

Assessing the sodium content in Canadian fast-food and sit-down restaurants from 2016 to 2020



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Background

Over 50% of Canadians eat out regularly, in which processed and restaurant foods account for more than 70% of dietary sodium^{1,2}. High dietary sodium intake has been linked to increased hypertension, a leading risk factor for adverse cardiovascular events³. While Canada has yet to set any salt targets for restaurant items, the UK's salt reduction program contributed to considerable reductions in the sodium content of foods and lower average population salt intake⁴.

Objective

Our objectives were to:
1) Assess the longitudinal changes in sodium levels of Canadian chain restaurant food items from 2016-20; 2) Evaluate the sodium content of menu items with the 2024 UK salt reduction targets.

It is hypothesized that the sodium quantity in 2020 would improve compared to 2016. However, most menu items may still not satisfy the UK salt reduction targets⁵.

Methods

Using the University of Toronto MenuFLIP database, nutritional information for menu items (n=21,225) was assessed from Canadian restaurants (n=140) with ≥20 outlets nationally in 2016 and 2020. The top 25 Canadian restaurant chains were assessed (Fig 1)⁶. All menu items identified from the included restaurants (n=3,601) were categorized. Matched pairs (n=1,047) for 2016 and 2020 were examined to ensure sodium-labelled plausibility. Longitudinal changes in sodium levels of menu items (n=979) were compared. Menu items (n=857) were categorized into two tables specified for processed foods and foods from eating out across major product categories (e.g., pizzas) (Fig 2)⁵. These were further used to compare sodium levels of Canadian menu items to their respective UK salt targets.

Chain	Company Name
1	Tim Hortons
2	McDonald's
3	Subway
4	Starbucks
5	Boston Pizza
6	Swiss Chai
7	Wendy's
8	KFC
9	St Hubert
10	The Keg
11	Pizza Hut
12	Dairy Queen
13	Harold's
14	Restaurant Brands International Inc.
15	McDonald's Corp.
16	Doc's Associates Inc.
17	AKW Food Services of Canada Inc.
18	Starbucks Corp.
19	Boston Pizza International Inc.
20	Recipe Unlimited Corp.
21	Wendy's Co. Inc.
22	Yum! Brands Inc.
23	Recipe Unlimited Corp.
24	Yum! Brands Inc.
25	International Dairy Queen Inc.

Food Category	2024 UK Salt Reduction Target (mg per serving)
Desserts	150
Entrées	200
Sides	100
Starters	100
Total	100

Figure 1. 2021 Euromonitor Report.

Figure 2. UK Salt Reduction Targets for 2024.

Results

Sodium levels increased in 28% of foods decreased in 41% and were unchanged in 31% (Fig 3). The percentage of foods that increased or decreased and the magnitude of the change varied depending on the restaurant and food category.

Overall, 53% of the reported Canadian chain restaurant menu items in 2020 met the salt targets and 46% in 2016 (Fig 4). Starters in 2020 had 67% of item exceeding the targets, followed by sides (60%), entrées (44%) and desserts (36%). Subcategories with the highest proportion of products exceeding salt targets were soups as starters (92%), fries as sides (74%), and non-fried potatoes as sides (67%), and those with the greatest proportion of products meeting the salt targets included breads as sides (81%), donuts as desserts (79%), and burgers as entrées (75%).

The total number of menu items with meeting the benchmark salt targets did not significantly change (p>0.05); however, entrée foods were barely significant between 2016 and 2020 (p<0.05) but not clinically significant (Fig 5).

Figure 3. Proportion of Menu Items by Changes in Sodium Levels Between 2016 and 2020 (n=979).

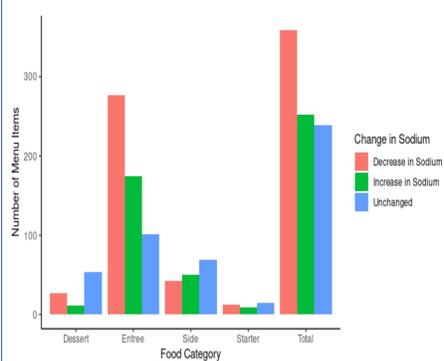


Figure 4. Proportion of Menu Items Exceeding and Meeting NSRI Salt Targets in 2016 and 2020 (n=857).

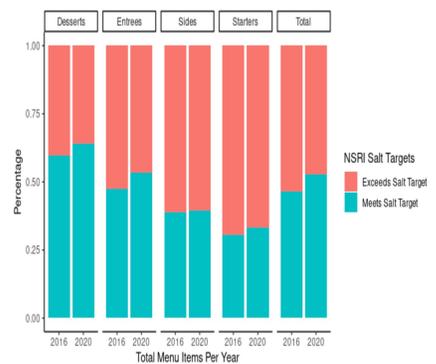
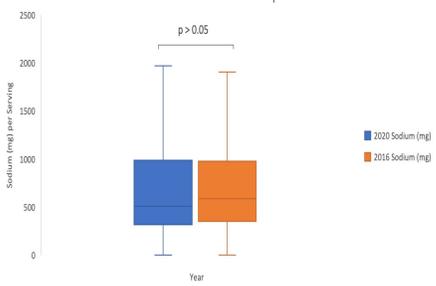


Figure 5. Boxplot of Sodium Levels in Menu Items per Year.



Conclusions

These data provide a critical evaluation of changes in sodium levels across Canadian chain restaurants. Although progress in reducing sodium in menu items is evident, Canadian restaurant foods still have higher amounts of sodium than recommended by current UK guidelines. Further policy interventions should aim at initiatives to improving the restaurant sector's sodium content and nutritional quality.

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