How Accurate are the Nutrients Available on Restaurant Websites?

Melissa Nickle, MPH and Pamela Pehrsson, PhD

USDA, Agricultural Research Service, Human Nutrition Research Center, Nutrient Data Laboratory, Beltsville, MD

Objective

The objective of this study is to compare analytical nutrient data of popular fast foods to stated nutrient data available on company's websites at the same time.

Introduction

As part of the Affordable Health Care Act, Congress passed a national law requiring restaurants with 20 or more outlets to post calorie information on menus and menu boards allowing consumers to make informed decisions when eating away from home. Accuracy of restaurant nutrient information will be a factor on the impact of public health from this national law. To assess the accuracy of the nutrients available through restaurants USDA's Nutrient Data Laboratory (NDL) conducted a nationwide sampling of 12 popular foods for analysis from top fast food restaurants in 2012 and 2013; nutrient information for the same foods was also collected from the restaurants website. Foods sampled included stuffed crust pizza, breakfast sandwiches, French fries, chicken nuggets, burgers, beef burrito and nachos.

Methods

Sampling: Twelve restaurant locations for each of the four leading nationwide restaurant chains by sales were statistically indentified using a multistage, stratified sampling plan developed for the National Food and Nutrient Analysis Program (NFNAP)[1].

Analyses: In 2012-13, sample units of each food item were randomly grouped into 6 subgroups of 2 each and composited to create a final analytical sample and composited according to previously developed protocols for NFNAP. Values for proximates, minerals and fatty acids were determined by USDA-approved commercial laboratories using validated AOAC methodology. Samples were weighed to obtain serving size information from all 12 restaurant locations for each food item.

Quality Control: Analytical quality assurance was monitored through the use of appropriate standard reference materials (SRM) and in-house control materials.

Comparison: Nutrients were compared on 100g basis; serving size information was also evaluated.

Figure 1. Comparison of Calories, Total Fat and Sodium per 100g of Analytical vs. Website

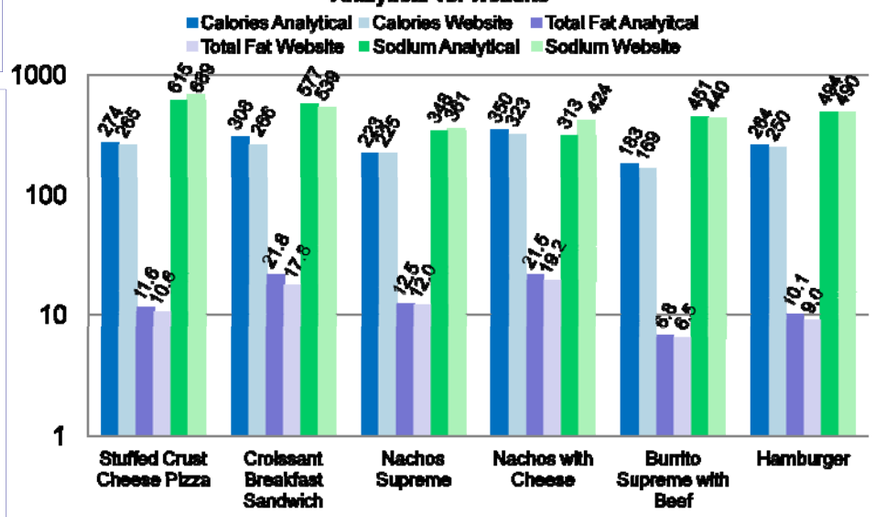

Figure 2. Comparison of Calories, Total Fat and Sodium per 100g of Analytical vs. Website

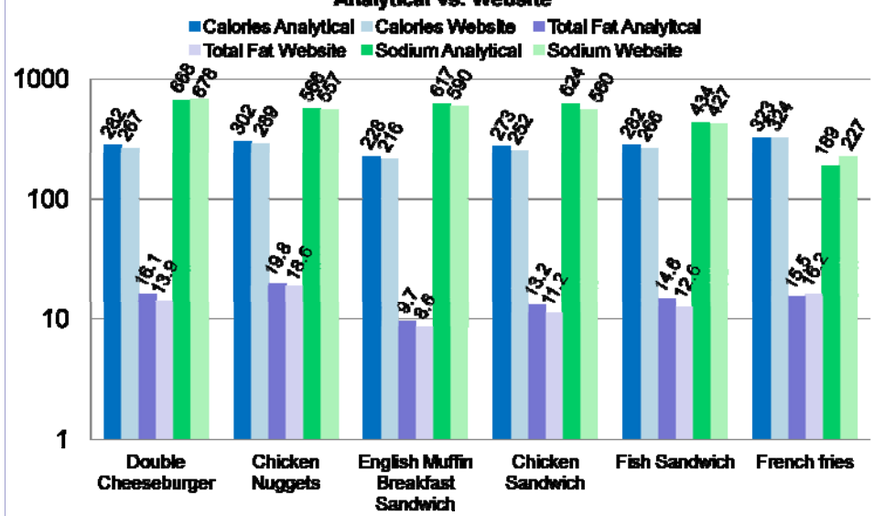

Table 1. Serving Size (g)

Food Item	Analytical *	Label	Difference
Stuffed Crust Cheese Pizza	117	132	-15
Croissant Breakfast Sandwich	171	169	+ 2
Nachos Supreme	222	191	+31
Nachos with Cheese	80	99	-19
Burrito Supreme with Beef	241	248	-7
Hamburger	95	100	-5
Double Cheeseburger	155	165	-10
Chicken nuggets	95	97	-2
English Muffin Breakfast Sandwich	126	139	-13
Crispy Chicken Sandwich	131	143	-12
Breaded Fish Sandwich	134	143	-9
French fries	117	117	0

*mean (n=12)

Results

- Overall, serving sizes and nutrients were similar when comparing analytical samples to company's website.
- Differences in calories ranged from -2kcal/100g (nachos supreme) to +42kcal/100g (croissant breakfast sandwich), with 66% of samples having ≤5% difference (Figure 1 and Figure 2).
- Total fat was underestimated in 92% of samples (+0.3g/100g to +4.0g/100g), whereas French fries were overestimated (-0.7g/100g) (Figure 1 and Figure 2).
- Sodium had a broader range of -111mg/100g (cheese nachos) to +64mg/100g (chicken sandwich) (Figure 1 and Figure 2).
- Protein was identical in 25% of the samples and underestimated in the remaining samples (range +0.1g/100g to +2.4g/100g).
- Serving sizes ranged from -19g (cheese nachos) to +31g (nachos supreme), as shown in Table1.

Conclusion

Website values for leading fast food restaurants provide a reasonable estimate of serving size and nutrient values for menu items.

These analyses provide current, accurate, nationally representative data for popular fast food items and are included in the USDA National Nutrient Database for Standard Reference 25 as part of an effort to monitor changes in nutrient profiles for popular foods[2].

References

1. Haytowitz, D.B., Pehrsson, P.R., and Holden, J.M. (2008) The National Food and Nutrient Analysis Program: A Decade of Progress. Journal of Food Composition and Analysis 21(Supp. 1):S94-S102.
2. Nutrient Data Laboratory (NDL), Agricultural Research Service, US Department of Agriculture. 2013. USDA National Nutrient Database for Standard Reference, Release No.26. NDL Web site: http://www.ars.usda.gov/nutrient data.

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