36 months in 2019. The NPPM was updated in 2022 and is available [here](#) (World Health Organization, 2022). The NPPM was developed in response to growing concern around the promotion of inappropriate CACFs high in sugar and salt and the potential for these foods to displace appropriate foods in the diets of children under 36 months of age.

The nutritional standards outlined in the NPPM are based on strong scientific evidence (Hutchinson *et al.*, 2021) and have been refined over a number of years by international experts in infant and young child nutrition and population dietary health. Given the strong scientific basis behind the NPPM, the standards are an appropriate basis for reformulation recommendations for Ireland, alongside nutrition composition requirements as set out in the legislation. Where the NPPM and legislative minimum or maximum nutrient amounts differ, the legislative requirements will supersede the reformulation targets developed based on the NPPM.

3.2 Legislation, policy and guidelines relevant to CACFs in Ireland

A review of the nutrition policy and guideline landscape in Ireland was completed to inform the development of reformulation targets for CACFs. This review included scientific evidence and EU legislation alongside the following national policy and guidance:

- *Scientific Recommendations for a National Infant Feeding Policy 2nd Edition*, (Food Safety Authority of Ireland, 2011).
- *Best Practice for Infant Feeding in Ireland – A Guide for Healthcare Professionals*, (Food Safety Authority of Ireland, 2012).
- *Scientific Recommendations for Food-Based Dietary Guidelines for 1 to 5 Year-Olds in Ireland*, (Food Safety Authority of Ireland, 2020).
- *Healthy Eating for 1 to 4 year olds; The Children's Food Pyramid Guidelines*, (Department of Health, 2020).

- *Nutrition Standards for Early Learning and Care Services*, (Healthy Ireland, 2023).

The reformulation targets outlined in this report align with the above-mentioned national guidelines and standards.

The specific legislations for these foods, including *Regulation (EU) 609/2013 Foods for Specific Groups and Commission Directive 2006/125/EC of 5 December 2006 on processed cereal-based foods and baby foods for infants and young children*, were also reviewed and considered in the development of these reformulation targets. Alongside these specific regulations, **CACFs placed on the Irish market must be safe, as required by Regulation (EC) No 178/2002, Article 14.**

3.3 A review of the nutrient composition of CACFs and their contribution to dietary intakes of sugar and sodium in pre-school children living in Ireland

In the Irish pre-school population (aged 1–4 years), dietary intakes of free sugar are estimated to range from 11% to 14% of total energy, exceeding the WHO recommended upper threshold of 10% total energy (Lyons *et al.*, 2022, Crowe *et al.*, 2020, World Health Organization, 2015). In addition, current salt intakes of 2.7 g/day in 1–2-year-olds and 3.4 g/day in 3–4-year-olds exceed the population daily salt intake upper threshold set by the FSAI for these age groups (2 g/day for 1–3-year-olds and 3 g/day for 4-year-olds) (Irish Universities Nutrition Alliance, 2012, Food Safety Authority of Ireland, 2016).

Several studies have reported high sugar and salt content in CACFs across Europe and the United Kingdom (Hutchinson *et al.*, 2021, Santos *et al.*, 2022, Grammatikaki *et al.*, 2021, Melissa *et al.*, 2020). A similar trend is observed in Ireland, where research undertaken since 2012 has identified inappropriate CACFs with high sugar, salt and fat content on the Irish market (Bennett *et al.*, 2012, Geraghty *et al.*, 2018, Taleghani *et al.*, 2018). The market is also growing; between 2012 and 2017, there was a 72% increase in the number of snack foods on the Irish market targeted to infants 6–12 months (Geraghty *et al.*, 2018). Snack foods targeting infants in 2017 had a mean sugar content of 11 g (Geraghty *et al.*, 2018). In 2017, CACFs sold as ‘biscuits’ were higher in sugar than an average digestive biscuit (Geraghty *et al.*, 2018) and CACFs sold as ‘toddler bars’ were higher in sugar than a standard cereal bar, with a mean sugar content of 26 g (Taleghani *et al.*, 2018). In 2017, 74% of products sold as snacks and targeting infants and 62% of products sold as snacks and targeting young children were deemed inappropriate as they were not in keeping with infant and young child feeding guidelines (Taleghani *et al.*, 2018, Geraghty *et al.*, 2018). A follow-up study completed in 2021 observed a minor improvement in the nutritional composition of CACFs targeting infants and

