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the scientific and medical knowledge which is current at the time the report is published." This is specifically the case with respect to recommendations and conclusions pertaining to quick service restaurants (QSR) or "fast-food." To that end, we are calling on the Agencies to consider the full body of science on this topic in issuing the 2015 Dietary Guidelines. We know research has indicated that the location where foods are obtained may not be as important as the nutritional quality of foods consumed. Furthermore, conclusive scientific evidence establishing a causal link between the availability or consumption of restaurants foods and obesity does not exist. We feel the Dietary Guidelines should assist consumers in making wise choices no matter the location of where the food is prepared and eaten. We further detail our concerns in the body of this set of comments.

In our earlier written comments filed with the DGAC, we submitted for review quality published studies illustrating a lack of evidence regarding any relationship in adults between BMI and QSR consumption.¹ We requested these studies be included in the Nutrition Evidence Library (NEL). In our subsequent comments, we urged the DGAC to reevaluate the totality of evidence, including the studies we submitted because in looking at the preponderance of evidence one cannot establish a causal link between consumption of QSR and adult obesity. It appears the DGAC did not include these studies in the NEL and did not consider these studies in reaching its final recommendation and conclusions which stated, "Among adults, moderate evidence from prospective cohort studies in populations ages 40 or younger at baseline indicates higher frequency of fast food consumption is associated with higher body weight, body mass index, and risk for obesity."

Within the DGAC report, Part D. Chapter 1 lines 1923-1924 states, "…no matter where the food is obtained, diet quality of the U.S. populations does not meet recommendations." Keeping this point in mind the rationale used by the DGAC of singling out QSR throughout the report (Executive Summary and Part D) and more specifically recommending reducing frequency of consumption is overreaching and not based on the preponderance of scientific evidence. Of recent note, a regional ban of QSR in the U.S. did not result in weight loss in the surrounding population.² The quality of the evidence that was included in the NEL from which the conclusion that moderate evidence indicates that adults who eat fast food are at increased risk of weight gain, overweight and obesity is weak. The studies selected have several major limitations, which we address below.

Four of the 15 total studies (adults and children) were conducted outside of the U.S. (Spain, UK, Canada, and Australia).^{3, 4, 5, 6} Only studies completed in the U.S. should be included in the NEL as the environment, culture and foods sold within the U.S. are different than that sold outside of the U.S. In fact, authors of these studies acknowledge this within their own studies as a limitation. QSR foods are influenced by ethnic dishes in each country. Thus to include international studies does not capture what is regularly consumed here in the U.S. and therefore these studies should not be part of the NEL. Other DGAC subcommittees did not include international studies when selecting their body of evidence to determine conclusion statements. It is unclear why subcommittee 3 decided to not be consistent with the rest of the DGAC members and not use international studies.

There are other limitations to the studies selected by the DGAC to draw their conclusion statement. Several of the studies included by the DGAC did not have control groups for comparison and thus were more observational studies.^{7, 8}. Although observational research can assist in forming hypotheses and finding associations, their conclusions do not show cause and effect and thus conclusive statements by the DGAC based upon these types of studies cannot be made. Also the DGAC selected studies frequently did not control for confounding variables including physical activity and other dietary patterns.^{8,9, 10, 11} In addition, one study reported that fast food consumption was not associated with weight change (boys) or negatively associated (girls), which is a finding opposite of the DGAC conclusions.¹¹ Finally the included studies were older dating back from 2000, with only one study being conducted in the last two years. Even recently published papers included in the DGAC report are based on outdated and old data. The Boggs citation published in 2013, consisted of food frequency questionnaires collected in 1995 and 2001 which again is not reflective of the current food environment.¹² Similarly, the Laska paper included in the NEL was published in 2012 but used data collected as far back as 2006-2007.¹³

Outdated studies using older data is problematic as it does not capture recent commitments, initiatives and changes made by many of our members including the largest QSR restaurant chains in the U.S. Neither does it capture changes in eating patterns by Americans today. These changes have yet to be captured in the most recent national consumption databases such as the National Health and Nutrition Examination Survey (NHANES). The most recently published research utilizing the NHANES data (2003-2010) reviewed food purchase location or origin including store, (grocery, convenience, or specialty), QSR, FSR, school cafeteria, workplace

cafeteria, vending machine, from someone else/gift, grown, or other.¹⁴ In addition specific food sources of dietary energy were identified with greater precision by food codes representing 96 mutually exclusive food groups or food sources. This analyses was the first ever study of caloric intake by age group, food purchase location and by specific food source. Evaluating who consumes what foods and from where provides new insight in the nature of eating patterns. The results of the study indicated grocery, convenience and specialty stores provide 63% to 76% of calories, depending on the age group. Restaurants including QSR and FSR, contribute between 16.9% and 26.3% of calories, which is also dependent on the age. For adults age 20-50y, 63.1% of energy was obtained from stores and 15.9% from QSR. The research also showed the contribution of the top food sources to energy intakes of adults ages 20-50y by purchase location. The top contributors were from store-bought soda (4.5%), breads (4.2%), grain-based desserts (3.9%), pasta (2.7%), and beef (2.5%) and chicken dishes (2.4%). The top QSR item, pizza, contributed 2.7% of energy, with the second highest QSR item being chicken dishes contributing 2.1% of energy.

