



Salt Levels in children's meal from four major fast food retailers, 2019

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The George Institute
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This report was prepared for the VicHealth salt partnership by World Health Organization collaboration centre on Population salt reduction, The George Institute for Global Health.

Introduction

Cardiovascular disease (CVD) remains the leading cause of mortality, responsible for one third of all deaths, worldwide and in Australia (1). About one-third of the adult Australian population has been diagnosed with high blood pressure, a main risk factor for CVD (2). Sodium is a chemical element, which is responsible for maintaining and regulating blood volume and pressure, in addition to other physiological functions. However, research has shown that over-consumption of sodium, most commonly in the form of sodium chloride, or salt, causes blood pressure to increase (3). Reducing salt intake is an effective way to lower blood pressure, and has become a priority for curbing the high burden of non-communicable diseases, such as CVD. In 2006, the World Health Organization (WHO) set a global target of reducing population salt intake to below 5g/day (4). In 2013, WHO Member States, including Australia, adopted a global target to reduce mean population salt intake by 30% by 2025 (5).

In Australia, the average salt intake for adults is approximately 9g/day, nearly twice the WHO recommended target (6). Likewise, children are also consuming too much salt; the average salt intake in school aged children is 6.1g salt per day (2440mg sodium) (7), far in excess of the current recommended upper limit, 1400mg sodium (3.5g salt) for children aged 4-8 years old, though we note these are to be revised (8). Excess salt in the diet can elevate blood pressure even in early stages of life. Studies show that children with elevated blood pressure, are more likely to continue to have high blood pressure in adulthood. Food taste preferences and attitudes for salt can also be carried into adulthood (9). Thus, targeting food intake and the salt content of food during childhood can have a positive impact on health and healthy attitudes later in life.

Tips for consumers

- Eat fresh and limit fast food as much as possible
- Prepare ahead, and know your options; choose the lower salt options. For example, swapping fries for apple slices

Processed foods are the main sources of salt in the diet, and in addition, meals eaten out of the home contribute to salt intake. In New South Wales, research indicates that 20% of primary school aged children ate a snack or meal from a fast food outlet at least once a week; with a significantly higher proportion (28%) of children from lower socioeconomic backgrounds compared to children from high socioeconomic backgrounds (15%) (10).

Nationwide salt reduction efforts began with the creation of the Food and Health Dialogue (FHD) in 2009, identifying nine priority food categories for product reformulation and setting voluntary targets to reduce sodium content in the food supply (11). This was succeeded by the Healthy Food Partnership (HFP) in 2016 (12). Currently there are no salt targets for the out of home food sector in Australia.

In 2015, the Victorian Health Promotion Foundation (VicHealth) formed a partnership with the George Institute for Global Health and the Heart Foundation, creating a taskforce to inform, implement, and evaluate salt reduction initiatives throughout the country (13).

As part of this Partnership, and in collaboration with World Action on Salt and Health (WASH), this project aimed to assess current salt levels in children's foods from four major fast food retailers with the highest market share in Australia (14); KFC, McDonald's, Hungry Jack's (Burger King) and Subway. Salt levels were compared against an existing target, namely that set by The Department of Health in the United Kingdom (UK), which is a maximum of 1.8g salt for children's main meals eaten out of the home (15).

The results will inform part of a global advocacy campaign for World Salt Awareness Week, focussing on the importance of reducing children's salt intake, specifically in food marketed at children.

Methods

Data Collection

Nutritional information and product descriptions were collected from the Australian websites for Kentucky Fried Chicken (KFC) (Nutrition information correct as at December 2018, accessed 21st February 2019 (16)), Hungry Jack's, also known as Burger King internationally (Nutrition Guide 5 Feb 2019, accessed 21st February 2019 (17)), McDonald's (Nutrition Information correct as at 29 August 2018, accessed 21st February (18)) and Subway (Australia Nutrition Summary updated, accessed 21st February 2019 (19)). Data obtained included the fast-food outlet name, product name, serving (portion) size, total salt/sodium per serving, salt/sodium per 100g, total calories per serve, main meal components and side dish components.