young children, however there remained CACFs on the market with high sugar and sodium content (McGovern *et al.*, 2022).

The WHO NPPM was applied to a sample of CACFs sold on the Irish market in 2021 (n=77), in line with the NPPM rapid evaluation methodology. This analysis found that for savoury meals and meal components, dry and semi-dry snacks, and finger foods (n=49), 45% (n=22) exceeded the $\leq 15\%$ of energy from total sugar threshold. In savoury meals (n=36), 44% (n=16) exceeded the $\leq 15\%$ energy from total sugar threshold, with those failing this criterion (n=16) having a mean of 23% (standard deviation (SD) 9) energy from sugar. Similarly, for snacks (n=13), 46% (n=6) failed, with the mean energy from sugar in such products being 34% (SD23). Of the total products assessed (n=77), 22% (n=17) contained added free sugars, which under the NPPM is not permitted; this includes all sugars, syrups, and any fruit juice (not including 100% fruit, which is permitted). Of the total products assessed (n=77), 31% (n=24) failed the NPPM sodium threshold of 50 mg/100 kcal (or 100 mg when cheese is within the product name in savoury meal products and dairy-based foods).

In 2022, the Food Reformulation Task Force commissioned a review of the Irish Universities Nutrition Alliance (IUNA) 2011–2012 National Pre-School Nutrition Survey (NPNS) by the Dietary Survey Team at UCD. An analysis with a specific focus on CACFs², found they contributed 11% of sugar and 3% of sodium intakes in pre-school children aged 1–2 years, and 7% of sugar and 1% of sodium intakes in pre-school children aged 3–4 years. Puréed fruit and smoothies, and fromage frais, were found to be significant contributors of sugar in the diets of pre-school children aged 1–4 years (Irish Universities Nutrition Alliance, 2012).

These findings demonstrate the need to continue improving the nutritional quality of CACFs on the Irish market. Improvement of the nutritional quality of CACFs is a priority given the vulnerability of the target population and the potential for long-term adverse health effects due to establishing taste preferences for sugar and salt, including an increased risk of obesity and diet-related NCDs in later life.

4. Reformulation targets for CACFs in Ireland

Based on the evidence summarised in this report, the food industry should prioritise the reformulation of sugar and salt in CACFs. The reformulation targets for sugar and salt have been established in

² NPNS includes 9 food categories specific to infant and young child foods as well as the standard 68 NPNS food categories.

response to their high levels in CACFs on the Irish market and are intended to improve the nutritional quality of CACFs. However, it must be noted that CACFs are not an essential part of the diets of infants and young children, and reformulation targets should not be misinterpreted as infant feeding guidance or dietary standards.

There are inappropriate CACFs with high fat, sugar and salt content sold on the Irish market, which mimic top-shelf foods on the children's food pyramid and are not in keeping with infant feeding guidelines, e.g. confectionery, crisps and cakes. As per infant feeding guidance, inappropriate CACFs, which are high in fat, sugar and salt, are unnecessary in the diets of infants and young children, as they provide limited nutrient value and displace more nutritious foods in the diet. For this reason, they should not be targeted to infants and young children. **Such CACFs cannot be made appropriate by reformulation, and manufacturers and retailers should rebalance their product portfolios towards products that are appropriate for this age group. Examples of appropriate and inappropriate CACFs are outlined in [Appendix I](#).**

4.1 Reformulation targets for sugar

In line with Ireland's infant feeding guidance, no sugars or sweetening agents should be added to CACFs as ingredients.

