Electronic Supplementary Material:

Similarities and differences of dietary and other determinants of iodine status in pregnant women from three European birth cohorts

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Multiple imputation

ALSPAC

For the women in the analysis (n=2852), there were 2.6% missing values in total (n=1263) and 19.3% of the cases (n=550) had at least one missing value. Data were imputed for 12 out of the 15 variables used in the analysis, including pre-pregnancy BMI (n=250), ethnicity (n=96), parity (n=134), smoking status (n=51, smoking status variable was made from two imputed smoking variables with n=102 missing values in total), alcohol consumption (n=101, alcohol consumption variable was made from two imputed variables with n=159 missing values in total), education level (n=86), home ownership (n=72), crowding index (n=94), family adversity index (n=30), life event score (n=96), marital status (n=47), and living with a partner (n=97). Data were not imputed for gestational age, maternal age and child's sex due to no missing values.

Generation R

For the women in the analysis (n=2254), there were 5.5% missing values in total (n=1369) and 31.7% of the cases (n=715) had at least one missing value. Data were imputed for nine out of 11 variables, including gestational age (n=1), pre-pregnancy BMI (n=12), ethnicity (n=71), smoking status (n=248), alcohol consumption (n=254), education level (n=149), net household income (n=479), marital status (n=154), and child's sex (n=1). Data were not imputed for maternal age and parity due to no missing values.

INMA

For the women in the analysis (n=1460), there were 1.1% missing values in total (n=154) and 5.8% of the cases (n=84) had at least one missing value. Data were imputed for nine out of ten variables, including gestational age (n=4), maternal age (n=4), ethnicity (n=3), parity (n=2), smoking status (n=44), alcohol consumption (n=56), education level (n=5), living with a partner (n=1), and child's sex (n=35). Data were not imputed for pre-pregnancy BMI due to no missing values.

Supplemental Table 1 Overview of the classification of foods into food groups by cohort

Food group	ALSPAC	Generation R	INMA
Vegetables	green leafy vegetables (e.g., cabbage), other green vegetables (e.g., leeks), carrots, other root vegetables (e.g., turnip), salad vegetables (e.g., tomatoes)	leafy (e.g., spinach), root (e.g., carrots), cabbage, mixed salad vegetables, mushrooms, allium (e.g., onion, garlic), stems and sprouts (e.g., asparagus), fruiting (e.g., tomatoes)	leafy (e.g., spinach), root (e.g., carrots), cruciferous (e.g., broccoli), salad vegetables (e.g., lettuce), allium (e.g., onions, leek, garlic), fruiting (e.g., tomatoes, aubergines, peppers)
Fruit	fresh fruit (e.g., apple, grapes, banana)	fresh fruit (e.g., apple, grapes, banana), olives	fresh fruit (e.g., apple, grapes, banana)
Nuts and seeds	nuts, tahini	nuts, seeds, nut spread	almonds, peanuts, hazelnuts, pine nuts
Potatoes	chips, roast potatoes, boiled/mashed/ jacket potatoes	potatoes and other tubers (does not include potato crisps)	fried, boiled/roasted potatoes, potato crisps
Legumes	pulses (e.g., lentils, chickpeas), baked beans, peas, sweetcorn, broad beans	dried lentils, beans and peas	lentils, chickpeas, beans
Cereals and cereal products	breakfast cereals (e.g., oats, cornflakes, bran cereals), pasta, rice, bread, crispbreads, pizza	breakfast cereals, pasta, rice, bread, pretzels, crispbreads, pizza, flour and thickeners	breakfast cereals, pasta, rice, bread, boiled corn
Cakes, confectionery and added sugar	cakes or buns, biscuits, chocolate bars (e.g., Mars), chocolate (e.g., dairy milk), sweets (e.g., toffees), pudding (e.g., cheesecake, mousse), sugar	cakes, pastries, biscuits, candy bars, chocolate, non-chocolate sweets (e.g., toffees) jam, honey, sugar, ice cream, syrups, water ice	cakes, pastries, biscuits, chocolate, jams, honey, sugar
Added fats	animal fats (e.g., butter, ghee), vegetable oils and spreads (e.g., olive oil)	animal fats (e.g., butter),vegetable oils (e.g., olive oil), spreads and margarines	animal fats (e.g., butter), vegetable oils and spreads (e.g., olive oil)
Milk and dairy products	milk, cheese	milk, milk drinks, evaporated milk, yoghurt, fresh cheese (e.g., cottage cheese), cheese, milk puddings (e.g., mouse, cream base), cream	fresh milk, condensed milk, yoghurt, cheese, custard, ice cream, cream

