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Abstract : Sources and correlates of sodium consumption in the first two years of life

High sodium intake during infancy and early childhood may change salt preference and blood pressure trajectories across life, representing a modifiable cardiovascular risk factor. Describing young children's sodium intake is important in informing effective targets for sodium reduction. This study aimed to describe food sources and demographic and behavioral correlates of sodium intake in 295 young Australian children using three unscheduled 24-hour recalls (when children were 9 and then 18 months of age) with mothers participating within an existing randomized controlled trial, The Melbourne InFANT Program. Differences in individual and family level demographic and behavioural variables were assessed across tertiles of sodium density (mg/1000 kilocalories). Descriptive statistics were used to describe food group contributions to total energy and sodium intakes at both ages. The mean sodium intake was 486 (SD 232) mg at 9 months and had more than doubled to 1069 (SD 331) mg at 18 months of age. Fifty-four percent of children at 18-months exceeded the recommended daily Upper Level for sodium intake, with bread, cheese, breakfast cereal, soup and mixed dishes all important sources of sodium at both ages. Yeast extracts, processed meats and bread products became important additional sources at 18-months. A greater proportion of children in the highest sodium density tertile had ceased breastfeeding and had commenced solids at an earlier age. In conclusion the key food sources of sodium for children under two years are those that contribute to the whole populations' high salt burden and highlight that policy driven changes that will reduce sodium in the food supply are a high priority.

Introduction

Hypertension is considered to be one of the most important preventable causes of stroke and cardiovascular disease (CVD).[1] After reducing smoking, worldwide reduction in dietary sodium (salt) intake has been proposed to be the most effective strategy to reduce CVD.[2, 3] The high sodium intake of developed nations is associated with higher levels of blood pressure (BP),[1, 4, 5] and importantly BP has been shown to track across the lifespan.[6-8] Understanding opportunities in early life where this tracking trajectory might be altered will be important in reducing the morbidity and mortality associated with CVD.

Evidence suggests that sodium intake predicts BP in older children.[9, 10] For example, in a Unites States (US) sample of 6235 8-18 year olds, each additional 1000mg of sodium/day was associated with an increased standard deviation score of 0.097 in systolic BP (95% CI: 0.006, 0.188, ~ 1.0mm Hg).[10] Furthermore, a meta-analysis including 10 controlled trials showed a 42% reduction in daily sodium predicted significant reductions in systolic (-1.17mm Hg) and diastolic (-1.29mm Hg) BP in children aged 8-16 years.[11]

There is also evidence that exposure to higher sodium intake during infancy increases BP in childhood and adolescence. Hoffman et al.,[12] in a randomized controlled trial (n=476) comparing low sodium to normal sodium diets from two months of age, reported that systolic BP was 2.1mm Hg (95% CI: 0.5,3.7) lower in the low sodium compared to the normal sodium group at six months of age. When followed up at 15 years of age (n=167), the difference between the original low and normal sodium diet groups had increased to 3.6mm Hg (95% CI: 0.5, 6.6).[13] Additionally, one longitudinal study reported that sodium intake at four months of age (n=533) was positively associated with systolic BP at age seven.[14]

Relatively little is known about young children's sodium intake, with just five studies worldwide providing high quality dietary recall data in the last two decades.[15-19]

The few existing studies report that most children under two years of age are consuming sodium in excess of national recommendations.[15-19] Importantly however, just two studies report contemporary data[15, 17] with most data now more than a decade old e.g. Australian data was collected in 1998 and 2001. Moreover, these latter studies do not identify key food sources of sodium in the diet. The aim of this study, therefore, was to describe sodium intake, food sources as well as demographic and behavioral correlates of sodium intake in young Australian children.

