

Welcome to the SSRI Food Working Group Speaker Series

February 26 - Gavan Fitzsimons - Food Marketing

March 26 - Sarah Armstrong - Childhood Obesity

April 2 - Kelly Brownell – Food Policy

April 9 - Nancy Zucker - Psychiatry and Food

April 23 - Michelle Nowlin - Food and the Law

Food: We
love & hate it



Gavan J. Fitzsimons
Duke University



How do we feel about food?

- Incredibly complex set of associations



Who makes your food choices?

- We all like to think that we make careful, considered food choices that are good for our bodies and the world around us, correct?

And yet... Do visual cues sign the end of a meal?

- Participants who unknowingly ate from bottomless soup bowls ate 73% more soup, but they did not believe they had eaten more or were more satiated than those eating from normal bowls



Wansink, Painter and North 2005

Who makes your food choices?

- We all like to think that we make careful, considered food choices that are good for our bodies and the world around us, correct?
- Will review work from our lab focusing on two areas that cast doubt on this assumption:
 - Our own nonconscious processes
 - The influence of other people
- Will also discuss some early efforts into eating strategy effectiveness

Ia. Food and the unconscious: Healthy options?



Do healthy options help?

- Global diet at an all time low
- Weight and related health problems rising
- We need more healthy food choices, right?

Method

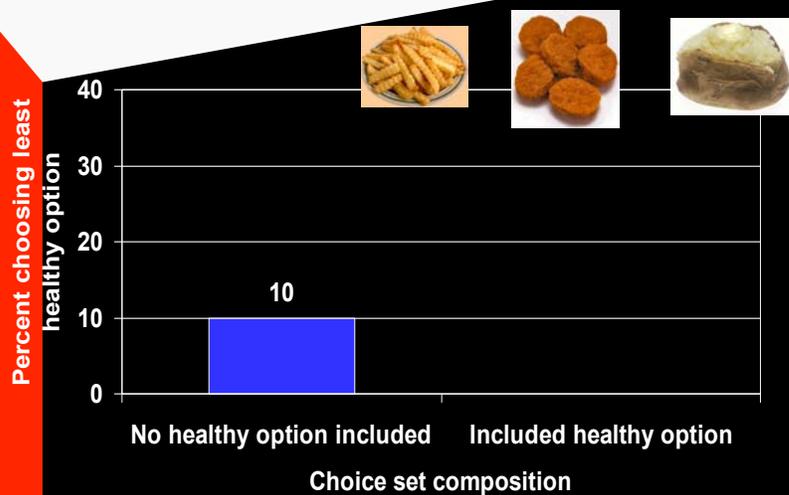
- Ps presented with options for a side with lunch
 - Either see no healthy option or a set that includes a healthy option



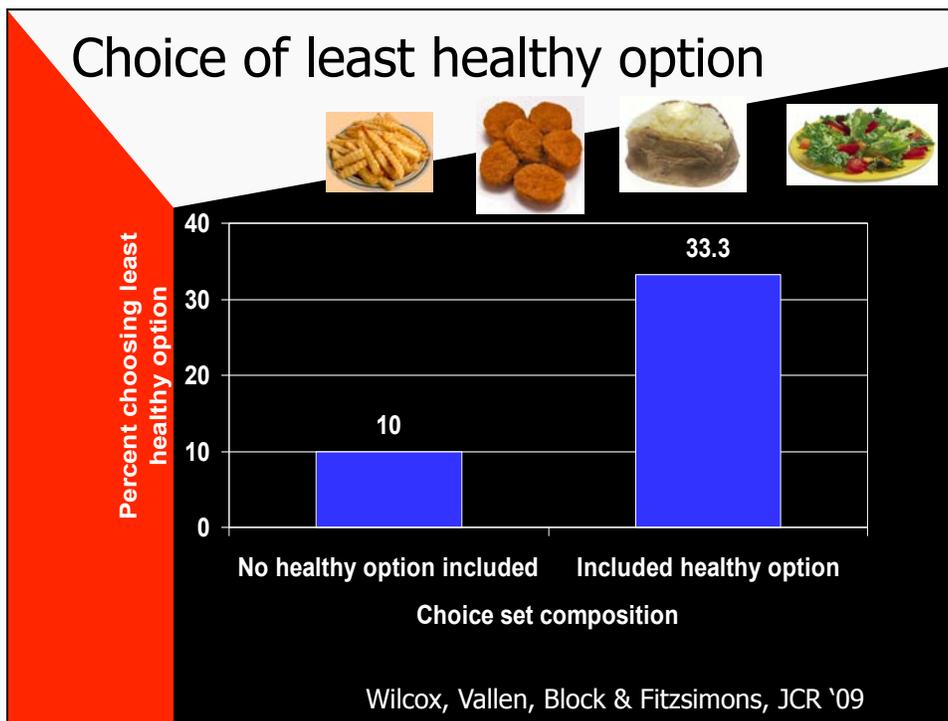
OR



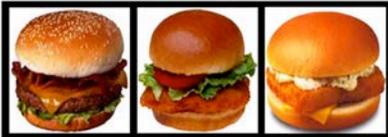
Choice of least healthy option



Wilcox, Vallen, Block & Fitzsimons, JCR '09



Not just salads...

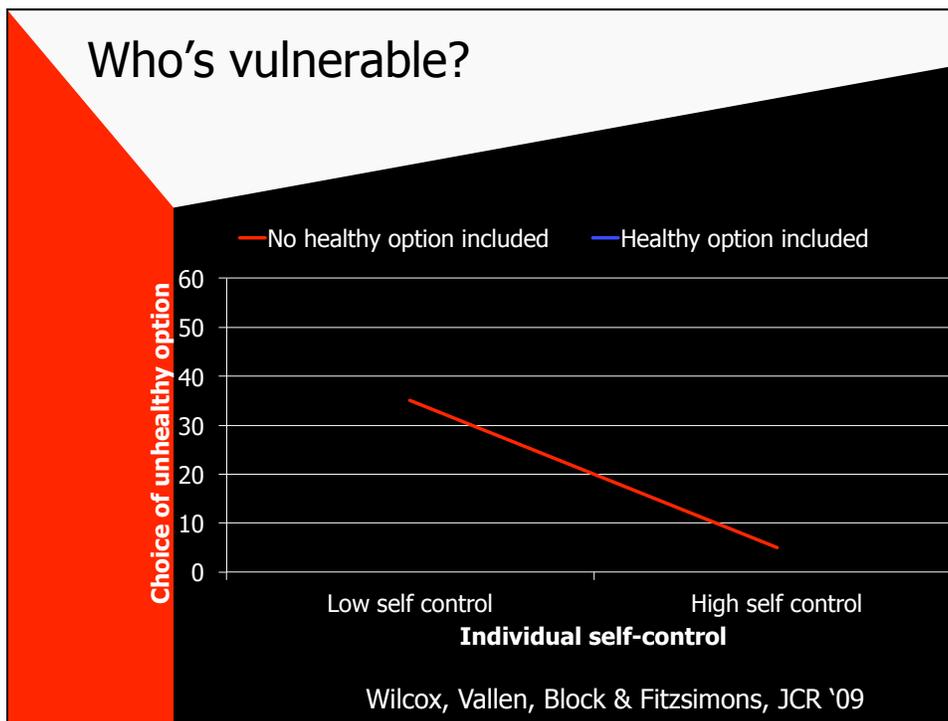
	Study	Choice Set	
		No Healthy Option	Healthy Option
Sporting Event Menu	Study 2a		
Snack Menu	Study 2b		
Lunch Menu	Studies 3 and 4		