Supplemental Table 1 Overview of the classification of foods into food groups by cohort *(continued)*

Food group	ALSPAC	Generation R	INMA
Meat and meat products	red meat, poultry, offal (e.g., liver), processed meat (e.g., sausages, burgers, bacon), pies and pasties (e.g., meat pies)	red meat, poultry, offal (e.g., liver), processed meat (e.g., sausage, pate)	red meat, white meat (e.g., chicken), offal (e.g., liver), processed meat (e.g., sausages, pate, bacon)
Eggs	eggs, quiche	eggs	eggs
Fish and shellfish	white fish (e.g., cod), oily fish (e.g., salmon), shellfish (e.g., prawns)	white fish (e.g., cod), oily fish (e.g., salmon), shellfish (e.g., prawns), processed fish (e.g., fish fingers)	boiled/fried/ grilled white fish (e.g., cod), boiled/fried/ grilled oily fish (e.g., salmon), seafood and shellfish (e.g., oysters, clams, lobster)
Condiments and seasoning	N/A	seasonings (e.g., salt, herbs, spices)	salt, including iodised salt
Processed and fried foods *(e.g., sauces, soups, fried foods, crisps)*	fried food (e.g., bacon, eggs, egg fried fish), crisps	sauces (e.g., tomato, dressings, mayonnaise), soups, bouillons	vegetable soups, tomato sauce, chicken croquettes, pizza
Non-alcoholic beverages *(excluding coffee and tea)*	tinned juice (e.g., tomato juice), pure fruit juice, soft drinks	fruit and vegetable juices, soft drinks, isotonic drinks, water	fruit juice, soft drinks, unalcoholic beer, tap water, bottled water
Alcoholic beverages	N/A	wine, beer, liquors and spirits	wine, beer, liquors and spirits
Miscellaneous *(e.g., soy products, diet foods and sweeteners)*	soy products (e.g., TVP, vegeburgers), bean curd (e.g., tofu)	diet products, soy products, artificial sweeteners	N/A

Abbreviations: N/A, data not available; TVP, texturised vegetable protein.

Supplemental Table 2 Determinants [a] of urinary iodine-to-creatinine ratio measured at ≤ 18 gestational weeks by cohort