Product categories

Products were categorised into four main categories: Children's meals (e.g. McDonald's Happy Meal), meal components (burgers/subs/sliders/wraps and chicken nuggets/products), snacks and sides (e.g. KFC Go Buckets, chips/fries) and drinks (e.g. Pop Top Juice).

Inclusion/exclusion criteria

Products that were not included as part of children's meals or marketed towards children were excluded from the product survey.

Missing values

Missing values for salt per serve or per 100g were calculated where possible. Hungry Jacks provided serving size (g) and sodium (mg) per serve, McDonald's provided sodium (mg) per serve and per 100g, KFC provided serving size (g), sodium (mg) per serve and 100g, and Subway provided serving size (g) and sodium (mg) per serve and per 100g.

Analysis

For all the products surveyed and each category, the total number, mean salt values and ranges were calculated. The proportion each product contributed to the daily salt limit for a child 4-8 years (daily upper limit (UL) 1400mg sodium, 3.5g salt (8)) were calculated.

Children's meals, meal components, sides and snacks were compared to the UK 2017 salt target for meals eaten out of the home (1.8g salt/meal).

Key Findings:

- The average salt content of children's meals was 1.57g (626mg sodium), and ranged from 0.44g-3.78g salt (175mg-1510mg sodium).
- The ranges of salt levels in children meals from different fast-food outlets were: McDonald's 0.56g-2.32g salt (223mg-928mg sodium), KFC 1.4g-1.58g salt (556mg-633mg sodium), Subway 0.44g-1g salt (175mg-398mg sodium) and Hungry Jack's 2.75g-3.78g salt (1100mg-

1510mg sodium).

- The highest salt children's meal was the Hungry Jack's 6 Nugget Kids pack (includes a dipping sauce and small chips), which contained 3.78g salt (1510mg sodium).
 - This is the equivalent of 108% of the maximum recommended salt intake per day for a child aged 4-8 years old (8).
 - Approximately two-thirds of the total salt is from the nuggets (2.06g), and the small chips (1.22g).
 - This meal contains more than twice the amount of salt compared to the equivalent option McDonald's Happy Meal containing 6 nuggets with small chips and water (1.59g salt, 635mg sodium per serve)
 - *Further McDonald's offers Happy Meal containing 6 nuggets with apple slice instead of chips and water (1.10g salt, 441mg sodium per serve) saving a further 0.49g salt.
- The lowest salt children's meal was the Subway Kids' Pak Veggie Delite Mini Sub, (includes a mini sub and SPC apple puree snack), which contained 0.44g salt (175mg sodium).
 - This is equivalent of 13% of the maximum recommended salt intake per day for a child aged 4-8 years old (8).
- Within the retailers, there was a range in salt levels for children's meals, depending on the food items selected.

For example McDonald's had the most options available:

- Choosing a McDonald's Happy Meal containing:
 - » 3 nuggets, apple slices and water provides 0.56g salt, 223mg sodium, 16% of a 4-8 years old child's (8)
 - » Cheeseburger, small fries* and water provides 2.32g salt, 928mg sodium, 66% of a 4-8 years old child's (8).
 - » Choosing the least salty option would save almost 2g of salt
 - *McDonald's website indicates small fries are not currently an option for Happy Meals, however we believe consumers can still make this choice. Therefore, this was included in the analysis.

- McDonald's is the only fast-food outlet offering fresh fruit (apple slices) and vegetables (grape tomatoes) with a children's meal.
- McDonald's and KFC were the only fast food outlets that offered drinks other than water with their children's meals. Other drink options included Pop Top fruit drink/juice from KFC and McDonald's, and chocolate milk and orange juice from McDonald's.
- 30% of children's meals exceeded the recommended 1.8g per meal eaten out of the home (15); all Subway and KFC children's meals met this target.

Burgers, subs, sliders and wraps

- Children's burgers were available at Hungry Jack's, burgers and wraps at McDonald's, mini-sub at Subway, and sliders at KFC.
- The average salt content was 1.12g (447mg sodium).
- Salt levels of children's burgers, subs, sliders and wraps available ranged from 0.41g-1.82g (164mg-729mg

sodium).