Materials and methods

Study design and participants

The Melbourne Infant Feeding Activity and Nutrition Trial (InFANT) Program was a cluster randomized controlled trial, involving first-time mothers attending parents' groups, from when their infants were three to 20 months of age. This lifestyle intervention was conducted in 2008-2010 within Melbourne, Australia (population 4 million). Primary aims of the InFANT Program focused on reducing children's obesity-risk behaviors; there was no focus on sodium consumption and no difference in sodium consumed between trial arms (data not shown). The study design has been previously reported.[20] Eighty six percent of eligible parents consented to participate (n=542).

This paper describes data collected from both intervention and control group children when they were approximately nine and 18- months, herein referred to as time two (T2) and three (T3), for consistency with other publications arising from these data [21]. Data were excluded for children from non-first-time mothers (n=14) and those lost to follow-up at T2 (n=21) or T3 (n=27). To ensure comparability between participants and to maximize capacity to describe children's food sources of sodium, children with <3 complete dietary recalls at nine or 18- months were excluded (n=131). Outliers for total energy and liquid intakes were identified and excluded according to the criterion of mean +/- 3SD (n=8). To avoid a possible influence of age on the results, children were excluded from the analysis if they were younger than seven months or older than 11 months at T2 (n=27); and younger than 16 or older than 20 months at T3 (n=19). This resulted in a sample of 295 children. InFANT was approved by the Deakin University Human Research Ethics Committee (ID number: EC 175-20078) and the Victorian Government Department of Human Services, Office for Children, Research Coordinating Committee (Ref: CDF/07/1138).

Measurements

Socio-demographic data

Self-administered paper-based questionnaires were provided to parents at the recruitment meeting and returned to program staff at the first InFANT Program session. These provided demographic and socioeconomic data at baseline (T1: children 3 months). Maternal education level was dichotomized as low (≤ secondary school or trade qualifications) or high (≥ college or university degree).

Dietary intake and dietary behaviors

Children's diet-was assessed by nutritionists trained by the researchers (KC, SAM) using standarized telephone-administered, 5-pass 24-hour recalls.[22] Study specific food measurement books aided parents' estimation of infants' food consumption. Three non-consecutive days of dietary data (including one weekend day) were collected via a purpose designed computer program facilitating reporting fidelity and analytical consistency between interviewers. Overall, 96% of telephone calls were unscheduled. Nutrient intakes were evaluated using the 2007 AUSNUT food composition database.[23] Breastfeeding was recorded as minutes spent breastfeeding and converted to volume consistent with previous studies.[24] Single questions assessed the age at which solids were introduced, and at which breastfeeding was ceased.[25]

Data management and statistical analyses

Tertiles of sodium intake (as a density, mg of sodium per 1000 kilocalories) at T2 were calculated to examine differences in individual and family demographic and behavioural variables across levels of sodium density. Analysis of variance (with Bonferroni adjustments) and the Chi-squared test were used to assess differences between sodium density tertiles. Descriptive statistics were used to describe food group contributions to total energy and sodium intake at T2 and T3. The 2007 AUSNUT food composition database categorizes foods into a hierarchy of food groups[26] and the sub-major food groupings (98 food groupings) were used. To understand how the transition from breast milk/formula milk to family foods contributed to sodium intake, the results are presented in two broad categories: (1) "Infant food and milks" which aggregate the following subgroups defined by the Australian Food Coding System: [26] 'Infant foods' (jarred fruit and vegetable based meals,

infant custards and yoghurts); 'Infant cereal foods' (jarred cereals and cereal based meals and rusks); and breast milk and infant formula and (2) "Other foods" including bread and breakfast cereal, cheese and regular (non-infant) yoghurt and dairy milk, as well as foods consumed as part of family meals such as casseroles and stews. Sodium intake at each time point was near normally distributed. Mean contribution and standard deviation for the sample are presented, as well as the percentage of the sample consuming each food group. Sub-major food groups contributing more than 2% to children's sodium intake are presented here and those contributing less than 2% are presented in Supplemental on-line Table 1. All analyses were conducted using IBM SPSS Statistics 20 (SPSS, Version 20.0, 2011, IBM, Chicago, IL, USA).