Determinants	ALSPAC (n=2852)			Generation R (n=2254)			INMA (n=1460)		
	n	*B* (95% CI)	*P* [b]	*n*	*B* (95% CI)	*P* [b]	*n*	*B* (95% CI)	*P* [b]
Maternal factors									
Gestational age at urine sampling, weeks	2852	0.051 (0.046, 0.057)	<0.001	2254	0.007 (-0.006, 0.019)	0.300	1460	0.004 (-0.023, 0.032)	0.755
Age [c], years	2852	0.014 (0.008, 0.020)	<0.001	2254	0.018 (0.012, 0.024)	<0.001	1460	0.020 (0.010, 0.030)	<0.001
Pre-pregnancy BMI, kg/m²	2852	-0.013 (-0.019, -0.007)	<0.001	2254	-0.011 (-0.017, -0.006)	<0.001	1460	-0.013 (-0.022, -0.004)	0.005
Ethnicity [d]									
Reference group	2800	Ref.		1095	Ref.		1340	Ref.	
Non-white	52	-0.018 (-0.203, 0.168)	0.851	N/A		.	N/A		.
Non-Dutch	N/A		.	1159	(see separate table) [e]		N/A		.
Non-Spanish	N/A		.	N/A		.	120	-0.016 (-0.150, 0.118)	0.810
Parity									
0	1354	Ref.		1279	Ref.		806	Ref.	
1	965	0.032 (-0.021, 0.085)	0.232	665	-0.001 (-0.057, 0.056)	0.982	544	-0.029 (-0.110, 0.052)	0.481
≥ 2	533	0.040 (-0.029, 0.108)	0.254	310	-0.041 (-0.123, 0.041)	0.327	110	-0.128 (-0.276, 0.020)	0.090
Smoking status									
Never smoked	2169	Ref.		1671	Ref.		1020	Ref.	
Stopped smoking	333	-0.003 (-0.075, 0.070)	0.943	211	-0.093 (-0.179, -0.007)	0.035	187	-0.060 (-0.172, 0.052)	0.296
Continued smoking	350	0.018 (-0.055, 0.092)	0.620	372	-0.008 (-0.083, 0.066)	0.831	253	-0.001 (-0.105, 0.104)	0.990
Alcohol consumption									
No	1350	Ref.		1458	Ref.		1330	Ref.	
Yes	1502	-0.006 (-0.052, 0.040)	0.795	796	-0.002 (-0.059, 0.055)	0.954	130	-0.051 (-0.181, 0.079)	0.442

Supplemental Table 2 Determinants [a] of urinary iodine-to-creatinine ratio measured at ≤ 18 gestational weeks by cohort *(continued)*

Determinants	ALSPAC (n=2852)			Generation R (n=2254)			INMA (n=1460)		
	n	*B* (95% CI)	*P* [b]	*n*	*B* (95% CI)	*P* [b]	*n*	*B* (95% CI)	*P* [b]
Markers of socio-economic status									
Education level									
Low	576	Ref.		247	Ref.		337	Ref.	
Medium	1780	0.005 (-0.056, 0.066)	0.869	995	-0.077 (-0.165, 0.012)	0.089	581	-0.016 (-0.112, 0.079)	0.736
High	496	0.026 (-0.055, 0.107)	0.531	1012	-0.057 (-0.159, 0.045)	0.272	542	0.089 (-0.013, 0.190)	0.088
Net household income (€ per month)									
Low < €1200	N/A	.	.	492	Ref.		N/A	.	.
Medium €1200-2200	N/A	.	.	597	0.022 (-0.063, 0.108)	0.606	N/A	.	.
High > €2200	N/A	.	.	1165	0.089 (-0.001, 0.179)	0.054	N/A	.	.
Home ownership									
Owned/mortgaged	2425	Ref.		N/A	.	.	N/A	.	.
Private/other rented	236	-0.037 (-0.126, 0.053)	0.422	N/A	.	.	N/A	.	.
Council rented	191	-0.032 (-0.136, 0.072)	0.547	N/A	.	.	N/A	.	.
Crowding index									
≤ 1 person per room	2747	Ref.		N/A	.	.	N/A	.	.
+ 1 person per room	105	0.134 (-0.006, 0.274)	0.060	N/A	.	.	N/A	.	.
Family adversity index									
None 0	1395	Ref.		N/A	.	.	N/A	.	.
Mild 1-2	1124	-0.007 (-0.056, 0.041)	0.765	N/A	.	.	N/A	.	.
Severe > 3	333	-0.100 (-0.182, -0.018)	0.016	N/A	.	.	N/A	.	.
Life event score	2852	0.007 (-0.001, 0.015)	0.097	N/A	.	.	N/A	.	.