But why?

- We believe that the healthy option can satisfy your goal to “eat healthy”
- May cause you to remember the salad you had yesterday...
- Or may cause you to consider the salad you think you’ll eat tomorrow...

Who’s vulnerable?

- If goal to be healthy is satisfied perhaps those whose goal is chronically active are more vulnerable
- 2 (Healthy option present/absent) X measured self-control
- DV is choice of least healthy option



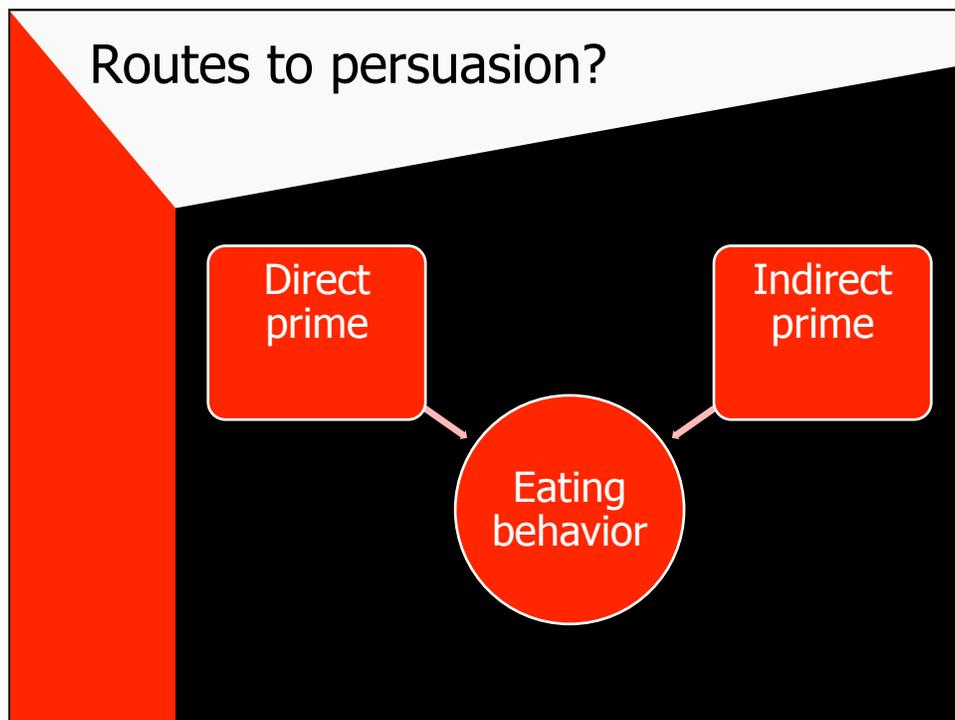
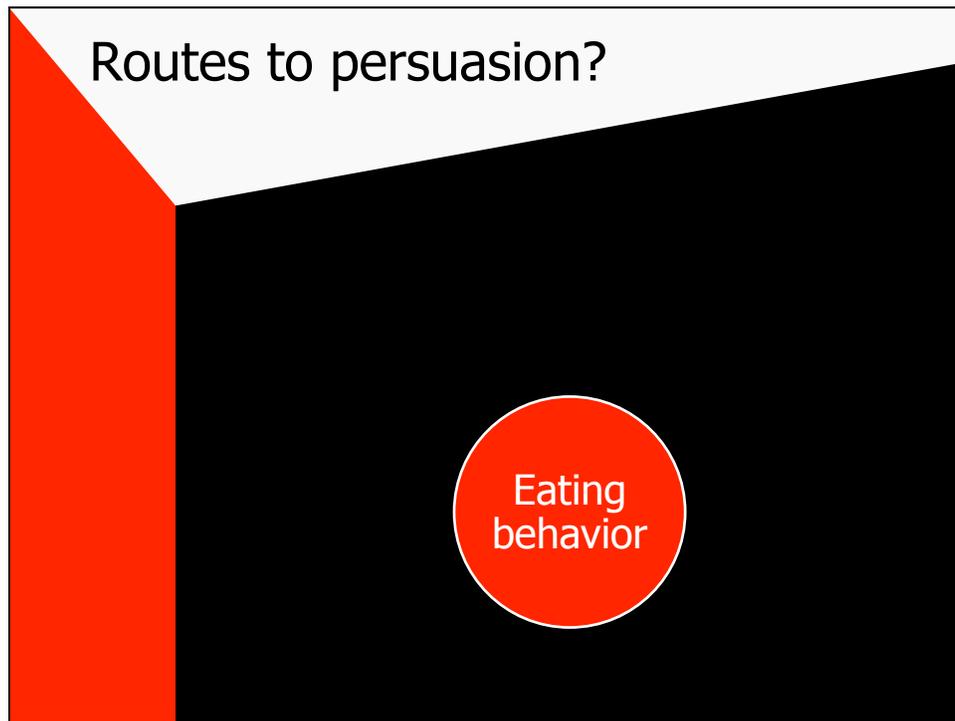
Ib. Food & the unconscious: Resistance