Results and Discussion

Demographic characteristics and sodium intake of participants by tertile of sodium density at 9 and 18 months of age are presented in Table 1. These longitudinal data indicate that during the second nine months of life, a time of progressive introduction to family foods, children's mean sodium intake doubled from 486 (SD 232)mg at T2 (mean age 9.2 months (SD 0.74)) to 1069 (SD 331)mg at T3 (17.5 months (SD 0.84)) (data derived from Table 1). Fifty four percent of 18-month old children in this study exceeded the Australian National Health and Medical Research Council Upper Level of 1000mg/d for sodium for one to three year olds.[27]

Our results are similar to earlier high quality Australian data (1991 and 1997-2000) collected at similar ages,[16,19] suggesting sodium intake in Australia has not changed substantially over the past 12-14 years. Internationally, the US Feeding Infants and Toddlers Study[15] reported a

similar mean daily sodium intake of 528mg (SD 21.2mg) in six to 11-month old children (n=505), but a 40% greater mean intake (1489mg, SD 16mg) at 12- to 23-months (n=925). The 2008/09–2009/10 United Kingdom (UK) National Diet and Nutrition Survey also reported higher mean daily sodium intakes (1312mg) in one and a half to three year olds (n=219).[17] Given absolute sodium intake increases with age these higher values may reflect the slightly older ages of these US and UK participants, however it is likely that cultural differences in consumption and or differences in food processing practices between countries plays a role. It is important to acknowledge that despite describing a younger sample, US national data shows mean sodium intakes are around 13% higher than comparable UK national data.

High sodium intakes in young children are concerning given evidence that taste preferences develop in early life,[28, 29] and that food intake tends to track across childhood through adolescence[30] and into adult life.[31] As sodium consumption is associated with increased blood pressure at all ages,[10-12, 32] and given that the cumulative effect of higher blood pressure increases risk for stroke and cardiovascular disease,[33] it is important that we understand how we can limit this transition to a sodium-dense diet. Understanding the food sources of sodium and factors associated with higher sodium intake in early life can guide potential targets to reduce population sodium consumption.

Food sources of sodium

In the current study, the primary sources of sodium include milk (breast milk at nine months, cow's milk at 18 months), and foods known to contribute to the high sodium intake across the

population; bread, cheese, breakfast cereals and soup[34]. By 18 months of age, a range of highly salted processed foods commonly consumed in the family setting (herein termed 'family foods') had become additional important sources of sodium, with highly salted yeast extract spreads, processed meats, bread products (i.e. English muffins and crumpets), baked beans and crackers all important contributors. To our knowledge, just two studies have described sources of sodium in young children's diets over the past 20 years[17, 35] and these findings, while not directly comparable due to differences in food group classifications, are broadly consistent.

Food group contributions to sodium intake at 9 months (T2) and 18 months (T3)

At T2, all children were consuming breast milk and/or infant formula, and this contributed 31% of total sodium and around half of total energy intake (Table 2). *"Infant foods and milk"* provided 36% of children's total sodium and 56% of total energy intake. In contrast, *"Other foods"* provided 47% of total sodium, but only 23% of total energy. Within this category, contributors to sodium intake were bread and rolls (providing 11% of total sodium), cheese (9%) and yoghurt (6.7%). Soup and breakfast cereal each provided around 4% of total sodium intake, although soup was only consumed by 16% of children. Mixed dishes individually provided 2-3% of sodium however collectively were an important source of sodium providing ~10% of total sodium intake.