Supplemental Table 2 Determinants [a] of urinary iodine-to-creatinine ratio measured at ≤ 18 gestational weeks by cohort *(continued)*

	ALSPAC (n=2852)			Generation R (n=2254)			INMA (n=1460)		
Determinants	*n*	*B* (95% CI)	*P* [b]	*n*	*B* (95% CI)	*P* [b]	*n*	*B* (95% CI)	*P* [b]
Markers of socio-economic status									
Marital status									
Never-married	355	Ref.		1136	Ref.		N/A	.	.
Married	2357	0.095 (0.018, 0.171)	0.015	1118	0.030 (-0.025, 0.086)	0.285	N/A	.	.
Other [f]	140	0.028 (-0.097, 0.153)	0.666	N/A	.	.	N/A	.	.
Living with a partner									
Yes	N/A	.	.	N/A	.	.	1445	Ref.	
No	N/A	.	.	N/A	.	.	15	-0.233 (-0.598, 0.131)	0.209
Child factors									
Child's sex									
Male	1405	Ref.		1147	Ref.		737	Ref.	
Female	1447	-0.025 (-0.070, 0.019)	0.261	1107	-0.026 (-0.073, 0.021)	0.278	723	-0.014 (-0.087, 0.058)	0.700

[a] Effect estimates (*B*=unstandardized regression coefficient), their 95% CIs and *P*-values from multiple linear regression models performed for each cohort with (natural) log-transformed iodine-to-creatinine ratio (UI/Creat) as the dependent variable and maternal characteristics as independent variables (for full models, see footnote b). Reported *B* coefficients represent the change in the mean (natural) log of UI/Creat per unit increase in the continuous independent variables and for each category compared to the reference for the categorical independent variables.

[b] *P*-values from adjusted Model 1 (adjusted for maternal and pregnancy characteristics); ALSPAC (R^2=0.123, $P < 0.0001$): gestational age (weeks), age (years), pre-pregnancy BMI (kg/m^2), ethnicity, parity, smoking status, alcohol consumption, education, home ownership, crowding index, family adversity index, life event score, marital status and child's sex; Generation R (R^2=0.086, $P < 0.0001$): gestational age (weeks), age (years), pre-pregnancy BMI (kg/m^2), ethnicity, parity, smoking status, alcohol consumption, education, net household income, marital status and child's sex; INMA (R^2=0.021, $P < 0.0001$): gestational age (weeks), age (years), pre-pregnancy BMI (kg/m^2), ethnicity, parity, smoking status, alcohol consumption, education, living with a partner and child's sex .

[c] Maternal age at urine sample collection, except in ALSPAC (age at last menstrual period).

[d] ALSPAC (Reference group=White); Generation R (Reference group=Dutch, Non-Dutch=Indonesian, Cape Verdian, Moroccan, Dutch Antilles, Surinamese, Turkish, Other non-western, Asian, or Other western); INMA (Reference group=Spanish, Non-Spanish=Latin American, European, or Others).

[e] Non-Dutch group in Generation R presented in detail in Table 3.

[f] ALSPAC (Other=widowed, divorced, or separated).

Abbreviations: BMI, body mass index; 95% CI, confidence interval; N/A, data not available or not applicable; Ref, reference category; UI/Creat, urinary iodine-to-creatinine ratio.

Supplemental Table 3 Determinants [a] of urinary iodine concentration measured at ≤ 18 gestational weeks by cohort

