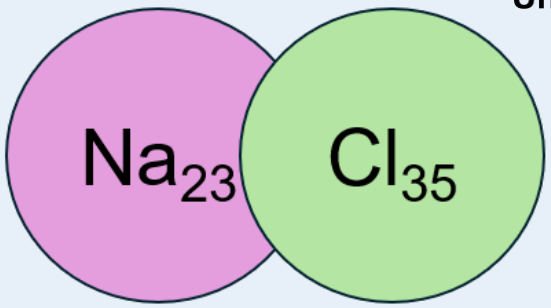
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Advice on salt intake
EMEESY Education Day

Ruth Prigg
16/10/26





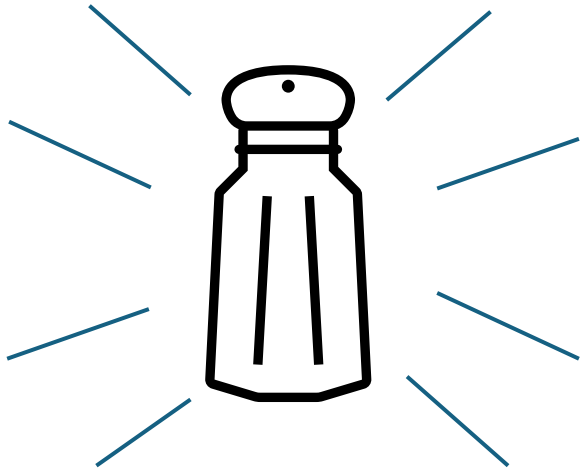
Why restrict salt?

- Reduce thirst
- Moderate salt restriction reduced BP and proteinuria
- Irrespective of CKD stage

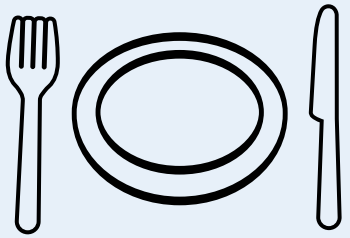
Garafalo et al. 2018; Renken-Terhaerdt et al. 2026

Sources of salt

- Salty snacks – crisps/crackers
- Cheese/cheese products
- Processed meats e.g ham/chicken strips
- Addition in cooking
- Bread and bakery products
- Addition at the table
- Ready meals/take aways
- Medication