The reduction or cessation of breast or formula feeding and the reduction in the consumption of *"Infant foods"* at T3, was associated with an increase in both the amount (as indicated by energy contribution) and proportion of higher sodium foods consumed (Table 3). *"Other*

185 *foods"* (e.g. bread and rolls, cheese, breakfast cereal) provided ~57% of total energy and
186 nearly three-quarters of children's total sodium intake (72%). Dairy milk was the greatest
187 single contributor to children's energy intake at T3 (providing 22% of energy intake) and
188 provided 13% of sodium intake. In contrast, bread and rolls provided a third as much energy
189 (8%) but contributed a similar proportion of total sodium (15%). Bread, cheese, breakfast
190 cereal, soup and mixed dishes remained important contributors to children's sodium intake at
191 T3. Other foods contributing significantly to sodium intake at this age included highly salted
192 yeast extract spreads, processed meats and English muffins or other sweet/savory bread
193 products (each contributing about 3%). Despite a low frequency of consumption (<25% of
194 the sample), legumes (including baked beans) and crackers still contributed, on average,
195 around 2% of total sodium intake.

196

197 *Factors associated with children's higher sodium intakes*

198 The factors associated with a high sodium intake have not been previously reported in this
199 young age group. In the current study, we considered a range of social and behavioral
200 variables as potential correlates of sodium intake at nine months and found that children with
201 the highest sodium intakes at nine months had ceased breastfeeding at a younger age
202 (P=0.040) and commenced solid food earlier in life (P=0.051). Children with higher sodium
203 densities were significantly older at T2 (P <0.001) and T3 but only between lowest and
204 highest tertiles (P <0.003).

205

206 The association of higher sodium intakes with maturation (older child age) and earlier
207 commencement of solid foods are closely linked and likely to reflect the move from

government regulated ‘infant’ or weaning foods, where the addition of salt is not permitted, to family foods. The incorporation of high sodium family foods, particularly staple foods such as bread, breakfast cereals and cheese into a young child’s diet appears to drive the rapid increase in children’s sodium intakes. This phenomena has also been documented by Smithers et al[36] who report from the Avon Longitudinal Study of Parents and Children that a ‘home-made traditional’ dietary pattern in infants was positively associated with sodium intake while the ‘ready-prepared baby foods’ pattern was negatively associated, suggesting that food regulation of infant foods limited sodium intakes. Understanding the impact of staple family foods on children’s sodium intakes provides further rationale for sodium reduction across the food supply. To achieve the greatest population reach, government policy focused on reducing the sodium in processed foods (e.g. bread, breakfast cereals and cheese) will be particularly beneficial. Gradual product reformulation is a focus in many countries, with the UK having been a leader in this field.[37] In comparison to the UK, USA and Canada,[38-40] where more than 80 food categories have voluntary sodium reduction targets in place, Australia has less than ten categories of food with nominated sodium reduction targets.[41]

While food reformulation is fundamental to population-wide reductions in sodium, so too is accessible and accurate food labelling regarding the sodium content of foods. It is also important that parents are provided with guidance regarding how to provide a healthy diet which is lower in sodium. Self-reported use of nutrition labels is common in Australia, however comprehension is limited.[42] Parents, therefore, may benefit from guidance regarding use of food labels to discern lower sodium options, particularly when choosing breads and breakfast cereals, where sodium contents vary widely.[43] Further, given the findings that cessation of breastfeeding and early introduction of solids were associated with

the highest sodium intakes at nine months of age, it is timely to reassess the predictors of these behaviors and promote, in line with current recommendations,[44] the best practices of maintaining breastfeeding and delaying the introduction of solids until six months of age.

It is important to consider the strengths and weaknesses of the current study. The use of three days of 24-hour dietary recall data for each measurement period, and the use of a contemporary nutrient database represent important strengths of this study. However, measurement of usual sodium intake is challenging and it is possible that our methodology may under represent actual sodium intakes as it does not capture the use of salt at the table or in cooking. Importantly, the collection of detailed dietary intake data in this study enabled food sources of sodium to be described and provides food-based information to guide dietary education specific to parents of young children. It is important to acknowledge that the over-representation of college/tertiary educated women in this sample, and the exclusion of participants with missing data, or those who did not have three days of dietary intake data, has implications for generalizability.