Determinants	ALSPAC (n=2852)						Generation R (n=2254)						INMA (n=1460)					
	Adjusted Model 1 [b]			Adjusted Model 2 [c]			Adjusted Model 1 [b]			Adjusted Model 2 [c]			Adjusted Model 1 [b]			Adjusted Model 2 [c]		
	n	B	P	n	B	P	n	B	P	n	B	P	n	B	P	n	B	P
Gestational age at urine sampling, weeks	2852	0.033	<0.001	2710	0.034	<0.001	2254	0.014	0.020	1580	0.021	0.004	1460	0.009	0.516	1446	-0.007	0.605
Age [d], years	2852	0.009	0.002	2710	0.006	0.063	2254	0.011	<0.001	1580	0.010	0.009	1460	0.019	<0.001	1446	0.013	0.008
Pre-pregnancy BMI, kg/m^2	2852	-0.009	0.004	2710	-0.009	0.008	2254	-0.003	0.279	1580	-0.004	0.192	1460	-0.007	0.113	1446	-0.002	0.650
Family adversity index																		
None 0	1395	Ref.		1334	Ref.		N/A	.	.	.	.	.	N/A	.	.	.	.	.
Mild 1-2	1124	-0.025	0.309	1069	-0.020	0.423	N/A	.	.	.	.	.	N/A	.	.	.	.	.
Severe > 3	333	-0.112	0.008	307	-0.101	0.019	N/A	.	.	.	.	.	N/A	.	.	.	.	.
Marital status																		
Never-married	355	Ref.		320	Ref.		1136	Ref.		825	Ref.		N/A	.	.	.	.	.
Married	2357	0.044	0.257	2269	0.078	0.054	1118	0.034	0.208	755	0.042	0.179	N/A	.	.	.	.	.
Other [e]	140	-0.015	0.815	121	0.009	0.889	N/A	.	.	.	.	.	N/A	.	.	.	.	.
Ethnicity [f]																		
Reference group	2800	Ref.		2674	Ref.		1095	Ref.		930	Ref.		1340	Ref.		1328	Ref.	
Non-white	52	0.048	0.611	36	0.109	0.284	N/A	.	.	.	.	.	N/A	.	.	.	.	.
Non-Dutch:	N/A	.	.	.	.	.							N/A	.	.	.	.	.
- Indonesian	N/A	.	.	.	.	.	72	-0.012	0.861	58	-0.026	0.725	N/A	.	.	.	.	.
- Cape Verdian	N/A	.	.	.	.	.	87	0.061	0.370	41	0.150	0.112	N/A	.	.	.	.	.
- Moroccan	N/A	.	.	.	.	.	165	0.286	<0.001	72	0.242	0.003	N/A	.	.	.	.	.
- Dutch Antilles	N/A	.	.	.	.	.	65	-0.064	0.393	37	-0.117	0.245	N/A	.	.	.	.	.
- Surinamese	N/A	.	.	.	.	.	196	-0.046	0.327	111	-0.024	0.698	N/A	.	.	.	.	.
- Turkish	N/A	.	.	.	.	.	226	0.323	<0.001	103	0.308	<0.001	N/A	.	.	.	.	.
- Other, non-western	N/A	.	.	.	.	.	107	0.125	0.034	53	0.054	0.502	N/A	.	.	.	.	.
- Asian	N/A	.	.	.	.	.	32	0.062	0.544	19	0.022	0.863	N/A	.	.	.	.	.
- Other, western	N/A	.	.	.	.	.	209	0.023	0.575	156	0.050	0.297	N/A	.	.	.	.	.
Non-Spanish	N/A	.	.	.	.	.	N/A	.	.	.	.	.	120	0.007	0.909	118	0.032	0.627

Supplemental Table 3 Determinants [a] of urinary iodine concentration measured at ≤ 18 gestational weeks by cohort *(continued)*

	ALSPAC (n=2852)						Generation R (n=2254)						INMA (n=1460)					
	Adjusted Model 1 [b]			Adjusted Model 2 [c]			Adjusted Model 1 [b]			Adjusted Model 2 [c]			Adjusted Model 1 [b]			Adjusted Model 2 [c]		
Determinants	*n*	*B*	*P*	*n*	*B*	*P*	*n*	*B*	*P*	*n*	*B*	*P*	*n*	*B*	*P*	*n*	*B*	*P*
Smoking status																		
Never smoked	2169	Ref.		2077	Ref.		1671	Ref.		1202	Ref.		1020	Ref.		1011	Ref.	
Stopped smoking	333	-0.008	0.825	312	-0.015	0.686	211	-0.078	0.065	147	-0.120	0.016	187	-0.097	0.077	186	-0.096	0.076
Continued smoking	350	0.005	0.896	321	0.034	0.380	372	0.021	0.557	231	0.039	0.385	253	-0.015	0.765	249	0.010	0.838