- The highest salt product was McDonald's Cheeseburger, which contained 1.82g salt (729mg sodium).
- This burger provides 52% of maximum recommended salt level for a child aged 4-8 years old (8).
- The lowest salt product was Subway Veggie Delite Mini-Sub, which contained 0.41g salt (164mg sodium).
- This mini-sub contains 12% of maximum recommended salt level for a child aged 4-8 years old (8).

Nuggets and similar chicken products

- Six packs of nuggets were available from KFC, Hungry Jack's and McDonald's, and 3 packs of nuggets were available at Hungry Jack's and McDonald's. KFC offered snack size Popcorn Chicken and Wicked Wings, and McDonald's offered Grilled Chicken Bites.
- The average salt content was 1.31g (525mg sodium)
- Salt levels ranged from 0.55-2.08g (218mg - 830mg sodium)
- Looking at 6 pack nuggets:
 - The highest salt nuggets were KFC 6 nuggets, which includes sweet n'sour sauce, and contained 2.08g salt (830mg sodium).
 - » This is the equivalent of 59% of the recommended salt intake per day for 4-8 year olds (8).
 - The lowest salt nuggets were McDonald's Chicken McNuggets 6 pack, which contained 1.09g salt (436mg sodium).
 - » This is the equivalent of 31% of the recommended salt intake per day for 4-8 year olds (8).
 - The nuggets from KFC contained almost twice as much salt compared to McDonald's.

Chips and Fries

- Small fries/chips were available at Hungry Jack's, KFC and McDonald's.
- The average salt content was 0.74g (295mg sodium).
- Salt content ranged from 0.49g-1.22g (194mg-489mg sodium).
- The highest salt fries were the Hungry Jack's regular seasoned chips, which contained 1.22g (489mg sodium).
- This is the equivalent of 35% of the recommended salt intake per day for 4-8 year olds (8).
- The lowest salt fries were McDonald's small fries, which contained 0.49g salt (194mg sodium).
- This is the equivalent of 14% of the recommended salt intake per day for 4-8 year olds (8).

Snacks and other sides

- A variety of snacks and side options were available, including: KFC Go Buckets; apple slices, grape tomatoes and McDonald's cookies from McDonald's

and a fruit puree from Subway

- The average salt content was 0.8g (320mg sodium).
- Salt levels ranged from 0g-2.11g (<1mg-842mg sodium).
- The highest salt snack/side was KFC Go Bucket 2 Baked Tenders, 2.11g salt (842mg sodium).
- This is the equivalent of 60% of the recommended salt intake per day for 4-8 year olds (8).
- McDonald's apple slices and grape tomatoes contained the least salt, 0g (<1mg sodium)
- KFC Go Buckets' were the predominantly available snack (n=5) containing 1.11-2.11g of salt (sodium 443-842mg)
- This contributes between 32-60% of the recommended salt intake per day for 4-8 year olds (8).

Recommendations

Government

- Establish specific salt targets for children's meals and foods eaten out of the home in Australia.
- Create a regulatory monitoring scheme to assess industry compliance with established salt targets.
- Increase consumer awareness campaigns to inform about the health benefits of reducing salt intake, specifically for children.

Fast food retailers

- Gradually reformulate high salt products to lowest levels of salt possible.
- Make the healthier option the default option

Notes on data:

- All data were collected online. Due care was taken to select the most up to date data source where multiple sources of data were available.
- Meal combinations for McDonald's Happy Meals were limited to the highest and lowest salt options for each main meal component and included water as the default drink
- Similar products were compared between Australian retailers even if not strictly marketed towards children to identify opportunities for lowering salt levels.