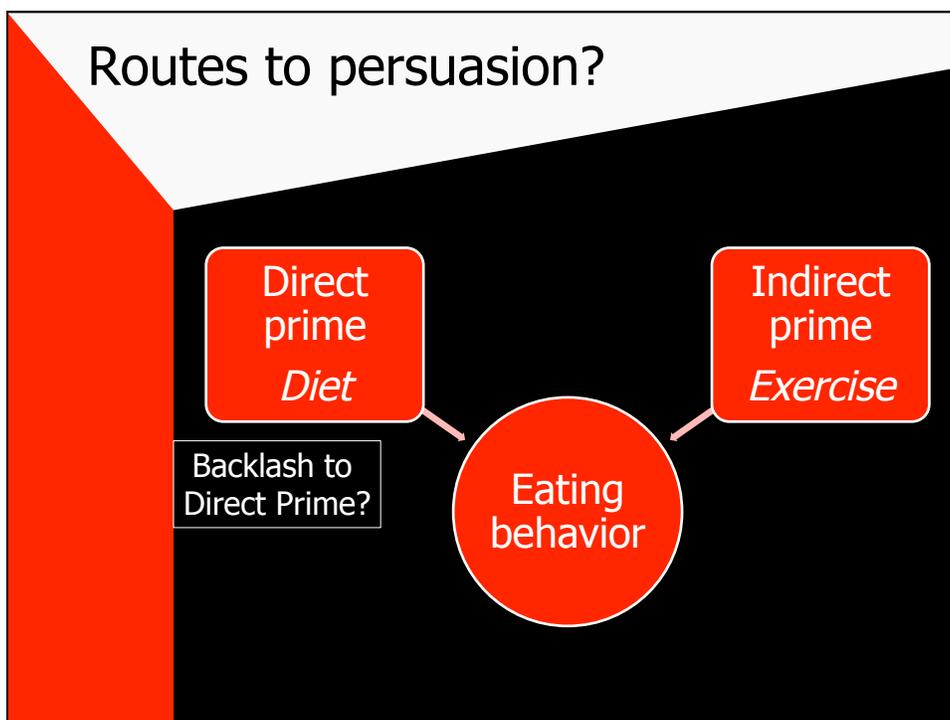
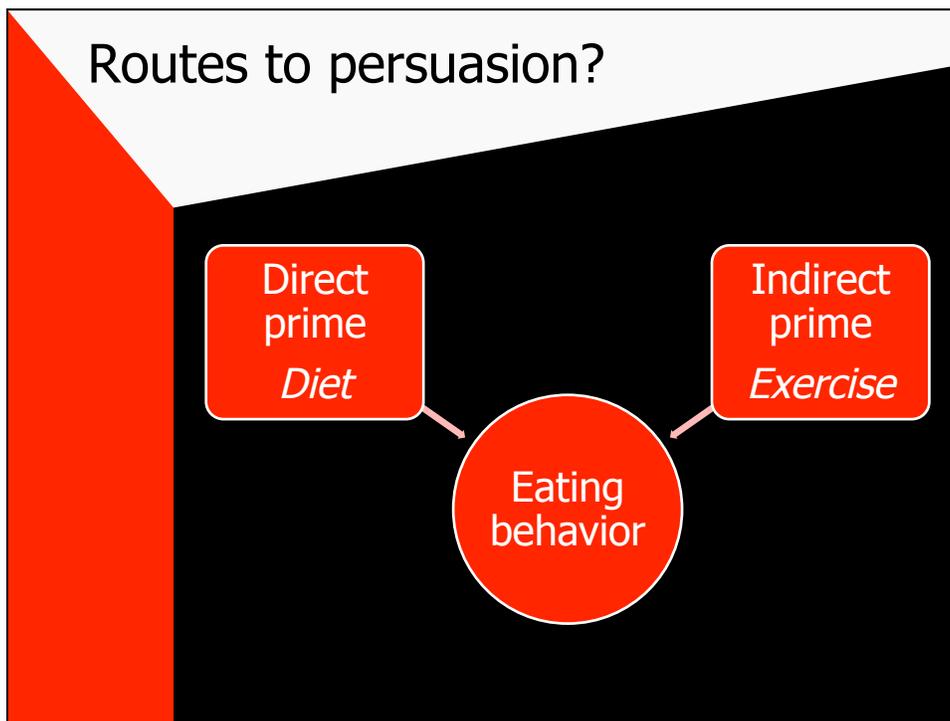
- Have you ever been told to “eat healthy” so many times that your first response is to want to eat more unhealthy foods
- What if you weren’t even told by someone to eat healthy but simply saw the words “diet” and “nutrition” on a billboard?

Liu & Fitzsimons, in prep

Background

- People resist attempts to persuade them (Friestad and Wright 1994)
- Resistance to stimuli can become automatized and nonconsciously activated (Chartrand, Dalton, and Fitzsimons 2007)
- How can we activate healthy eating in consumers if priming persuasion attempts may backfire?





Study 1 Method

- Priming (scrambled sentence) condition:
 - Control
 - Direct Prime (Diet words)
 - Indirect Prime (Exercise words)
- DV: choice of food products (all consumed during study)
 - Chocolate chip cookies vs. chocolate rice cakes
 - Soda vs. water
 - Chips vs. pretzels
 - Gummies vs. apples
 - Toaster pastry vs. granola bar

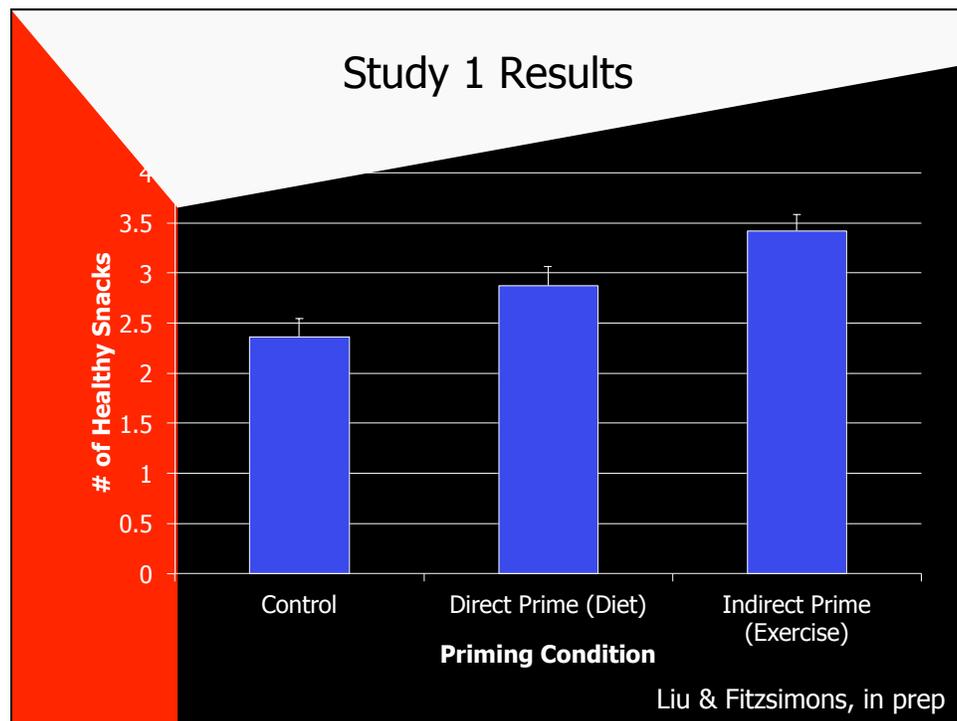
Priming Words

Direct prime

- diet
- nutrition
- healthy
- calories
- fiber
- low fat
- vitamins
- nutrient

Indirect prime

- training
- fit
- work out
- exercise
- gym
- active
- athlete
- fitness



Study 2 Method

- Priming (scrambled sentence) condition:
 - Direct Prime (Diet words)
 - Indirect Prime (Exercise words)
- DV: choice of food products (all consumed during study)
- Moderator
 - Trait reactance (Hong 1992; Hong and Faedda 1996)