[a] Effect estimates (*B*=unstandardised regression coefficient) and *P*-values from multiple linear regression models performed for each cohort with (natural) log-transformed urinary iodine concentration (UIC) as the dependent variable and maternal characteristics and dietary intakes as independent variables (for full models, see footnotes b and c). All models were additionally adjusted for urinary creatinine concentration (UCreat, g/L). Reported *B* coefficients represent the change in the mean (natural) log of UIC per unit increase in the continuous independent variables and for each category compared to the reference for the categorical independent variables.

[b] Adjusted Model 1 (adjusted for maternal and pregnancy characteristics); ALSPAC (R^2=0.424, $P < 0.0001$): gestational age (weeks), age (years), pre-pregnancy BMI (kg/m^2), ethnicity, parity, smoking status, alcohol consumption, education, home ownership, crowding index, family adversity index, life event score, marital status, child's sex, UCreat (g/L) and UCreat^2; Generation R (R^2=0.525, $P < 0.0001$): gestational age (weeks), age (years), pre-pregnancy BMI (kg/m^2), ethnicity, parity, smoking status, alcohol consumption, education, net household income, marital status, child's sex, UCreat (g/L) and UCreat^2; INMA (R^2=0.193, $P < 0.0001$): gestational age (weeks), age (years), pre-pregnancy BMI (kg/m^2), ethnicity, parity, smoking status, alcohol consumption, education, living with a partner, child's sex, UCreat (g/L) and UCreat^2.

[c] Adjusted Model 2 (adjusted for maternal and pregnancy characteristics + dietary intakes); ALSPAC (R^2=0.443, $P < 0.0001$): Model 1 + energy intake (kcal/day) + intake of vegetables (g/day), fruit (g/day), nuts and seeds (g/day), potatoes (g/day), legumes (g/day), cereals and cereal products (g/day), cakes, confectionery and added sugar (g/day), added fats (g/day), milk and dairy products (g/day), meat and meat products (g/day), eggs (g/day), fish and shellfish (g/day), processed and fried foods (g/day), non-alcoholic beverages (g/day), miscellaneous (g/day); Generation R (R^2=0.548, $P < 0.0001$): Model 1 + energy intake (kcal/day) + intake of vegetables (g/day), fruit (g/day), nuts and seeds (g/day), potatoes (g/day), legumes (g/day), cereals and cereal products (g/day), cakes, confectionery and added sugar (g/day), added fats (g/day), milk and dairy products (g/day), meat and meat products (g/day), eggs (g/day), fish and shellfish (g/day), condiments and seasoning (g/day), processed and fried foods (g/day), non-alcoholic beverages (g/day), alcoholic beverages (g/day), miscellaneous (g/day); INMA (R^2=0.227, $P < 0.0001$): Model 1 + energy intake (kcal/day) + intake of vegetables (g/day), fruit (g/day), nuts and seeds (g/day), potatoes (g/day), legumes (g/day), cereals and cereal products (g/day), cakes, confectionery and added sugar (g/day), added fats (g/day), milk and dairy products (g/day), meat and meat products (g/day), eggs (g/day), fish and shellfish (g/day), condiments and seasoning (e.g., salt) (g/day), processed and fried foods (g/day), non-alcoholic beverages (g/day), alcoholic beverages (g/day).

[d] Maternal age at urine sample collection, except in ALSPAC (age at last menstrual period).

[e] ALSPAC (Other=widowed, divorced, or separated).

