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Associations between cognitive restraint, history of weight loss diet and organic food consumption in a large population-based sample of adults

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Background

- Organic food consumption has risen in many countries during the past decades, but the links with psychological factors and dieting remain unclear.
- The aim of this study was to evaluate the associations between cognitive restraint, weight loss diet history and organic food intake, in French adults.

Methods

- Participants of the NutriNet-Santé study, a large ongoing web-based prospective cohort started in France in May 2009.
- 21,516 participants (5,688 men, 15,828 women) in this cross-sectional study
- Cognitive restraint : evaluated by the Three-Factor Eating Questionnaire
- Practice of weight-loss diet in the past years : assessed by an ad hoc questionnaire
- Organic food intake of 17 food groups : assessed by the Organic-Food Frequency Questionnaire.
- Logistic regression models were performed and proportions of organic food intakes out of total food intakes were compared.
- Analyses were adjusted for age, education, occupation, income, urban unit size, family situation, energy intake, total intake of the group, physical activity level, mPNNS-GS, BMI

Results

Cognitive restraint

Table 1: Multivariable logistic regression analysis showing the association between quartiles of cognitive restraint score and organic food intake in women

	Q1	Q2	Q3	Q4	p ¹
Fruit and vegetables	Ref	0.98 (0.86-1.11)	0.96 (0.84-1.10)	0.87 (0.76-0.99)	0.23
Fish	Ref	0.99 (0.90-1.08)	1.02 (0.93-1.12)	0.96 (0.87-1.05)	1.00
Red meat, poultry, processed meat	Ref	0.95 (0.85-1.05)	0.96 (0.86-1.08)	0.87 (0.78-0.97)	0.07
Dairy products	Ref	0.99 (0.90-1.09)	0.90 (0.81-0.99)	0.97 (0.88-1.07)	0.33
Starchy refined foods	Ref	0.99 (0.89-1.10)	0.93 (0.83-1.04)	0.93 (0.84-1.04)	0.78
Fast food	Ref	0.99 (0.91-1.09)	0.93 (0.85-1.03)	0.89 (0.81-0.98)	0.13
Fatty sweets	Ref	1.00 (0.90-1.11)	0.86 (0.77-0.96)	0.88 (0.79-0.98)	0.021
Non-fatty sweets	Ref	0.97 (0.87-1.07)	0.88 (0.79-0.97)	0.87 (0.78-0.96)	0.036
Fats	Ref	0.92 (0.83-1.02)	0.85 (0.77-0.95)	0.87 (0.78-0.96)	0.031
Non-alcoholic drinks	Ref	0.91 (0.83-1.01)	0.85 (0.77-0.95)	0.82 (0.74-0.91)	0.004
Alcoholic beverages	Ref	0.96 (0.87-1.05)	0.98 (0.89-1.09)	0.87 (0.79-0.96)	0.07

In addition

- Women with higher levels of cognitive restraint presented lower mean % of organic food (all food groups), compared with those with lower level of cognitive restraint
- Only a few association were observed in men

History of weight loss diet

Table 2: Multivariable logistic regression analysis showing the association between history of weight loss diet and organic food intake in women

	Never dieters	Dieters (past/current)	p ¹
Fruit and vegetables	Ref	0.95 (0.86-1.05)	0.60
Fish	Ref	1.03 (0.96-1.10)	0.88
Red meat, poultry, processed meat	Ref	1.00 (0.92-1.08)	0.92
Dairy products	Ref	0.99 (0.92-1.07)	1.00
Starchy refined foods	Ref	1.02 (0.94-1.11)	1.00
Fast food	Ref	0.89 (0.82-0.95)	0.004
Fatty sweets	Ref	0.93 (0.86-1.01)	0.20
Non-fatty sweets	Ref	0.91 (0.84-0.98)	0.049
Fats	Ref	0.94 (0.87-1.02)	0.31
Non-alcoholic drinks	Ref	0.91 (0.84-0.98)	0.037
Alcoholic beverages	Ref	0.90 (0.83-0.97)	0.017

In addition

- Women who were past or current dieters presented lower mean % of organic fast food, fatty sweets, non fatty sweets, fats, non-alcoholic and alcoholic beverages compared with non dieters
- No association was observed in men

Conclusion

- Overall, individuals, and in particular women, with higher cognitive restraint scores or with a history of weight loss diet consumed less organic food.
- Results suggest that it can be too complex to follow both restrictive and organic strategies at the same time.