Conclusion

In summary, the current study describes the principal food sources of dietary sodium in a sample of Australian children at approximately nine and 18 months of age. This knowledge may be used to inform policy driven approaches to reducing children's sodium intakes to be more in line with national dietary guidelines. It also may be used by health professionals to support parents in making health promoting dietary changes to prevent excessive sodium consumption by children.

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Table 1. Daily dietary intake and demographic characteristics by tertile of sodium density (mg/1000kcal) of a cohort of 295 infants enrolled in The Melbourne Infant Study. Data presented at 9- and 18 months of age (T2 and T3 respectively)

	mg Na/1000kcal (mean (SD))						Difference	
	Lowest (1)		Middle (2)		Highest (3)		between	
	376(73)		555(44)		809(156)		tertiles	
	n=98		n=99		n=98			
	Mean	SD	Mean	SD	Mean	SD	*P* value	
Child daily dietary intake								
Sodium intake at 9 months (T2) (mg)	277	94	454	114	727	192	<0.001	a,b,c
Sodium intake at 18 months (T3) (mg)	1033	356	1033	292	1142	334	0.028	
Change in sodium intake (mg)[d]	756	357	579	298	415	352	<0.001	a,b,c
Sodium density at T3 (mg/1000 kcal)	991	258	997	230	1080	260	0.022	a
Change in sodium density (mg/1000 kcal)[d]	615	269	441	232	442	302	<0.001	a,b,c
Energy (kcal) at 9 months (T2)	729	183	814	181	901	181	<0.001	a,b,c

Energy (kcal) at 18 months (T3)	1035	191	1040	197	1059	191	0.663	
Child characteristics								
Gender (n (%))								
Boys	49	50.0	53	53.5	54	55.1	0.764	
Girls	49	50.0	46	46.5	44	44.9		
Age at T2 (months)	8.9	0.7	9.3	0.7	9.4	0.7	<0.001	a,b,c
Age at T3 (months)	17.4	0.9	17.6	0.8	17.8	0.8	0.003	a
Weight at T2 (kg)	8.7	1.1	8.9	1.1	9.0	1.2	0.124	
BMI z-score at T2	0.07	1.0	0.08	1.0	0.2	0.9	0.617	
Weight at T3 (kg)	11.1	1.3	11.3	1.1	11.5	1.3	0.071	
BMI z-score at T3	0.8	1.0	0.8	0.9	1.0	1.0	0.111	
Cessation of breastfeeding (age in months)	9.4	4.7	8.2	4.9	7.5	4.7	0.040	a
Commencement of solids (age in months)	5.5	0.7	5.3	0.7	5.2	0.7	0.051	a
Parent characteristics[e]								

Body Mass Index	24.2	4.8	24.3	5.2	24.6	5.3	0.873
Current employment status (n (%))							
Back at work	5	5.1	9	9.1	4	4.1	0.299
Still at home	93	94.9	90	90.9	94	95.9	
Highest level of education (n (%))							
Trade or high school	32	32.7	38	38.4	45	45.9	0.161
Bachelor degree or higher	66	67.3	61	61.6	53	54.1	
Marital status (n (%))							
Partner	97	99.0	99	100.0	95	96.9	0.167
Single parent	1	1.0	0	0.0	3	3.1	
Parent country of birth (n (%))							
Australian	77	78.6	77	77.8	79	80.6	0.881
Other	21	21.4	22	22.2	19	19.4	
Main language at home (n (%))							

English	90	91.8	95	96.0	94	95.9	0.342
Other	8	8.2	4	4.0	4	4.1	

T2 is the data collection time when children are ~9 months of age, T3 is the data collection time when children are ~ 18-months of age

[a] Significant difference between lowest and highest tertile (1v3)

[b] Significant difference between lowest and middle (1v2)

[c] Significant difference between middle and highest (2v3)

[d] Change is intake at 18-months minus intake at 9-months, meaning positive value equals an increase in intake.

