

## **SUPPLEMENTAL MATERIAL**

## **Supplemental Methods: Rules and procedures for estimating the proportion of sodium in food added during processing outside the home.**

For every food the proportion of sodium in the food considered 'added to food outside the home' was estimated using the following rules and procedures:

- 1) A proportion of 0 (no sodium in the food considered added outside the home) was assigned for basic/single ingredient foods that are generally processed in a manner that does not involve the addition of sodium compounds or ingredients that contain sodium compounds. Examples of foods for which this rule was applied include most fruits, fresh vegetables, cooking oils, natural sweeteners, and yogurts.
- 2) A proportion of 1 (all sodium in the food considered added outside the home) was assigned to foods composed entirely or nearly entirely of sodium compounds. Examples of items for which this rule was applied include sea salt, regular salt, lite salt, seasoning sauce, garlic salt, onion salt, celery salt, baking soda, and baking powder. Note that sodium from salt added to food at the table or in home food preparation was the exception to this rule (all of the sodium was attributed to salt added to food at the table or in home preparation in these cases).
- 3) A proportion of 1 was assigned was assigned to foods that contain sodium compounds but very little if any inherent sodium. Examples of foods for which this rule was applied include salad dressings and savory sauces such as soy and tabasco sauces.
- 4) For most multi-ingredient foods (e.g. Oreo cookie, Honey Nut Cheerios, Funyons) the proportion of sodium in the food added outside the home was calculated based on the recipe/formulation for the food in the NDSR food and nutrient database. For example, from

the ingredients in the Oreo cookie formulation (sugar, unbleached enriched flour, canola oil, cocoa, high fructose corn syrup, cornstarch, baking soda, salt, etc.) the proportion could be calculated using the proportions for the ingredients determined using rules 1 and 2.

5) For multi-ingredient foods that lack formulations in the NDSR database, the proportion was generally determined by estimating the amount of sodium added outside the home via comparison with the sodium content of a version of the food or product that does not have a sodium containing compound added in processing. The procedures for food categories that include foods that require use of this rule are as follows:

*Meats* : For most dried (e.g. beef jerky), pickled, and other processed forms of meats the proportion added outside the home was estimated from recipes/formulation (Rule 4). The exception is cured pork (ham). For cured pork the proportion was determined by subtracting the sodium in the fresh (unprocessed) form of the meat from that in the processed form to estimate the amount, and in turn the proportion, added to the food outside the home:

$$\frac{(\text{sodium in 100 grams of ham} - \text{sodium in 100 grams of unprocessed pork})}{\text{total sodium in 100 grams of ham}} = \text{proportion of sodium in ham that is added outside the home.}$$

*Cheeses*: For 'low sodium' cheeses none of the sodium in the cheese was considered added outside the home because sodium containing compounds are not generally added during processing in the preparation of these cheeses (potassium chloride used as substitute). All of the sodium in cheese substitutes was considered added outside the home following Rule 3. For regular cheeses the inherent sodium was calculated from the amount of milk needed to equal the fat in the cheese. The amount of sodium in the milk was considered the inherent amount. The inherent amount was then subtracted from the total sodium for the cheese to determine the amount, and in turn the proportion, that was added outside the home.

*Beverages:* For some beverages (e.g. coffee, tea, wine, beer, etc.) none of the sodium in the beverage was considered added outside the home because sodium containing ingredients are not typically added in processing (Rule 1 applied). For other beverages sodium is added in processing, mostly through the use of sodium citrate or sodium bicarbonate as ingredients (sodium bicarbonate is often used in making carbonated water). For these beverages, which include some sports drinks, energy drinks, drink mixes, fruit drinks, soft drinks, and club soda, the proportion of sodium that is added outside the home was estimated by calculating the difference in the sodium content of the beverage with sodium added in processing and tap water.