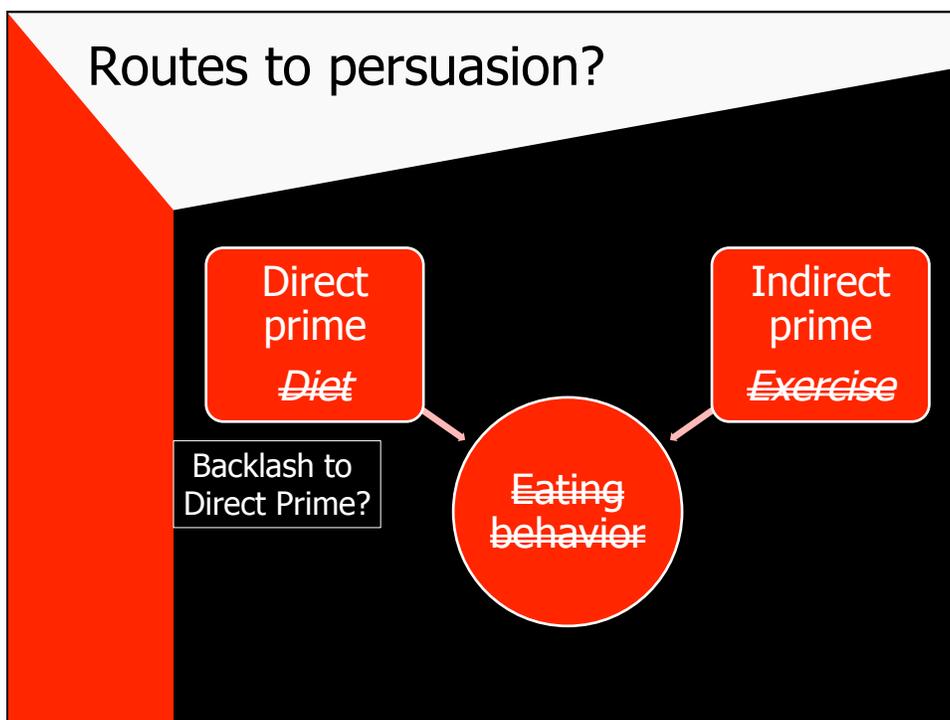
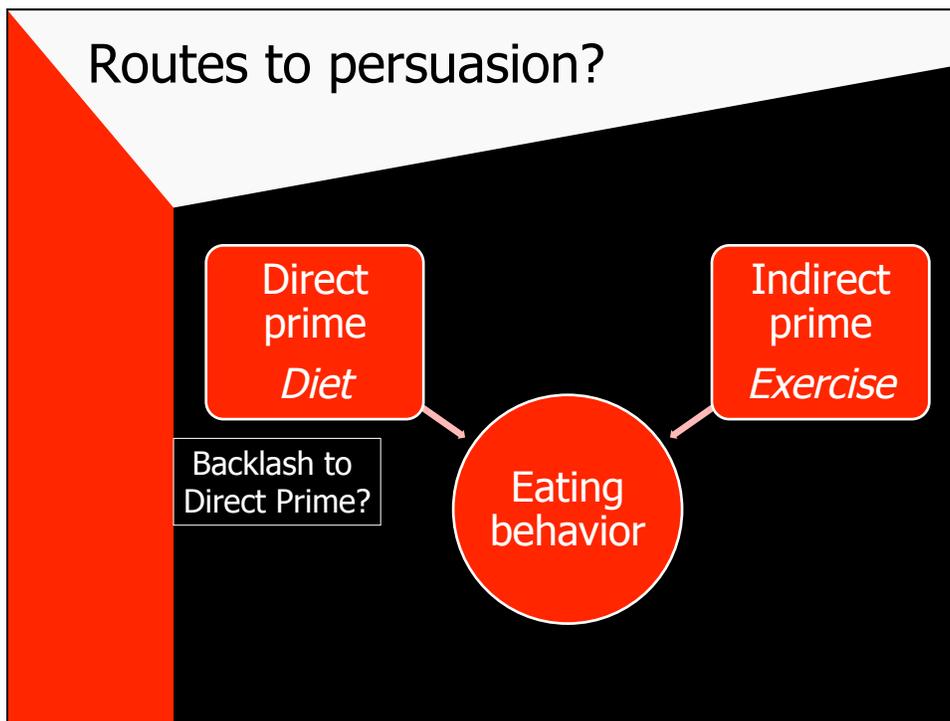
Are you reactant?

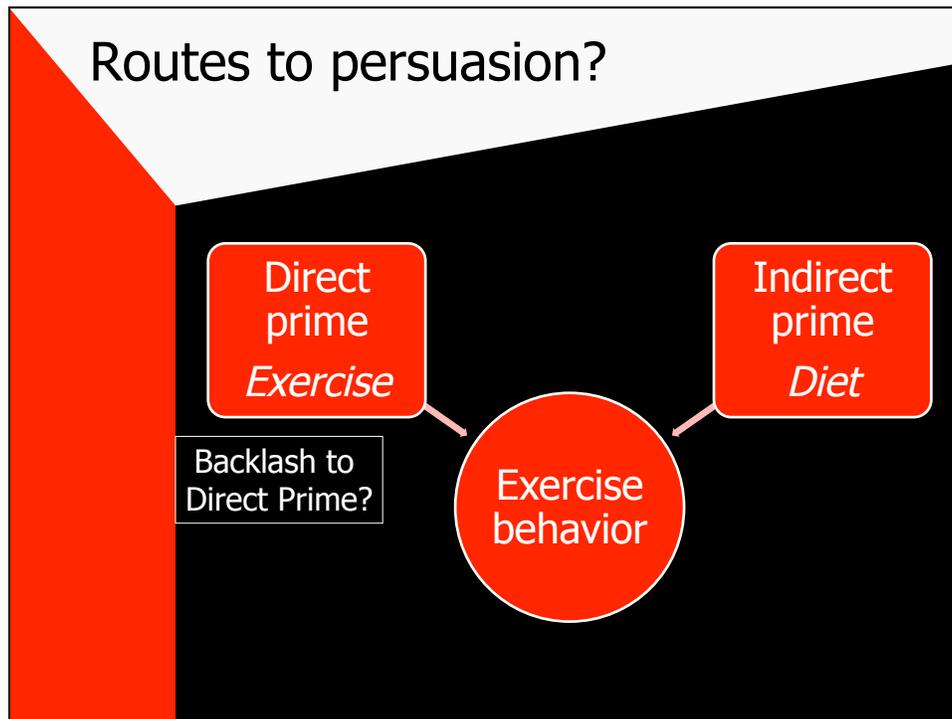
- Regulations trigger a sense of resistance in me
- I find contradicting others stimulating
- I resist the attempts of others to influence me
- I become angry when my freedom of choice is restricted

