P81 (continued)

Objective: Investigate whether food is more filling when people receive it pre-cut into several pieces, and to explore potential underlying factors.

Design, Setting and Participants: Participants (N=43) were college students who took part in this study for credit. Participants completed the study in groups of 4 to 12 people. All groups got a mini bagel (approx. 42.5 grams) with cream cheese. One group got the bagel in one piece. The other two groups got the bagel cut into four pieces: for one group, pieces were spread out on the plate, and for another the pieces were kept together (distances approaching zero, such that the bagel could appear to be in one piece though cut lines were clearly visible). Experimental groups were run at different hours, one every half an hour. Groups were run at different hours of the day (early afternoon, late afternoon) to avoid differences due to time of day. Participants did not know of the existence of other groups with different conditions. Participants were instructed to finish eating the entire bagel on their plate.

Outcome Measures and Analysis: Participants reported on their fullness across 3 measures: hunger, fullness, and satiation, all measured on 9 point likert scales. They reported on fullness before and after eating the bagels. We summed up the three measures, with hunger reverse scored, and calculated a difference score between pre and post eating fullness as our dependent measure. We analyzed differences using a General Linear Model.

Results: Increased satiety was highest when participants received the pieces close together (4.77). However, receiving the 4 pieces spread apart led to reduced satiety (2.18). Differences were significant at a .04 level: $F(2,41)=3.26$.

Conclusions and Implications: It appears that eating food cut into pieces on its own is no guarantee for increased satiety. If pieces were spaced having the food cut into pieces did not have a positive effect into satiety. We suspect the reason for increased satiety is the number of units being eaten, but that if the food is spread out its volume may appear lower, rather than larger, which may counterbalance the positive effect of eating pieces. Consumers themselves may benefit from cutting the food into pieces, and restaurants may contribute to people feeling fuller by serving food in several pieces. However, separating the food on the plate may undo the effects, so food pieces should remain together.

Funding: Cornell Food and Brand Lab.

P82 Variety Increases Satiety: Eating Different- (vs Same-) Shaped Pretzels Increases Satiety

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Objective: Explore whether food variety (shape of food, in this case) increases satiety.

Design, Setting and Participants: Participants (n=37, 14 male) ate 2 cups (40 grams total) of pretzels each. Participants were college students and graduate students completing the study for credit. Half (n=17) were randomly assigned to a variety condition, and half (n=20) were assigned to a control (non-variety) condition. Variety condition participants received 1 cup of rod pretzels, and 1 cup of pretzel shaped pretzels. Control condition participants received one type only. Pretzels were similar in thickness, texture, and taste, as well as calories and nutritional values. Before eating the pretzels, participants were instructed to report how hungry and how full they felt, on 9-point likert scales. They were then asked to eat all of the pretzels they received. After they finished eating, participants rated their level of hunger and fullness once again.

Outcome Measures and Analysis: We summed up reported fullness levels and reverse-scored hunger to create our metric of satiety. We then calculated a difference score, deducting pre-snacking satiety from post-snacking satiety. We compared mean satiety levels and ran a t-test examining the effects of variety on satiety level.

Results: Participants who received varied pretzels reported a greater increase in satiety ($M=5.41$, $SD=2.79$) than did participants who received one type of pretzels ($M=3.1$, $SD=3.11$). The difference was significant at a .02 level, $t(35)=-2.36$. There were no differences in satiety level between the two different pretzel conditions, attesting to their similarity ($p>.1$).

Conclusions and Implications: Variety can increase satiety. Trivial differences, such in the current case where food eaten was essentially the same and differed on appearance only, increases satiety. Providing greater variety within a meal containing a set amount of food can lead people to feel fuller, and help curb subsequent over-eating.

Funding: Cornell Food and Brand Lab.

P83 On the Dangers of Pre-Plating: Uniformly High Consumption When Consuming From Pre-Portioned Snacks vs Self-Served Snacks

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Objective: Examine the moderating role of pre-plating on mindless eating.

Design, Setting and Participants: Participants (n=200) snacked while watching 20 minute programs. A third of participants watched action movie "The Island," a third watched "The Island" without sound, and a third watched "The Charlie Rose Show." Half the participants were served pre-plated bowls of grapes, baby-carrots, M&Ms and cookies (150 grams each), and half served themselves.

Outcome Measures and Analysis: We measured and compared food consumed, using GLM.

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