



ASSESSMENT OF THE POTENTIAL IMPACT OF THE NUTRITIONAL COMMITMENTS OF FOOD OPERATORS ON FRENCH NUTRIENT INTAKES

Battisti¹ C-Perrin¹ C ; Gauvreau-Béziat¹ J ; Volatier² JL ; Menard¹ C

¹Anses, Risk Assessment Department, Observatory of the nutritional quality of food Unit, Maisons-Alfort, France.

²Anses, Risk Assessment Department, Maisons-Alfort, France.

Background and Objectives:

Oqali has been set up in 2008 by the Ministries in charge of Agriculture, Health and Consumers Affairs and represents the nutritional section of the French Food Observatory. It is implemented and managed both by The French Agency for Food, Environmental and Occupational Health & Safety (Anses) and The French National Institute for Agricultural Research (INRA).

In accordance with French health authorities, food operators have signed voluntary commitment charters to improve the nutritional quality of their foodstuffs as part of The French Nutrition and Health Programme (PNNS 2). The purpose of this study is to assess the potential cumulative impact of these reformulations on French consumers' nutrient intakes.

Methods:

Initial nutrient intakes were computed by combining the data from the French individual consumption survey (INCA 2) and the CIQUAL food composition database. Potential new nutrient intakes were simulated by integrating improved nutrient contents to foodstuffs concerned by reformulations. These new contents were matched with the corresponding consumption data, according to the real market shares of these improved foodstuffs. New nutrient intakes were simulated for 1918 adults and 1444 children (3-10/11-17 year olds) and compared to the initial intakes.

Results:

All processed food groups are concerned by at least one commitment. Figure 1 shows that potential improved nutrient intakes differ significantly from the initial ones for all the nutrients studied (sugars, dietary fibers, lipids, saturated fatty acids, *trans* fatty acids, sodium, calcium, vitamin D). Evolutions are similar for men and women and lead to a decrease of average energy intake of -11.4kcal/day (-0.4%) for men and -10.6kcal/day (-0.6%) for women.

	% of food concerned	MEN				WOMEN			
		Average daily nutrient intake (g/day ⁺)		Evolution		Average daily nutrient intake (g/day ⁺)		Evolution	
		Before food composition improvement	After improvements	g/day ⁺	%	Before food composition improvement	After improvements	g/day ⁺	%
Sugars	11.6	101.2	100.8 ***	-0.4	-0.4	89.3	88.9 ***	-0.4	-0.4
Dietary fibers	2.1	19.2	19.2 ***	+0.01	+0.0	16.0	16.0 ***	+0.01	+0.1
Lipids	14.5	100.0	99.7 ***	-0.4	-0.4	79.5	79.3 ***	-0.3	-0.3
Saturated fatty acids	5.6	41.2	41.1 ***	-0.1	-0.1	32.1	32.1 ***	-0.1	-0.2
<i>Trans</i> fatty acids	1.6	2.6	2.6 ***	-0.002	-0.1	2.0	2.0 ***	-0.002	-0.1
Sodium	16.2	3446.6	3410.2 ***	-36.3	-1.1	2533.3	2509.5 ***	-23.8	-0.9
Calcium	0.4	984.2	984.5 **	+0.3	+0.0	850.3	850.5 ***	+0.2	+0.0
Vitamin D	1.4	2.7	2.8 ***	+0.1	+2.0	2.4	2.5 ***	+0.1	+3.1

⁺ average daily nutrient intakes g/day except for calcium (mg/day), sodium (mg/day) and vitamin D (µg/day).
* p<0.05 ; ** p<0.01 ; *** p<0.001: significant difference between reference and new nutrient intakes (according to scenario).

Figure 1: Average daily nutrient intake before and after food composition improvement for adults

For instance for men, sodium and lipids intakes decreases (-1.1% and -0.4%) are mainly due to reductions in delicatessen meats (Fig.2) and sugar intakes decrease (-0.4%) is mainly due to reformulations of dairy products and soft drinks (Fig.3).

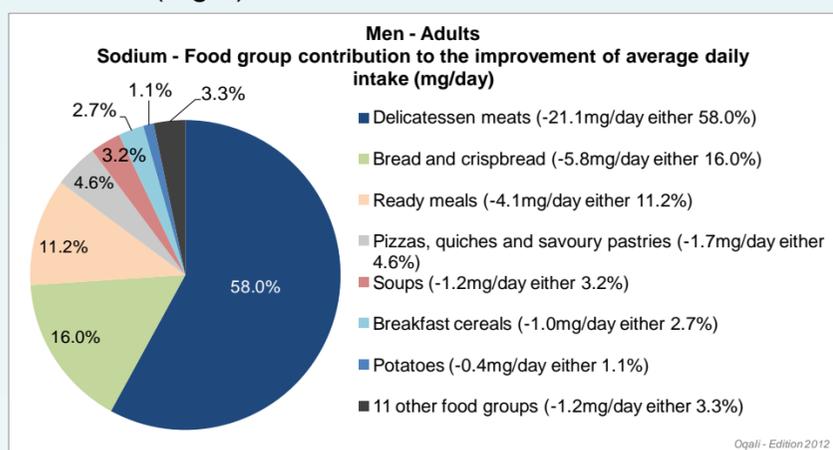


Figure 2: Food group contribution to the improvement of sodium average daily intake (mg/day) for men

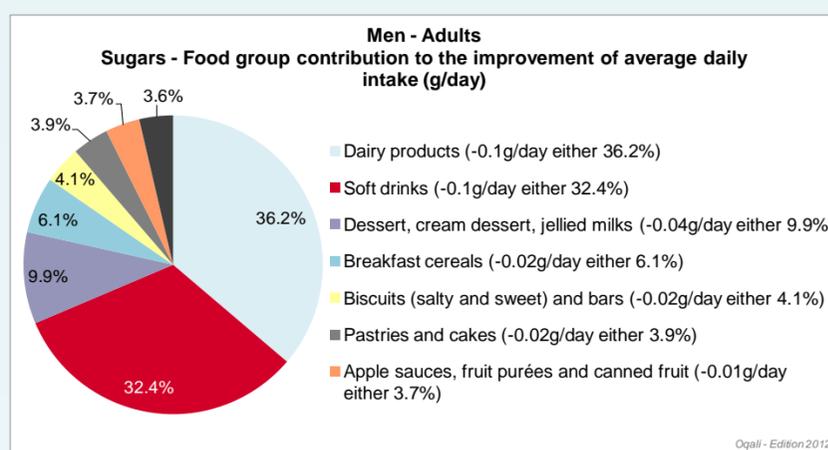


Figure 3: Food group contribution to the improvement of sugars average daily intake (g/day) for men

Reformulations agreements are contributing to achieve the objectives set by the PNNS 2. For men, 3% to 5% of the objective set for salt (<8g/day) is achieved because of the voluntary commitment charters, as 1.6% of the sugars objective (25% decrease of added sugars consumption).

All socio-economic groups are significantly impacted by the reformulation agreements proposed and for all the nutrients studied (except for calcium) which is a real advantage of these voluntary commitments in comparison with other public policies such as tax.

Conclusions:

This study represents an interesting tool to assess French nutritional policies. This impact assessment of reformulations proposed by food operators doesn't take into account all reformulations but only those defined in the agreements. This study highlights the limited potential impact of these reformulations on French nutrient intakes. Now, the magnitude of the impact depends on the number of food operators involved and on their market shares. That's why new commitments are needed to enhance the impact.

Keywords:

nutrition policies assessment, food composition, nutritional improvements, nutrient intakes, socio-economic groups