Moderation by reactance...

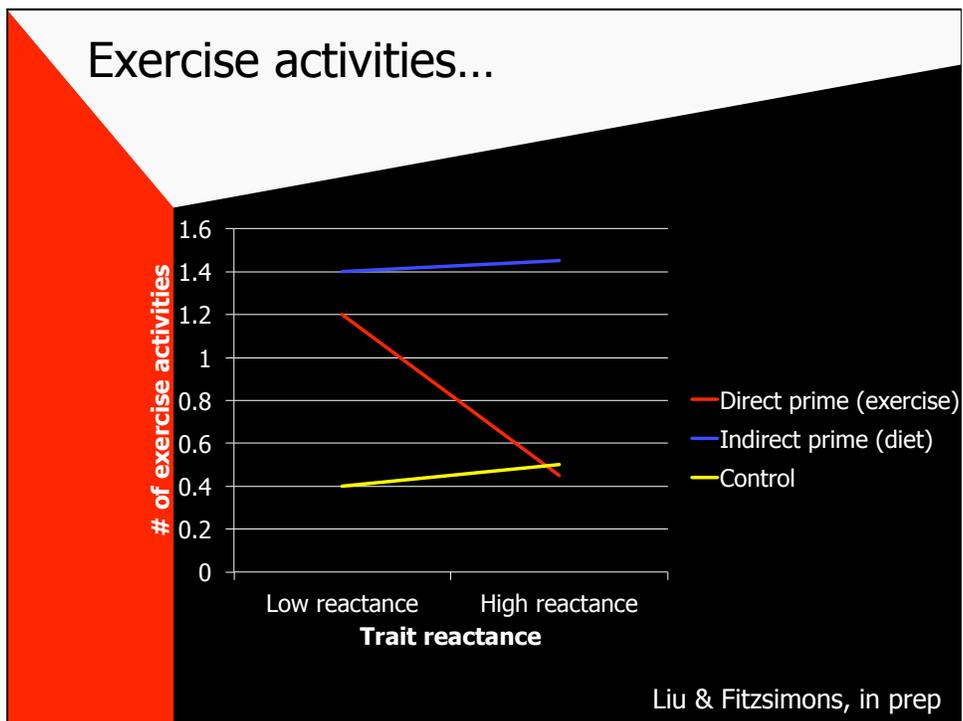


Liu & Fitzsimons, in prep





- ## Does it work in reverse?
- Priming (scrambled sentence) condition:
 - Control
 - Direct Prime (Exercise words)
 - Indirect Prime (Diet words)
 - DV: choice of exercise activities performed during study
 - Jumping jacks
 - Stepping stairs
 - Chair squats
 - Grouping jelly beans
 - Cutting paper
 - Cutting string



Movie study

- Design: 2 (confederate body type: thin vs. obese) x 2 (confederate quantity taken: little vs. lots)
- Procedure: Guise "Viewing experience", run in pairs "to save time" and to make the video experience "more realistic", they were offered a choice of snacks
 - Confederate takes first, either 2 or 30 from 7 bowls of different candies
 - Taken to separate rooms, watch 5 minute movie clip
- Quantity taken and consumed measured