Notably, we had asked that the DGAC include this published peer reviewed research

other types of eating out venues (e.g., quick serve, casual, formal restaurants and grocery store take out (Line 145)." However there are other references throughout the report that state QSR as fast food, counter service and vending machines (Line 167, Line 1971). This also holds true with the Figures (Figure D1.41-Figure D1.52 legends) and with studies that DGAC selected to consider. Six studies that used questionnaires to determine the eating habits of Americans predominately lump fast food with junk food, pizza or all meals not prepared at home.

In general, the definition defined by the DGAC for QSR was too broad and inconsistently used throughout the scientific report. In fact within the research recommendations the DGAC recognized that additional research is needed to standardize terminology used to define and describe various types of eating venues. Thus this is a major weakness in the report from which a conclusion statement was made based on varying definitions of QSR. How can one draw a conclusion when there is no uniformity with the definition of QSR?

As previously stated herein, within the previous written comments filed by the National Restaurant Association we included studies that do not show an association between QSR and weight.¹ In addition, those that do show an association are not always positive associations. We are aware there is an ongoing systematic review being completed as noted below.¹⁵ Preliminary results were recently presented at Experimental Biology in late March, 2015 on a systematic review of human studies included cross-sectional, longitudinal, ecological and randomized control trials.¹⁶ After initially reviewing over 3,000 research articles related to frequented restaurant type, quantity consumed, distance to restaurant, restaurant density and frequency and applying study inclusion and exclusion criteria only 197 studies were included for a detailed analysis. The review indicated of all the papers reviewed, only one was a randomized controlled trial which is the "gold standard" of research. In addition, few studies used designs that provided meaningful causal inference on the relationship between QSR frequency and obesity. Similar to the DGAC scientific report most of the papers have varied or non-standard definitions of QSR which makes it extremely difficult to compare results and draw conclusions.

In a recent webinar presented by the same author, he highlighted a study in which there was a negative association between BMI and fast food consumption, and yet the authors of that study still concluded that the children are "exposed to an obesogenic environment."¹⁷ Unfortunately this illustrates the inherent bias of researchers drawing conclusions on frequency of QSR with obesity where there is a strong lack of evidence. Further quantitative synthesis is needed specifically

within this area of research particularly before any conclusion statement can be made by the DGAC.

Lastly, we were discouraged to find that the DGAC made countless policy recommendations, particularly in the sodium section. Suggesting that the Food and Drug Administration should set mandatory national standards for the sodium content in foods by modifying the generally recognized as safe (GRAS) status of sodium added to foods in order to reduce the sodium content in the food supply goes beyond the Committee's scope and raises major concerns at a time when there is new and emerging science on this topic. Therefore, the current scientific literature should be reviewed before establishing any voluntary or mandatory thresholds of any kind.

Conclusion

In summary, research has indicated that the location where foods are obtained may not be as important as the nutritional quality of foods consumed. There does not exist conclusive scientific evidence establishing a causal link between the availability or consumption of restaurants foods, including QSR and adult obesity. It is important to note that scientific studies have found conflicting results and thus no conclusions can be drawn between an association with QSR consumption and adult obesity, paricularly when the definition of QSR defers between studies and the committee used various definitions. Thus the conclusions statement made regarding consumption of QSR and obesity should be reconsidered and potential effects of public health efforts targeted at QSR are overstated.

As we noted in our most recent oral comments, the Dietary Guidelines should assist consumers in making wise choices no matter the location of where the food is prepared and eaten. The National Restaurant Association supports providing consumers with options that can help them meet the Dietary Guidelines recommendations as well as nutrition information to help customers make informed food choices. Restaurant menu labeling, as mandated by the Affordable Care Act, will soon be implemented by many restaurant chains nationwide. We have been aggressively working with our members and the FDA to ensure a smooth implementation period, as well as to educate healthcare professional and consumers on the federal law. With menu labeling being implemented why not direct Americans to use this information to choose the meal that best fits their needs, regardless of the type of food outlet. The American lifestyle is probably not going to become less hectic – Americans need advice on positive changes they can implement, of which meal location seems less critical than meal choices. Guiding Americans on which nutrient rich

food choices to make versus not to make, and focusing on portion guidance to provide "how to" practical advice, can help people make wise food choices within the context of the total diet. The 2015 DGAC should consider advising Americans to make healthful choices both at home and when eating food away from home while not calling out anyone sector of the restaurant industry

Thank you again for the opportunity to participate in the Dietary Guidelines process.

Sincerely,

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