[f] ALSPAC (Reference group=White); Generation R (Reference group=Dutch, Non-Dutch=Indonesian, Cape Verdian, Moroccan, Dutch Antilles, Surinamese, Turkish, Other non-western, Asian, or Other western); INMA (Reference group=Spanish, Non-Spanish=Latin American, European, or Others).

Abbreviations: BMI, body mass index; N/A, data not available or not applicable; Ref, reference category; UCreat, urinary creatinine concentration; UCreat^2, squared urinary creatinine concentration; UIC, urinary iodine concentration.

Supplemental Table 4 Descriptives of dietary intakes of food groups (g/day) and energy intake (kcal/day) estimated from FFQ by cohort

Food group (grams/day) [a]	ALSPAC (n=2710)	Generation R (n=1580)	INMA (n=1446)
	Mean (±SD)	*Mean (±SD)*	*Mean (±SD)*
Vegetables	117 (±64)	144 (±64)	220 (±114)
Fruit	100 (±56)	171 (±116)	320 (±200)
Nuts and seeds	3 (±7)	17 (±12)	6 (±9)
Potatoes	98 (±49)	52 (±43)	63 (±37)
Legumes	54 (±32)	4 (±7)	38 (±25)
Cereals and cereal products	195 (±79)	195 (±71)	184 (±77)
Cakes, confectionery and added sugar	80 (±55)	98 (±56)	44 (±36)
Added fats	19 (±11)	25 (±14)	23 (±15)
Milk and dairy products	391 (±155)	412 (±251)	444 (±233)
Meat and meat products	71 (±40)	78 (±43)	116 (±50)
Eggs	21 (±18)	11 (±10)	20 (±9)
Fish and shellfish	35 (±30)	14 (±13)	69 (±36)
Condiments and seasoning (e.g., salt, iodised salt)	N/A	6 (±5)	0.3 (±0.4)
Processed and fried foods (e.g., sauces, soups, fried foods, crisps)	8 (±8)	100 (±90)	101 (±66)
Non-alcoholic beverages (excluding coffee and tea) [b]	175 (±83)	940 (±550)	1488 (±494)
Alcoholic beverages	N/A	6 (±17)	3 (±13)
Miscellaneous (e.g., soy products, diet foods and sweeteners)	2 (±9)	6 (±20)	N/A
Energy, kcal/day	1743 (±459)	2076 (±520)	2083 (±532)

[a] Dietary intake of food groups presented as mean (±SD) grams per day, energy intake presented as mean (±SD) kcal per day.

[b] Food group also includes water in INMA and Generation R (but not in ALSPAC).

Abbreviations: FFQ, food frequency questionnaire; N/A, data not available; SD, standard deviation.

Supplemental Table 5 Multivariable associations of food group intakes estimated from FFQ (per 100 g/day) [a] with urinary iodine-to-creatinine ratio measured at ≤ 18 gestational weeks by cohort