McFerran, Dahl, Fitzsimons & Morales, JCR '10

Confederate - before



Confederate – before and after



Size 00, 5'2", 105 lbs



Size 16, 5'2, ~175 lbs

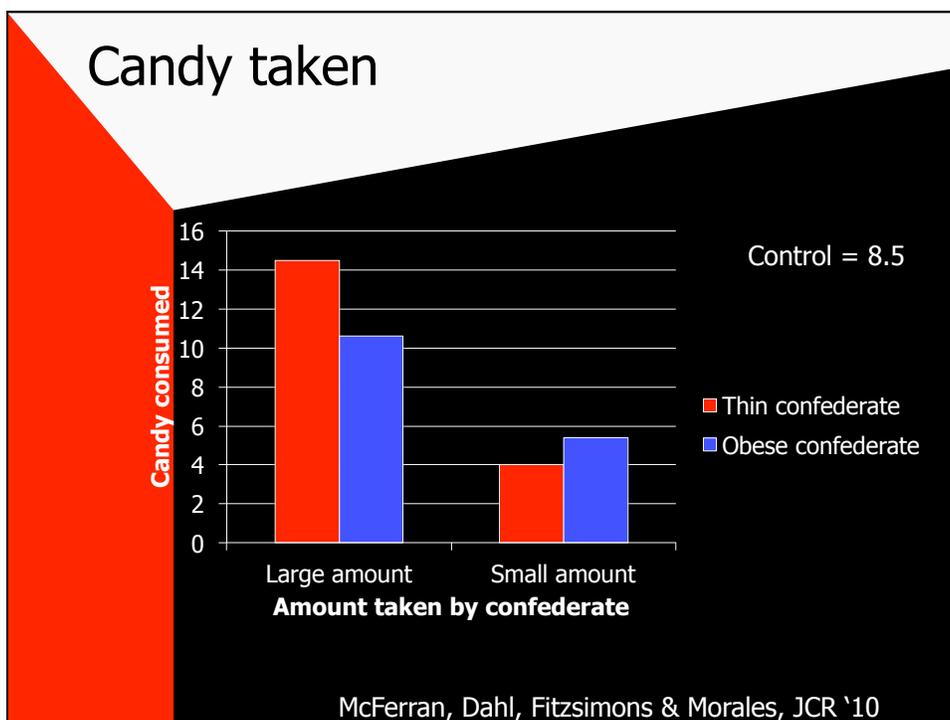
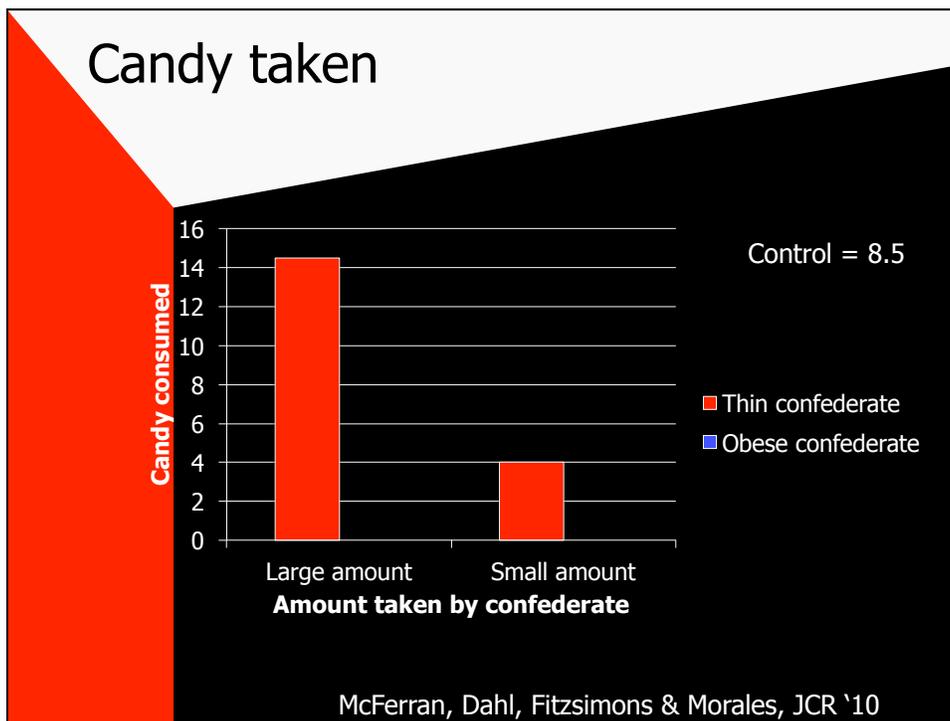
Confederate – before and after



Size 00, 5'2", 105 lbs



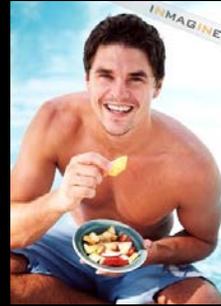
Size 16, 5'2, ~175 lbs



IIb. Social influence: Size of those we are choosing for



vs.



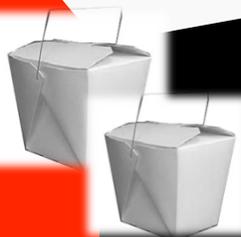
Context

- We often make food choices for others (e.g., SOs, colleagues, etc)
- At times these others are members of a growing stigmatized group – the obese
- When choosing food simultaneously for a large other do change your own choices?

The scenario

- You have agreed to pick-up take-out for dinner and your friend has told you what they wanted for their entrée but not what they want for their side dish
- When you get to the restaurant, there are two side dishes available

Food for a friend...