Given infant and young children's requirement for altered textures there is a need to use fruit and vegetable purées as foods and food ingredients. An allowance is made for this requirement, and therefore, the use of macerated/mashed/puréed fruit and vegetables (other than juices and juice concentrates), including the use of lemon or lime juice in small quantities, is permitted. However, to keep the sugar content of CACFs as low as feasibly possible, manufacturers should:

1. limit and reduce the amount of macerated/mashed/puréed fruit added as ingredients wherever possible, and
2. refrain from masking the flavour of less sweet or bitter vegetables with sweet vegetables and fruit, i.e., sweet and bitter fruit and vegetables should not be mixed in order to mask the flavour of vegetables³.

³ Nitrate is a naturally occurring contaminant in vegetables. Maximum levels (MLs) for nitrate have been set for certain vegetables and baby food and processed cereal-based food for infants and young children. An ML of 200 mg NO₃/kg has been set for nitrate in "Baby food and processed cereal-based food for infants and young children" and this ML applies to the products ready to use (placed on the market as such or after reconstitution as instructed by the manufacturer). MLs for nitrates will take precedence over the reformulation targets set out in this report.

Additionally, commercially available savoury meals⁴ and commercially available snacks/finger foods⁵ should have ≤15% of energy (calories) from total sugar.

The reformulation targets for sugar are summarised in Table 1.

Table 1 Reformulation targets for sugar content of CACFs

Sugar	Food category and threshold
Added sugar	<p>In line with infant feeding guidance, no sugars should be added to CACFs as ingredients. This target applies to all CACFs on the market.</p> <p>Added sugars are defined by the EFSA as “<i>mono- and disaccharides added to foods as ingredients during processing</i>” and include free sugars, which are defined as “<i>added sugars plus sugars naturally present in honey, syrups, fruit juices and fruit juice concentrates</i>”. (EFSA Panel on Nutrition <i>et al.</i>, 2022).</p> <p>An allowance is made for the use of macerated/mashed/puréed fruit and vegetables (other than juices and juice concentrates), including the use of lemon or lime juice in small quantities. To keep the sugar content of CACFs as low as feasibly possible, manufacturers should:</p> <ol style="list-style-type: none"> 1. limit and reduce the amount of macerated/mashed/puréed fruit added as ingredients wherever possible, and 2. refrain from masking the flavour of less sweet or bitter vegetables with sweet vegetables and fruit, i.e., sweet and bitter fruit and vegetables should not be mixed in order to mask the flavour of vegetables³.
Total sugar	≤15% of energy (calorie) from total sugar in commercially available savoury meals ⁴ and commercially available snacks/finger foods ⁵ .

CACFs= commercially available complementary foods; %= percentage; EFSA= European Food Safety Authority.

⁴ Commercially available savoury meals mean all savoury meals, such as vegetable, meat and fish-based meals and meal components **which include combinations** of starches, vegetables, dairy and/or traditional protein and which are sold in pouches, jars and containers and marketed for infants and young children under the age of three years.

⁵ Commercially available snack products and finger foods means any grain, starch, pulse/lentil, processed fruit or vegetable snack products such as cracker, bread, rusk, marketed for children under the age of three years. Commercially available snack products should be nutritious savoury and plain foods.

4.2 Reformulation targets for salt/sodium

In line with infant feeding guidance, no salt or salt-containing ingredients, excluding cheese, should be added to CACFs. Cheese can be added as it is an important source of calcium in young children's diets.

Sodium content should be limited to ≤ 50 mg/100 kcal for all CACFs, except for savoury meal products and dairy-based foods if cheese is named within the front-of-pack product name, which will have a higher threshold of ≤ 100 mg/100 kcal. Products made from 100% fruit and vegetables will be excluded from the sodium target to reflect naturally occurring sodium in fruit and vegetables.