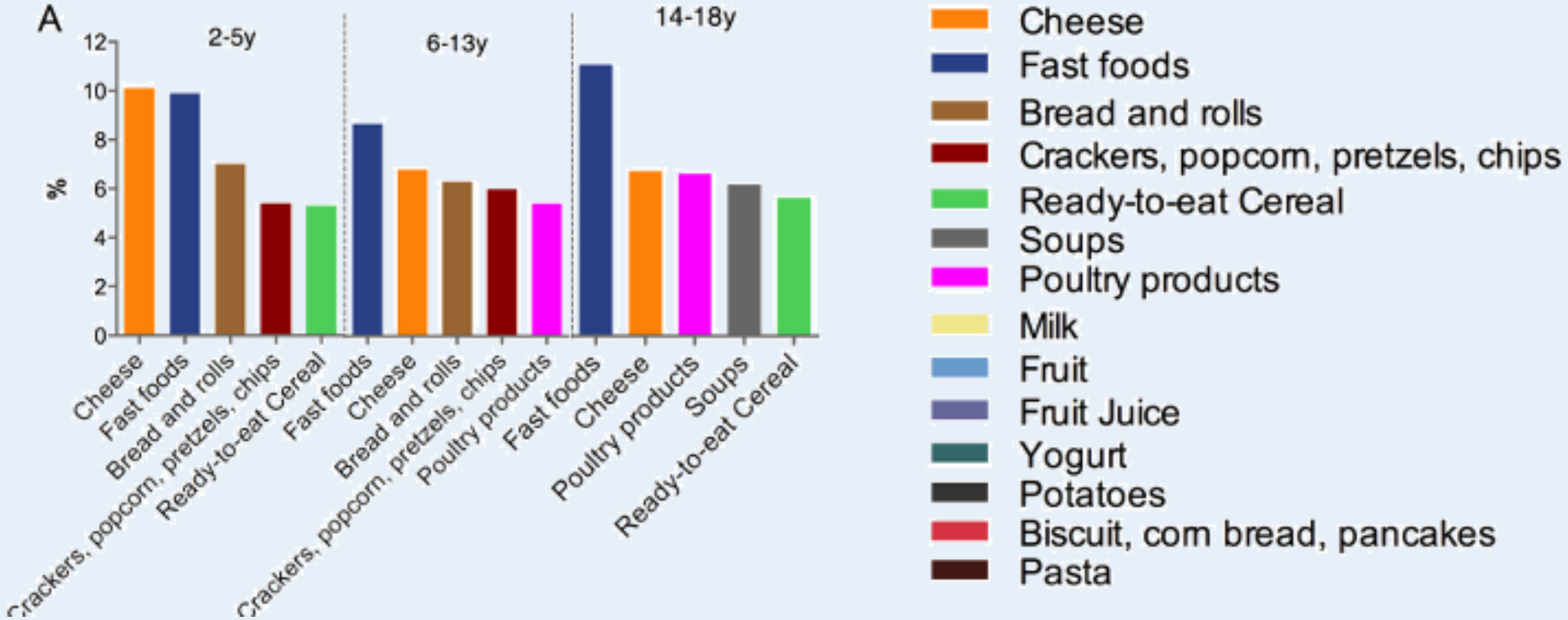
Sources of salt



- In the UK < 25% of salt intake is from ‘discretionary’ salt
- Worldwide ‘discretionary’ salt intake was inversely proportionate to per capita GDP
- Main sources were bread and bakery products, cereal and grain products, meat products, and dairy products

(Bhat et al. 2020)

Sources of salt



- Multicenter, US, Canada 1-16yr (IQR 8-15yr)

Chen W, et al. 2017

NOVA-1 Unprocessed or minimally processed foods	NOVA-2 Processed culinary ingredients	NOVA-3 Processed foods	NOVA-4 Ultraprocessed foods
Edible parts of plants or animals that remain whole or undergo minimal alterations like cutting, drying, or freezing. No added salt, sugar, or fat.	Substances extracted from NOVA-1 foods through pressing, refining, grinding, or milling. Used for cooking, not direct consumption.	NOVA-1 foods with added NOVA-2 ingredients. Simple modifications using traditional methods such as canning, pickling, curing, smoking or fermentation.	Industrial formulations using extracted substances, chemically modified ingredients, and cosmetic additives. Multiple processing steps.
			
Examples: Fresh fruits, vegetables, meat, eggs, milk, grains, nuts, herbs	***Examples***: Oils, butter, sugar, salt, honey, starch	***Examples***: Canned vegetables in brine, fruits in syrup, artisan cheese, freshly made bread, cured meats, plain oat milk, soy sauce	***Examples***: Soft drinks, processed meat products, instant foods, packaged snacks, breakfast cereals, packaged bread, flavoured soy milk

Increasing level of processing

Monteiro et al. 2017.


58%
1
26%
1980


2
44%
28%
2000

Sources of salt

(Renken-Terhaerdt et al. 2026)

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Medication	Dose	Na content (mmol/dose)	Na content (mg/dose)
Polystyrene sulfonate oral powder	15 g dose	60	1380
Sodium zirconium cyclosilicate	5 g sachet	17.4	400
Sodium bicarbonate 500 mg capsules	1 capsule	6	138
Sodium alginate + sodium bicarbonate, 500 + 267 mg tablets	1 tablet	2.6	60
Sodium chloride 1 mmol/ml solution	1 mL	1	23
Ibuprofen 600 mg effervescent granules	1 sachet	8.6	198
Paracetamol 500 mg effervescent tablets	1 tablet	18.2-19	419-437
Paracetamol 500 mg soluble tablets	1 tablet	16.9-17	389-391
Cold and Flu Relief powder	1 sachet	5.1	117
Acetylcysteine 600 mg effervescent tablets	1 tablet	15.5	356
Calcium gluconate 1 g effervescent tablets	1 tablet	4.5	103
Movicol 13.8 g oral powder	1 sachet	8.1	186
Oral hydration solution	100 mL	6-9	138-207

Recommendations

Age < 1 year	Adequate intake* of sodium (g/day)	Adequate intake* of salt (NaCl) (g/day)
0–3 m	0.11–0.12	0.28–0.30
4–6 m	0.11–0.20	0.28–0.50
7–11 m	0.17–0.37	0.43–0.90
Age > 1 year	CDRR for sodium intake** (g/day)	CDRR for salt intake** (g/day)#
1–3 y	1.2	3.0
4–6 y	1.5	3.5
7–8 y	1.7	4.0
9–13 y	2.0	5.0
14–18 y	2.3	5.5

Renken-Terhaerdt, J. et al. (2026)

Recommendations

- Management strategy inc. assessment of barriers in both early and late CKD
- Barrier to reducing salt is reading food labels of processed foods, awareness and long-term sustainability