[e] Parent characteristics measured at baseline (child aged 3-months)

Table 2. The contribution of food groups [a] to daily energy and sodium intakes of a cohort of 295 9-month old infants enrolled in The Melbourne InFANT Program

Food groups	Percentage consuming	Contribution to total daily energy intake (%)		Contribution to total daily sodium intake (%)		Sodium provided (mg)	
	%	Mean	SD	Mean	SD	Mean	SD
Infant foods and milk (total contribution)		*(55.5)*		*(36.1)*			
Breastmilk and infant formula	100	47.8	15.0	31.0	17.9	127.1	64.2
Infant foods[b]	63	3.7	4.6	2.7	5.1	11.6	20.5
Infant cereal foods[c]	77	4.0	4.9	2.4	4.4	11.3	27.3
Other foods (total contribution)		*(23.2)*		*(46.8)*			
Bread and rolls	76	3.6	4.4	10.9	11.9	57.2	69.5
Cheese	64	2.5	3.2	9.0	11.7	50.9	76.1
Yoghurt	76	5.4	5.4	6.7	7.4	28.7	30.0
Soup (Prepared, Ready to Eat)	16	0.7	2.2	4.0	11.2	25.3	83.4

Breakfast cereal	56	2.8	3.4	3.9	5.2	18.6	24.5
Mixed dishes with beef, veal, lamb [d]	32	1.5	3.4	3.2	7.7	18.0	49.1
Mixed dishes with cereals [d]	18	1.3	4.0	2.9	8.5	16.5	50.0
Stir fried vegetables and combinations[e]	65	2.0	2.8	2.1	3.8	8.6	13.8
Dairy milk	45	2.3	4.6	2.1	4.4	10.9	23.9
Mixed dishes with chicken[d]	21	1.1	3.3	2.0	6.6	12.0	46.2

[a] Only the food groups contributing more than 2% to children's total sodium intake are presented.

[b] Infant foods includes jarred fruit and vegetable based meals, infant custard and yoghurts.

[c] Infant cereal foods include jarred cereals and cereal based meals, and rusks[26].

[d] Mixed dishes containing meat include meat based casseroles or stews, stir fry, or crumbed meat. Mixed dishes containing cereals include spaghetti bolognese, pasta bakes, savoury or fried rice[26].

[e] Stir fried vegetables and combinations includes mushrooms, corn (including canned), onions, garlic, and mixed vegetable combinations[26].

Table 3. The contribution of food groups [a] to daily energy and sodium intakes of a cohort of 295 18-month old children enrolled in The Melbourne InFANT Program

Food groups	Percentage consuming	Contribution to total daily energy intake (%)		Contribution to total daily sodium intake (%)		Sodium provided (mg)	
	%	Mean	SD	Mean	SD	Mean	SD
Other foods (total contribution)		*(56.5)*		*(72.3)*			
Dairy milk	92	22.0	13.1	12.5	8.8	123.1	75.6
Bread and rolls	94	7.8	5.0	14.6	9.3	155.2	103.7
Cheese	85	4.8	4.4	11.4	10.5	124.8	125.1
Breakfast cereal	86	6.1	4.4	5.0	4.3	51.1	44.4
Mixed dishes with cereal[b]	45	2.9	5.3	5.0	8.5	56.6	109.5
Soup (Prepared, Ready to Eat)	22	0.9	2.3	3.7	9.1	41.6	114.6
Yoghurt	78	5.3	5.0	3.6	3.7	37.2	37.9
Yeast extracts (vegemite)	56	0.2	0.3	3.3	4.5	37.9	54.9

Processed meat	32	0.4	1.0	3.3	6.3	40.4	85.1
English muffins, other sweet/savoury breads	39	2.0	3.6	2.9	5.7	31.3	61.0
Baked beans or other canned beans	23	0.8	2.2	2.5	6.8	27.2	76.3
Mixed dishes with beef, veal, lamb[b]	48	1.9	3.3	2.4	4.8	25.2	51.7
Crackers	61	1.4	2.0	2.1	3.6	20.6	30.5

[a] Only the food groups contributing more than 2% to children's total sodium intake are presented.