The reformulation targets for salt/sodium are summarised in Table 2.

Table 2 Reformulation targets for salt/sodium content of CACFs

Salt/sodium	Food category and threshold
Salt	In line with infant feeding guidance, no salt (or salt-containing ingredients⁶) should be added to CACFs.
Sodium⁷	Sodium should be limited to <ul style="list-style-type: none"> • ≤ 50 mg/100 kcal. • ≤ 100 mg/100 kcal if cheese is named within the front-of-pack product name in savoury meal products⁴ and dairy-based foods⁸.

CACFs= commercially available complementary foods; mg= milligram; kcal= kilocalories.

⁶ This excludes cheese, which is an important source of calcium for children.

⁷ Does not apply to products made from 100% fruit and vegetables.

⁸ Dairy-based foods and cereals where dairy is the largest ingredient.

4.3 Availability and prominence of appropriate and inappropriate CACFs

As well as nutrient reformulation, manufacturers and retailers should rebalance their CACFs product portfolio towards foods which are appropriate for this age group, as outlined in *the [Best Practice for Infant Feeding in Ireland Guidelines](#) and [Healthy Eating for 1 to 4 year olds; The Children's Food Pyramid Guidelines](#)* (Food Safety Authority of Ireland, 2012, Department of Health, 2020). To achieve this, manufacturers and retailers should reduce the availability, prominence and sales of inappropriate CACFs. Examples of appropriate and inappropriate CACFs are outlined in [Appendix 1](#).

4.4 Time frame to achieve targets and monitor progress

Changes in the nutrient composition of CACFs will be measured between 2021 and 2025.

To measure progress, a market snapshot of CACFs products available on the market in 2021 will be compared against a market snapshot which will be completed in 2025. The 2025 market snapshot will measure all foods sold as CACFs on the market at that point in time in retail outlets where access is provided. The results of the 2021 market snapshot are outlined in [Appendix II](#).

To monitor the availability and prominence of inappropriate CACFs, the ratio of appropriate to inappropriate CACFs availability, and in-store prominence (visibility to the consumer) will be measured. The availability of suitable and robust consumer purchase data to determine trends in sales of inappropriate CACFs will also be explored.

5. Acknowledgements

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6. Appendix

Appendix I Examples of appropriate and inappropriate CACFs

Appropriate CACFs are foods which conform to standards set out in [Best Practice for Infant Feeding in Ireland](#) and [Healthy Eating for 1 to 4 year olds; The Children's Food Pyramid Guidelines](#) (Department of Health, 2020, Food Safety Authority of Ireland, 2012). Appropriate CACFs do not contain added sugar or salt, and their fat content comes from nutrient-rich sources. Appropriate CACFs do not mimic foods on the top shelf of the children's food pyramid.

Inappropriate CACFs are products containing added sugar and salt. CACFs which mimic foods on the top shelf of the children's food pyramid in the [Healthy Eating for 1 to 4 year olds; The Children's Food Pyramid Guidelines](#) e.g. confectionery, cakes, biscuits and crisps, are inappropriate (Department of Health, 2020). The [Healthy Eating for 1 to 4 year olds; The Children's Food Pyramid Guidelines](#) outline that top-shelf foods should not be offered to young children, but if offered, should be given in tiny amounts so as not to displace more nutritious foods (Department of Health, 2020). [Best Practice for Infant Feeding in Ireland Guidelines](#) and [Healthy Eating for 1 to 4 year olds; The Children's Food Pyramid Guidelines](#) outline fruit juice drinks are also inappropriate as only milk (breastmilk, formula, and from 12 months onwards cow's milk and dairy alternatives fortified with calcium) and water are recommended for this age group (Department of Health, 2020, Food Safety Authority of Ireland, 2012).

Examples of appropriate and inappropriate CACFs by category are outlined in Table 3.