About the WHO Collaborating Centre on Population Salt Reduction

The WHO Collaborating Centre on Population Salt Reduction (WHO CC SALT) has a global remit with a focus on Australia, the Western Pacific and South East Asian Regions. It is currently involved in projects in Australia, the Pacific Islands, Mongolia, Vietnam, Cambodia, Indonesia, China and India. WHO CC SALT is working with the World Health Organization to develop a range of tools and resources to support countries to develop and implement salt reduction strategies. WHO CC SALT is funded through a mixture of short and longer term contracts and research grants

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Media Enquiries

Julia Timms

Senior Media Advisor

The George Institute for Global Health

P: + 61 410 411 983

E: jtimm@georgeinstitute.org.au

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Table 1. Descriptive statistics for salt (g) per serving in children's meals

	N	Mean salt, g (SD)	Mean sodium, mg (SD)	Range salt, g	Range sodium, mg
Kids Meals	23	1.57 (0.77)	626 (307)	0.44 - 3.78	175 - 1510
Kids Meal components					
Burgers, mini-sub, sliders and wraps	16	1.12 (0.33)	447 (130)	0.41 - 1.82	164 - 729
Nuggets and similar chicken products	8	1.31 (0.54)	525 (215)	0.55 - 2.08	218 - 830
Fries	3	0.74 (0.42)	295 (168)	0.49 - 1.22	194 - 489
Kids sides	10	0.8 (0.79)	320 (317)	0 - 2.11	0 - 842
Drinks	6	0.09 (0.09)	35 (33)	0.01 - 0.25	5 - 98

Table 2: Highest and lowest children's salt meals and food

	High salt meal	Total salt (g) per serving [sodium mg]	Salt (g) per 100g [sodium mg]	Lowest salt meal	Total salt per serving (g) [sodium mg]	Salt (g) per 100g [sodium mg]
Kids Meals	Hungry Jacks 6 Nuggets Kid's Pack (including Dipping Sauce and Small Chips)	3.78 [1510]	1.31 [524]	Subway Veggie Delite Mini Sub and SPC puree snack	0.44 [175]	0.20 [81]
Kids Meal components						
Burgers, mini-sub, sliders and wraps	McDonalds Cheeseburger	1.82 [729]	1.55 [618]	Subway Veggie Delite Mini Sub	0.41 [164]	0.32 [129]
Nuggets 6 pack	KFC 6 Nuggets (with sweet n'sour sauce)	2.08 [830]	1.63 [652]	McDonalds 6 McNuggets	1.09 [436]	1.10 [440]
Fries	Hungry Jacks Small Chips	1.22 [489]	Unknown	McDonalds Small Fries	0.49 [194]	0.67 [269]
Kids sides	KFC Go Bucket 2 Baked Tenders	2.11 [842]	0.91 [362]	McDonalds Apple Slices	0.00 [1]	0 [1]
Drinks	McDonalds CalciYum Wicked Chocolate Milk	0.25 [98]	0.10 [39]	McDonalds Pop Tops Water	0.01 [5]	0.01 [2]