[b] Mixed dishes containing meat include meat based casseroles or stews, stir fry, or crumbed meat. Mixed dishes containing cereals include spaghetti bolognese, pasta bakes, savoury or fried rice[26]

Supplemental on-line Table 1: The contribution of food groups contributing less than 2% of daily sodium intakes in a cohort of 295 9 and 18-month old infants enrolled in The Melbourne InFANT Program

9 month of age		18 months of age	
Mean percentage contribution of food groups to total sodium intake		Mean percentage contribution of food groups to total sodium intake	
Yeast and yeast extracts	1.6	Savoury biscuits	2.1
Legumes and pulse dishes	1.3	Mixed dishes with poultry	1.9
Meat (beef, lamb, pork and veal)	1.1	Sausages, Frankfurts and saveloys	1.8
Gravies and savoury sauces	1.1	Gravies and savoury sauces	1.7
Savoury biscuits	1.1	Sweet and savoury pastries	1.6
Processed meat	0.9	Cakes, sweet buns, muffins, cake-type desserts	1.5
Prepacked fish and seafood	0.8	Breast milk and infant formula	1.5
Carrot and other root vegetables	0.8	Pancakes, waffles, drop scones	1.4
Poultry	0.7	Egg based dishes, omelettes	1.1
English muffins, flat, savoury and sweet breads	0.7	Sweet biscuits	1.1
Sweet biscuits	0.5	Pasta and pasta products	0.9
Fin fish	0.5	Soy milk	0.8
Sausages, Frankfurts and saveloys	0.4	Other vegetables and combinations	0.8
Vegetable dishes	0.4	Fish and seafood products (Homemade, Takeaway)	0.8
Mature legumes and pulses	0.4	Vegetable dishes	0.7
Egg based dishes, omelettes	0.3	Potatoes	0.6
Potatoes	0.3	Margarine and table spreads	0.6
Soy-based yoghurt	0.3	Meat (beef, lamb, pork and veal)	0.6
Butters	0.3	Mixed dishes with fish or seafood	0.5
Cabbage, cauliflower and brassica vegetables	0.3	Prepacked fish and seafood	0.5
Margarine and table spreads	0.3	Infant foods, fruit, custards	0.5
Mixed dishes with fish or seafood	0.2	Butters	0.4

Sweet and savoury pastries	0.2	Poultry	0.4
Cakes, sweet buns, muffins, cake-type desserts	0.2	Pickles, chutneys and relishes	0.4
Pancakes, waffles, scones	0.2	Hot porridge breakfast cereal	0.4
Soy milk	0.2	Cereal, fruit and nut bars	0.3
Leaf and stalk vegetables	0.2	Infant cereal products	0.3
Pasta and pasta products	0.2	Custards	0.2
Pumpkin, squash and zucchini	0.2	Nuts and nut products	0.2
Flour and cereal grains	0.2	Dried fruit	0.2
Other fruits	0.2	Extruded snacks	0.2
Hot porridge breakfast cereal	0.2	Flours and other cereal grains	0.2
Pome fruit (apples and pears)	0.1	Soy yoghurt	0.2
Custards	0.1	Canned condensed soup	0.2
Fish and seafood products (Homemade, Takeaway)	0.1	Fin fish	0.2
		Carrot and other root vegetables	0.2
		Jelly and water ice confection (gelato, sorbet)	0.2
		Eggs	0.2
		Herbs, spices, and stock cubes	0.2
		Other fruits	0.2
		Other snack foods	0.2
		Potato based snacks	0.2
		Mature legumes and pulses	0.1
		Dairy blends	0.1
		Tomato and tomato products	0.1
		Cabbage, cauliflower and brassica vegetables	0.1

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