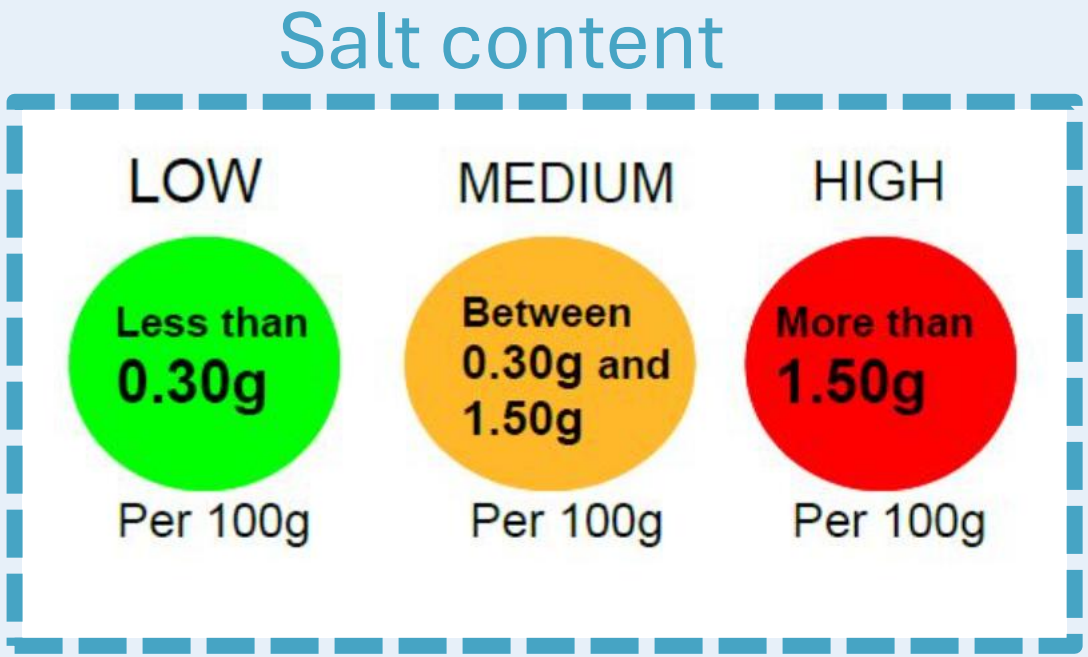
Garafalo et al. 2018; Renken-Terhaerdt et al. 2026

Practical dietary changes

- Dietary assessment including barriers
  - Cost • Time • Knowledge • Cooking skills
- Time and Thyme
- Small sustainable changes - lunch box substitute or cooking once per week from scratch

Practical dietary changes

- Educating on food labelling
  - Ideal is to aim for foods labelled low sodium
  - Realistically < 1g/100g
  - Per portion v per 100g
- Sodium v Salt



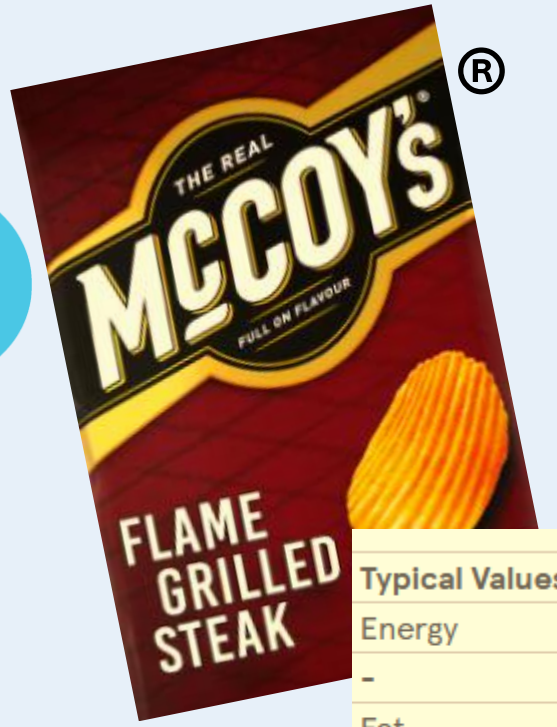


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Nutrition information

Typical Values	Per 100g	Per Pack (23g)
Energy (kJ)	2134	491
(kcal)	511	117
Fat	28.6g	6.6g
of which Saturates	14.4g	3.3g
Carbohydrate	51.5g	11.8g
of which Sugars	4.6g	1.0g
Fibre	2.6g	0.6g
Protein	10.3g	2.4g
Salt	2.4g	0.5g
Typical number of servings per multipack: 12	-	-

Kind Inclusive Ambitious One team



Typical Values	Per 100g	Per 25g Pack
Energy	2187kJ	547kJ
-	524kcal	131kcal
Fat	31g	7.8g
of which Saturates	2.5g	0.6g
Carbohydrate	53g	13g
of which Sugars	2.3g	0.6g
Fibre	4.0g	1.0g
Protein	6.9g	1.7g
Salt	1.5g	0.38g
1 serving per pack	-	-



Nutrition information

Typical Values	Per 100g	Per 13.1g Pack
Energy	2249kJ	295kJ
-	539kcal	71kcal
Fat	32g	4.2g
of which Saturates	2.9g	0.4g
Carbohydrate	56g	7.3g
of which Sugars	6.5g	0.9g
Fibre	1.2g	<0.5g
Protein	5.2g	0.7g
Salt	2.2g	0.29g
1 serving per pack	-	-

Practical dietary changes

Nottingham University Hospitals NHS Trust

Kidney Care UK

Kidney Kitchen Family Favourites

Packed with easy to follow, delicious recipes the whole family will enjoy, developed with kidney dietitians specially for children and young people living with kidney disease.