Table 3: Salt levels in within each category

Retailer/ Brand	Meal name	Portion size (g)	Total salt per serving (g)	Total sodium per serving (mg)
Kids Meals				
Hungry Jacks	6 Nuggets Kid's Pack (including Dipping Sauce and Small Chips)	288	3.78	1510
Hungry Jacks	3 Nuggets Kid's Pack (including Dipping Sauce and Small Chips)	174	2.75	1100
Hungry Jacks	Cheeseburger Kid's Pack (including Small Chips)	210	2.75	1100
McDonalds	Happy Meal (Cheeseburger, fries and water)	440	2.32	928
McDonalds	Happy Meal (Wholemeal snack wrap crispy, fries and water)	433	1.94	774
McDonalds	Happy Meal (Hamburger, fries and water)	426	1.86	745
McDonalds	Happy Meal (Cheeseburger, apple slices and water)	428	1.84	734
McDonalds	Happy Meal (Grilled chicken bites, fries and water)	414	1.60	639
McDonalds	Happy Meal (6 Nuggets, fries and water)	421	1.59	635
McDonalds	Happy Meal (Wholemeal snack wrap grilled, fries and water)	434	1.59	634
KFC	Kids Meal-Snack Popcorn	439	1.58	633
McDonalds	Happy Meal (Wholemeal snack wrap crispy, apple slices and water)	421	1.45	580
KFC	Kids Meal- Baked Slider	453	1.4	556
McDonalds	Happy Meal (Hamburger, apple slices and water)	414	1.38	551
McDonalds	Happy Meal (Grilled chicken bites, apple slices and water)	402	1.11	445
McDonalds	Happy Meal (6 Nuggets, apple slices and water)	409	1.10	441
McDonalds	Happy Meal (Wholemeal snack wrap grilled, apple slices and water)	422	1.10	440
McDonalds	Happy Meal (3 Nuggets, fries and water)	372	1.04	417
Subway	Turkey Mini Sub and SPC puree snack	225	1.00	398
Subway	Ham Mini Sub and SPC puree snack	213	0.98	392
Subway	Roast Beef Mini Sub and SPC puree snack	224	0.87	349
McDonalds	Happy Meal (3 Nuggets, apple slices and water)	360	0.56	223
Subway	Veggie Delite Mini Sub and SPC puree snack	217	0.44	175
Meal components (burgers and similar, nuggets and similar, fries)				
KFC	6 Nuggets (with sweet n'sour sauce)	127	2.08	830
Hungry Jacks	6 Nuggets	108	2.06	824
McDonalds	Cheeseburger	118	1.82	729
KFC	3 Wicked Wings (3 pieces)	115	1.55	619
Hungry Jacks	Cheeseburger	121	1.54	614
McDonalds	Wholemeal snack wrap crispy	111	1.44	575
McDonalds	Hamburger	104	1.37	546
KFC	Original Slider BBQ	97	1.30	518
Hungry Jacks	Small Chips	Small	1.22	489
KFC	Original Slider Pepper Mayo	97	1.14	457
Hungry Jacks	Whopper Beef Junior Cheese	159	1.14	457
McDonalds	Grilled chicken bites	92	1.10	440
McDonalds	6 Nuggets	99	1.09	436
McDonalds	Wholemeal snack wrap grilled	112	1.09	435
KFC	Popcorn Chicken (Snack size - not available individually)	69	1.05	420
Hungry Jacks	3 Nuggets	54	1.03	412
KFC	Baked Slider Supercharged	89	1.01	402

Subway	Chicken Strips	156	0.98	391
Subway	Turkey Mini Sub	135	0.97	387
KFC	Baked Slider Aioli	88	0.95	381
Subway	Ham Mini Sub	123	0.95	381
Hungry Jacks	Whopper Beef Junior	147	0.93	372
Subway	Roast Beef Mini Sub	134	0.85	338
McDonalds	3 Nuggets	50	0.55	218
KFC	Regular Seasoned Chips	120	0.51	203
McDonalds	Small fries	72	0.49	194
Subway	Veggie Delite Mini Sub	127	0.41	164
Snacks and sides				
KFC	Go Bucket 2 Baked Tenders	233	2.11	842
KFC	Go Bucket Popcorn	194	1.60	639
KFC	Go Bucket 2 Wicked Wings	197	1.54	616
KFC	Go Bucket 3 Nuggets	168	1.16	462
KFC	Go Bucket 1 Original Tender	157	1.11	443
McDonalds	McDonaldland Cookies	60	0.38	150
McDonalds	Miam Strawberry Yoghurt	70	0.08	32
Subway	SPC Puree & Simple Apple Strawberry	90	0.03	11
McDonalds	Grape Tomatoes	63	0.01	5
McDonalds	Apple slices	60	0.00	0
Drinks				
McDonalds	CalciYum Wicked Chocolate Milk	251	0.25	98
McDonalds	Pop Tops Juice (Apple)	253	0.10	38
McDonalds	Babyccino	67	0.08	30
McDonalds	Orange Juice (small)	289	0.07	26
KFC	Pop Top Drink (Apple)	250	0.03	10
McDonalds	Pop Top Water	250	0.01	5

Please note some values calculated due to data availability. Data correct as per 21st February 2019.