Providing choice and/or variety on vegetables: What impact on food intake?

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On the one hand, a choice situation gives an individual a sense of freedom, autonomy and control over the environment, which triggers higher intrinsic motivation and higher satisfaction (Deci and Ryan, 1985). Indeed, it has been demonstrated that a choice situation elicits higher food intake in a meal context (Rohlfs Dominguez et al., 2013; Parizel et al., 2015). On the other hand, providing variety has been demonstrated to enhance food intake. Rolls et al. (1981) argued that providing variety during a meal prevents the onset of specific sensory satiation which refers to the declining satisfaction generated by the monotonous consumption of a certain food. However, in an out-of-home catering situation, it frequently occurs that people face both a “choice” and “variety” situation. People can often select their menu among several proposals and are also allowed to combine several alternatives for the same dish (e.g., selecting two side dishes for the main course).

The present experiment aims at comparing the impact of choice and/or variety on food intake. Sixty normal weight participants were recruited under the condition that they equally liked three recipes of vegetables (green beans with butter, zucchinis with olive oil, spinach with cream). Volunteers participated in four sessions at lunch time. In the no choice/no variety condition, volunteers were randomly assigned one vegetable recipe. In the no choice/variety condition, volunteers were served with the three vegetable recipes. In the choice/no variety condition, volunteers were asked to choose only one vegetable recipe among the three presented. In the choice/variety condition, volunteers were free to choose as many vegetable recipes as they wanted. For all conditions, participants were allowed to eat as much as they desired.

Results still under analysis allowed to decipher the impact of choice versus variety and to reveal synergy between these two factors on food intake.

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