Read Kidney Kitchen Family Favourites magazine

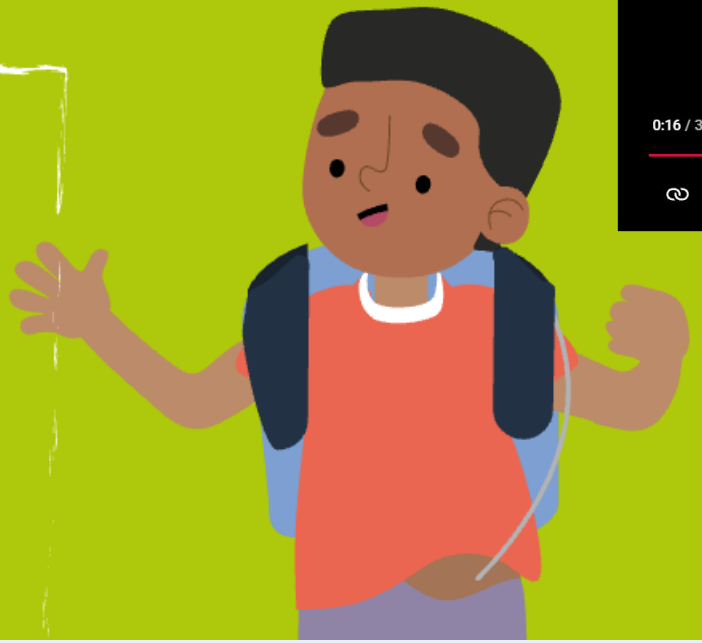


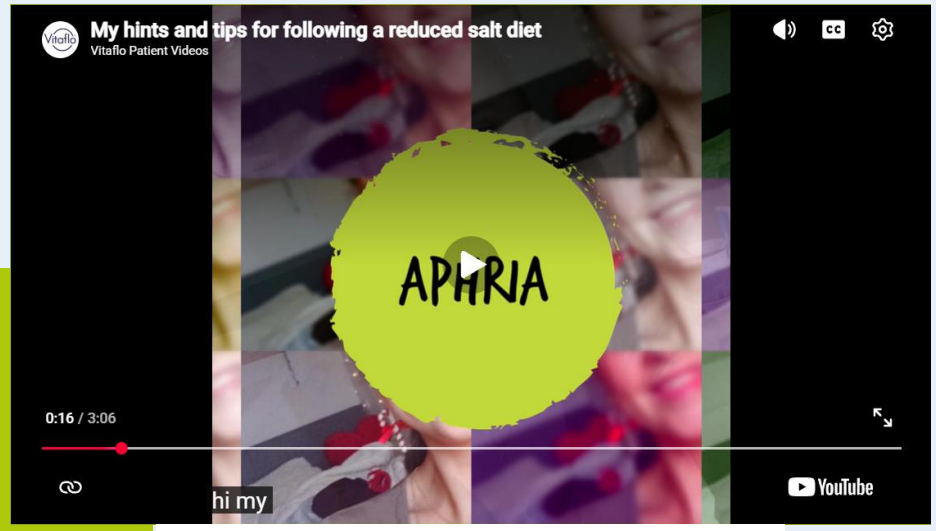
Kind Inclusive Ambitious One team

Practical dietary changes

My Renal Nutrition

Why is it important to reduce the amount of salt that I eat if my kidneys aren't working well?





Kind Inclusive Ambitious One team

Take aways

- Chicken and pesto take away pizza - small ---3.2g salt per pizza
- Burger and fries (no additional salt) – 1.7g
- 4 piece chicken meal and fries -4.2g
- Cheese and ham toastie – 2.1g

Conclusion

- Reducing salt can have a significant impact on the management of CKD at all stages
- Processed foods are the largest contributor to the individual intake of salt
- Systematic small changes can have a big impact
  - Medication, changing some snacks, exploring new flavours
- Resources available to support

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  - https://www.myrenalnutrition.com/dietary-principles/what-salt
  - https://www.youtube.com/watch?v=A1qbkL-Iff8