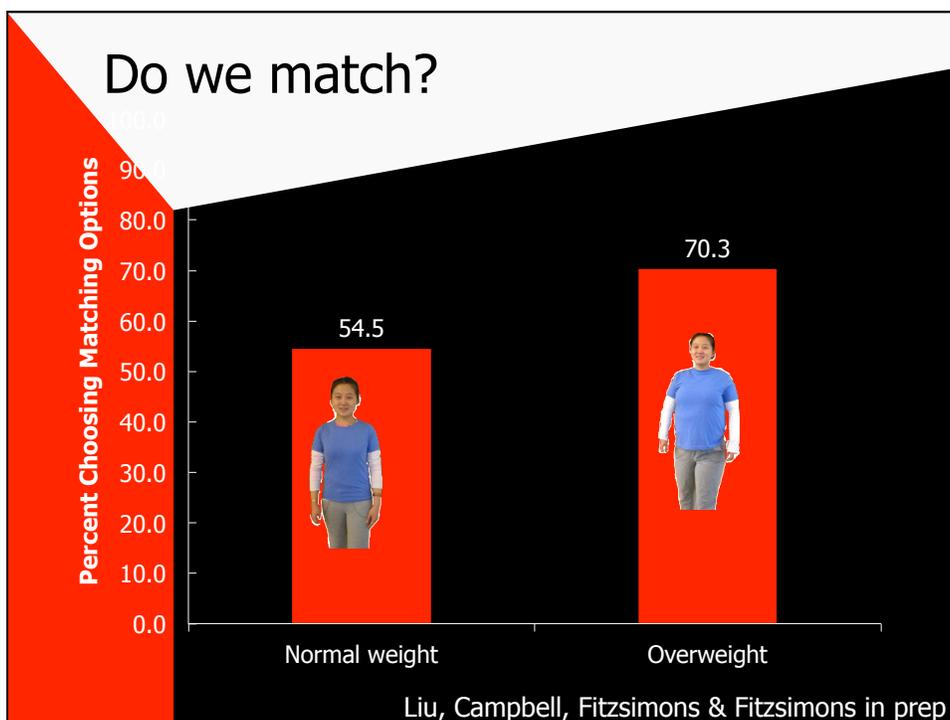


You

Sarah

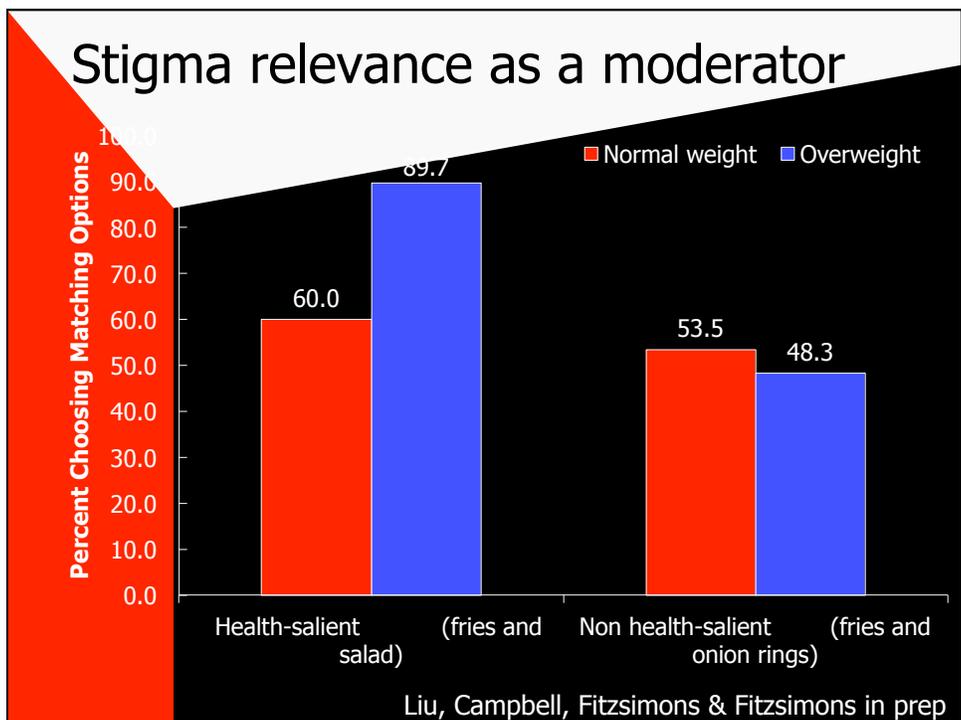
Would you choose the same or different side dishes for yourself and Sarah...





What if the choice set isn't stigma relevant?



So far...

- It's quite possible that despite our best efforts to balance our internal conflicts about food we are being guided by:
 - people and norms in your social environment
 - forces outside your awareness
- What can we do?

Sample interventions...

More information?

- Is the solution to the eating problem a lack of information?
- Perhaps if we provide more nutrition information on menus everyone will make “better” choices?
- Empirical support?
- If not information, what?

IIIa. What eating strategies “work”?

- **Avoidance**
 - No consumption of a forbidden fruit
 - No exposure to tempting stimuli allowed
- **Moderation**
 - Never go to excess, but let moderation be your guide (Cicero)
 - Limited quantity of or exposure to tempting stimuli
 - Precommitment, “fun” money

Haws, Lambertson, Dzhogleva & Fitzsimons, in prep

Research question

- When are avoidance vs moderation strategies used?
- When are they most effective?
- What are situational and individual moderators of these answers?

Food strategies...

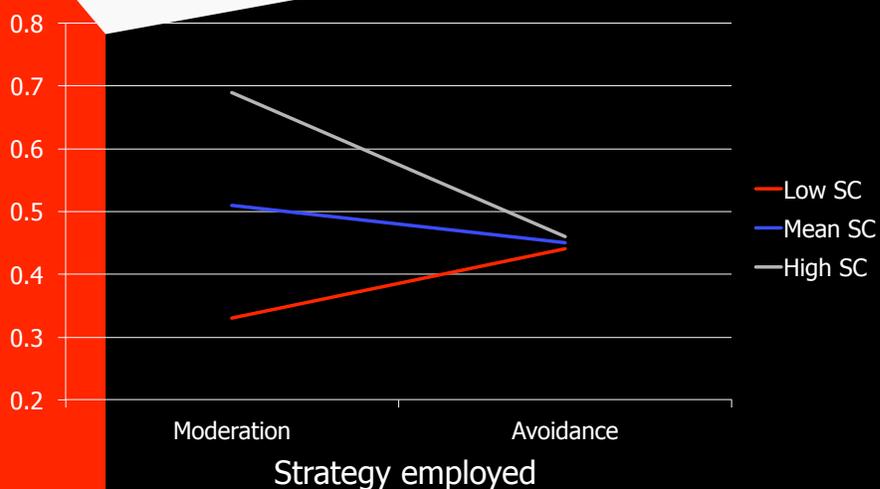
- Preliminary data suggest that moderation may be more effective when Ps find a situation less challenging
- We measure individual food self control and prime the use of either a moderation or avoidance strategy (through an essay writing task)
- Then measure actual food choice

Food self-control

- “I display a lot of self-control when it comes to eating”
- “I have a lot of experience controlling my eating behavior”
- “I tend to engage in indulgent eating more than I should” (reversed)
- “I wish I were able to avoid indulgent eating more often” (reversed).

Giner-Sorolla 2001

% of healthy items selected (higher is less SC failures)



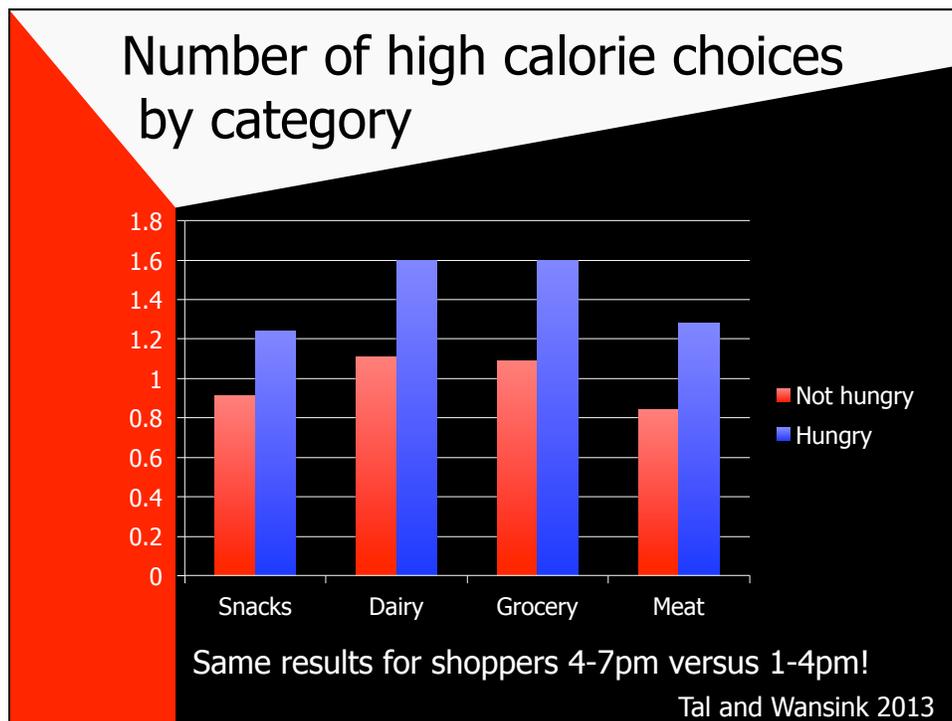
Haws, Lambertson, Dzhogleva & Fitzsimons, in prep

Strategy effectiveness...