Food group intakes (per 100 g/day) [a]	ALSPAC (n=2710) B (95% CI) [b]	P [c]	Generation R (n=1580) B (95% CI) [b]	P [d]	INMA (n=1446) B (95% CI) [b]	P [e]
Vegetables	0.24 (-1.51, 2.06)	0.791	-0.76 (-4.78, 3.46)	0.719	0.48 (-7.07, 8.31)	0.903
Fruit	2.79 (0.59, 5.09)	0.012	1.13 (-1.12, 3.45)	0.328	-4.38 (-8.91, 0.26)	0.064
Nuts and seeds	19.30 (-2.05, 51.25)	0.083	51.07 (17.18, 96.03)	0.001	68.80 (-33.30, 230.33)	0.223
Potatoes	2.66 (-0.20, 5.71)	0.069	5.92 (-1.17, 13.61)	0.104	-16.46 (-36.05, 5.36)	0.134
Legumes	2.33 (-1.33, 6.29)	0.219	16.98 (-17.38, 68.39)	0.384	28.00 (-5.39, 66.86)	0.105
Cereals and cereal products	1.42 (-0.92, 3.88)	0.238	12.32 (6.34, 18.69)	<0.001	0.21 (-13.90, 15.34)	0.978
Cakes, confectionery and added sugar	4.90 (0.50, 9.73)	0.028	5.36 (-2.24, 13.64)	0.172	-17.98 (-43.38, 11.33)	0.217
Added fats [a]	0.11 (-0.01, 0.24)	0.082	0.27 (0.04, 0.50)	0.022	-0.42 (-1.13, 0.29)	0.243
Milk and dairy products	3.73 (2.74, 4.74)	<0.001	2.34 (1.00, 3.70)	0.001	6.92 (2.52, 11.41)	0.002
Meat and meat products	1.27 (-2.30, 5.13)	0.497	2.87 (-4.14, 10.49)	0.433	-32.71 (-50.77, -12.58)	0.002
Eggs	5.44 (-1.18, 13.06)	0.112	65.32 (26.28, 117.87)	<0.001	86.92 (-13.13, 238.12)	0.099
Fish and shellfish	5.10 (0.89, 9.70)	0.017	2.01 (-16.18, 24.91)	0.845	28.04 (2.73, 56.38)	0.029
Condiments and seasoning (e.g., salt) [a,f]	N/A	.	0.27 (-0.30, 0.84)	0.359	31.69 (10.31, 55.16)	0.003
Processed and fried foods (e.g., sauces, soups, fried foods, crisps)	0.85 (-12.40, 19.47)	0.915	1.88 (-0.98, 4.83)	0.199	0.00 (-11.26, 11.91)	0.999
Non-alcoholic beverages (excluding coffee and tea)	0.62 (-0.71, 1.99)	0.367	0.40 (-0.07, 0.87)	0.099	-1.46 (-3.05, 0.13)	0.072
Alcoholic beverages	N/A	.	13.86 (-1.99, 32.66)	0.090	-34.72 (-85.12, 36.20)	0.297
Miscellaneous (e.g., soy products, diet foods and sweeteners)	14.61 (-0.70, 35.22)	0.063	8.13 (-4.77, 23.06)	0.230	N/A	.

[a] Added fats and salt intakes expressed per 1 g/day.

[b] Effect estimates (*B*=unstandardized regression coefficient) represent the actual change in the geometric mean of UI/Creat (µg/g) associated with 100 g increase in intake of a food group. *B* coefficients and their 95% CIs are calculated by back-transformation from logarithmic scale (see methods). Values are adjusted for dietary intake of other food groups, energy intake and other potential confounders (for full models, see Table 3, footnote c). When calculating the *B* coefficients

all categorical covariates were set to their reference group and the continuous covariates gestational age, maternal age, pre-pregnancy BMI and energy intake were centred to their means.

[c] *P*-value adjusted for energy (kcal/day) + gestational age (weeks), age (years), pre-pregnancy BMI (kg/m^2), ethnicity, parity, smoking status, alcohol consumption, education, home ownership, crowding index, family adversity index, life event score, marital status and child's sex (R^2=0.147, *P* < 0.0001).

[d] *P*-values adjusted for energy (kcal/day) + gestational age (weeks), age (years), pre-pregnancy BMI (kg/m^2), ethnicity, parity, smoking status, alcohol consumption, education, net household income, marital status and child's sex (R^2=0.091, *P* < 0.0001).

[e] *P*-values adjusted for energy (kcal/day) + gestational age (weeks), age (years), pre-pregnancy BMI (kg/m^2), ethnicity, parity, smoking status, alcohol consumption, education, living with a partner and child's sex (R^2=0.060, *P* < 0.0001).

[f] In INMA this food group also includes iodised salt. Separate information about the consumption of table salt and use of iodine-fortified table salt was collected only in the INMA cohort.

Abbreviations: BMI, body mass index; 95% CI, confidence interval; FFQ, food frequency questionnaire; N/A, data not available; UI/Creat, urinary iodine-to-creatinine ratio.