Table 3 Examples of appropriate and inappropriate CACFs by category

CACF categories	CACF category description	Examples of appropriate CACFs	Examples of inappropriate CACFs
Savoury meals	All savoury meals, such as vegetable, meat and fish-based meals and meal components which include combinations of starches, vegetables, dairy and/or traditional	Nutrient-dense savoury meals with no added sugar or salt.	Savoury meals with added sugar and/or salt and low nutrient density.

CACF categories	CACF category description	Examples of appropriate CACFs	Examples of inappropriate CACFs
	protein and which are sold in pouches, jars and containers and marketed for infants and young children under the age of three years.		
100% fruit and/or vegetable purées	Purées made from 100% fruit and/or vegetables.	Nutrient-dense purées with no added sugar or salt.	Purées with low nutrient density, with added sugar and salt.
Snacks/finger foods	Snacks/finger foods mean any grain, starch, pulse/lentil, processed fruit or vegetable snack products such as cracker, bread, rusk, marketed for children under the age of three years.	Energy-dense and nutritious snacks and finger foods containing $\leq 15\%$ energy from sugar.	Snacks/finger foods exceeding the sugar and salt targets. Snacks/finger foods with limited nutrient density. Products mimicking foods on the top shelf of the children's food pyramid e.g. biscuits, crisps, cakes and confectionery.
Cereal-based foods	Dry cereals and starches for preparation with milk or water.	Unsweetened porridge, rice powder or breakfast cereal.	Breakfast cereal or porridge with added sugar, salt or cream.
Dairy-based foods	Dairy-based foods and cereals where	Yoghurt with no added sugar.	Yoghurt with added sugar or dairy-based

CACF categories	CACF category description	Examples of appropriate CACFs	Examples of inappropriate CACFs
	dairy is the largest ingredient.		dessert with added cream.
Confectionery	Chocolate and non-chocolate confectionery.	None.	Chocolate-based or covered snacks/finger foods, such as jellies and pulped and dried fruit.
Ingredients	CACFs added in meal preparation such as stocks and sauces.	Sauce with no added sugar or salt. Stock with no added sugar or salt.	Gravies with added salt. Sauce with added salt/sugar.
Drinks	Drinks excluding formula milks.	None. Only milk and water should be offered as drinks to infants and young children.	Juice based drinks, flavoured/sweetened water.

CACFs = commercially available complementary foods.

Appendix II Nutritional composition of CACFs on the Irish market in 2021

Table 4 Mean (SD) nutritional composition per 100 g of CACFs on the Irish market in 2021

CACFs categories*	N	Mean (SD) Energy (kcal)	Mean (SD) Saturated fat (g)	Mean (SD) Sugar (g)	Mean (SD) Salt (g)
Savoury meals	77	73.26 (55.54)	0.8 (0.63)	2.74 (1.35)	0.14 (0.26)
100% fruit and/or vegetable purées	82**	57.91 (16.77)	0.21 (0.68)	9.91 (4.02)	0.03 (0.03)
Snacks/finger foods	115	409.35 (58.86)	1.87 (2.36)	15.59 (12.2)	0.15 (0.23)
Cereal based foods	43	356.95 (116.25)	2.41 (1.93)	20.47 (15.9)	0.2 (0.20)
Dairy-based foods	26	80.54 (13.38)	1.3 (0.87)	7.93 (3.20)	0.06 (0.03)
Confectionery	8	336.38 (17.36)	0.26 (0.09)	67.88 (1.46)	0.3 (0.61)
Ingredients (e.g. sauces, stocks)	2	7.5 (0.71)	0.15 (0.07)	0.25 (0.07)	0.1 (0.00)

*Drinks are not included as none were collected on the market in 2021. **N= 82 for energy, sugar and salt and n=78 for saturated fat. N= sample size; kcal= kilocalories; g= gram; SD= standard deviation.

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