- People use both moderation and avoidance strategies on regular basis
- Matching avoidance to high difficulty tasks appears to make sense
- Attempting moderation for high difficulty tasks or when individuals are low in perceived self-control runs risk of SC failure

IIIb. Shopping on an empty stomach

- Ps fasted for five hours prior to the experiment
- Half ate wheat thins until they were full
- Then went shopping in online grocery store



How do our kids feel about healthy eating?

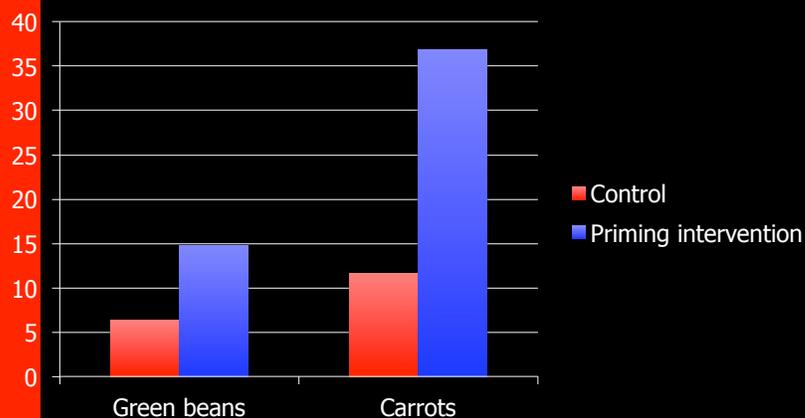
- Childhood obesity on the rise
- Kids tend to avoid healthy foods
- What can we do to help?
 - A. Simple priming intervention by former PhD student
 - B. Partnership with Compass Foods and their K-12 division, Chartwells

IIIc. Veggie priming

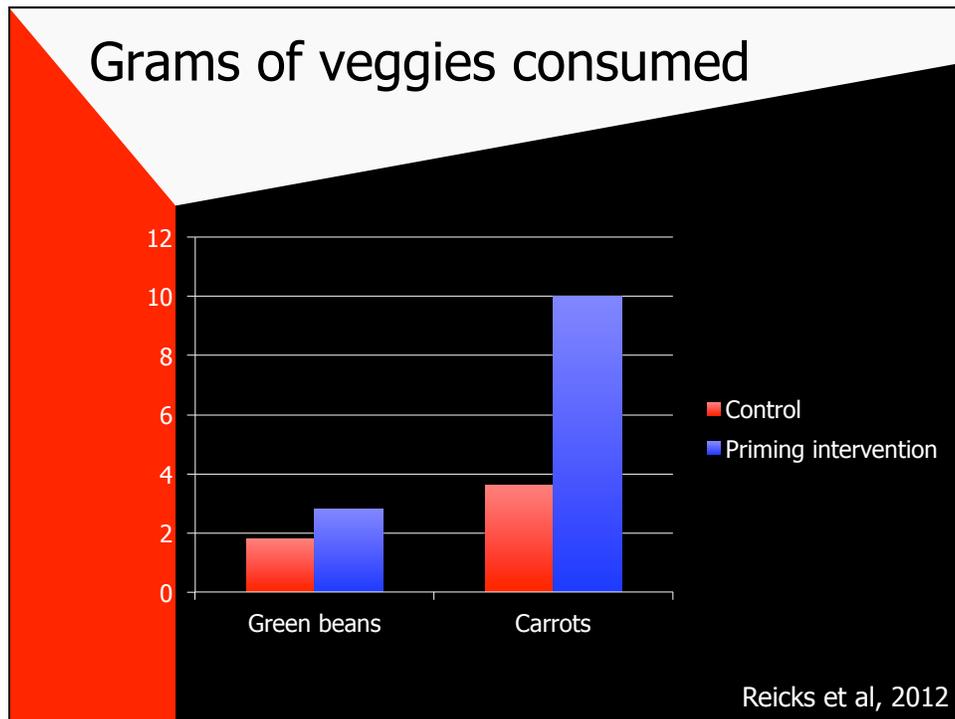
- 800 elementary school students (K-5)
- Compare control to intervention day – same meals are served
- Students helped themselves to pre-portioned servings of applesauce, orange slices, green beans, and carrots

Reicks et al, 2012

Percent of veggies taken



Reicks et al, 2012



IIIId. Field study design

- 3 schools: No intervention
- 2 schools: FV Challenge
- 2 schools: FV Challenge + Parent Involvement



Parent Involvement Booklets

Fruit and Vegetable Take-Home

One Sticker = 1 serving of fruit or vegetable

This week, give your child one serving of fruit or vegetable for every sticker they earn.

See the back-side for more information.

Give one sticker to your child for each serving of fruit or vegetable he or she eats. Attach 25 blue stickers to this booklet for what one serving equals.

Place stickers here as fruit or vegetable servings are eaten.

1	2
6	7
11	12
16	17
21	22

Guide of Handing Out Fruit & Vegetable Challenge Stickers at Home

Here are some tips for handing out stickers to your student at home for this week (Monday through Friday).

Tip: Give one sticker to your student for each serving of fruit or vegetable he or she eats. Have your student place the sticker on the tracking chart in this booklet.

1 serving of a fruit or vegetable = 1 sticker

Here are some examples of foods and how many stickers they equate to. Other fruits and vegetables that are not listed here may also count—this is just a guide!

FOODS	STICKERS
Steamed vegetables (½ cup)	1 sticker
Side salad (½ cup)	1 sticker
Potato wedges, mashed potatoes (½ cup)	1 sticker
Chilled fruit cup (½ cup)	1 sticker
Piece of fresh fruit (apple, banana, orange, etc.)	1 sticker
Beans (as a vegetable serving – ½ cup)	1 sticker
Entrée salad (promotional salad, chicken Caesar salad, chef salad)	3 sticker
Lettuce & Tomato on a sandwich	1 sticker if provides a ½-cup serving of vegetables
Vegetables mixed in a lunch entrée (teriyaki chicken w/ broccoli, spaghetti w/ tomato sauce, vegetables in soup)	1 sticker if provides a ½-cup serving of vegetables
Fruit based dessert (cobbler, crisp)	1 sticker if provides a ½-cup serving of vegetables

Exhibit 1. Weighted Average Fruit and Vegetable Servings per Meal (Baseline, Intervention, and Post-intervention) and % Change from Baseline

	Baseline Average FV servings per meal	Intervention Average FV servings per meal (% Change from Baseline)	Post-Intervention Average FV servings per meal (% Change from Baseline)
Control	2.78	2.81 (1%↑)	2.60 (6.5%↓)

Liu, Schwartz, & Fitzsimons, in prep

