

# Improving children's eating habits through eating together



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# Conflict of interest disclosure

- This presentation was funded in part by Danone Institute International.

# Eating together

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- Child having a planned meal with at least one parent
- Aspect of structure



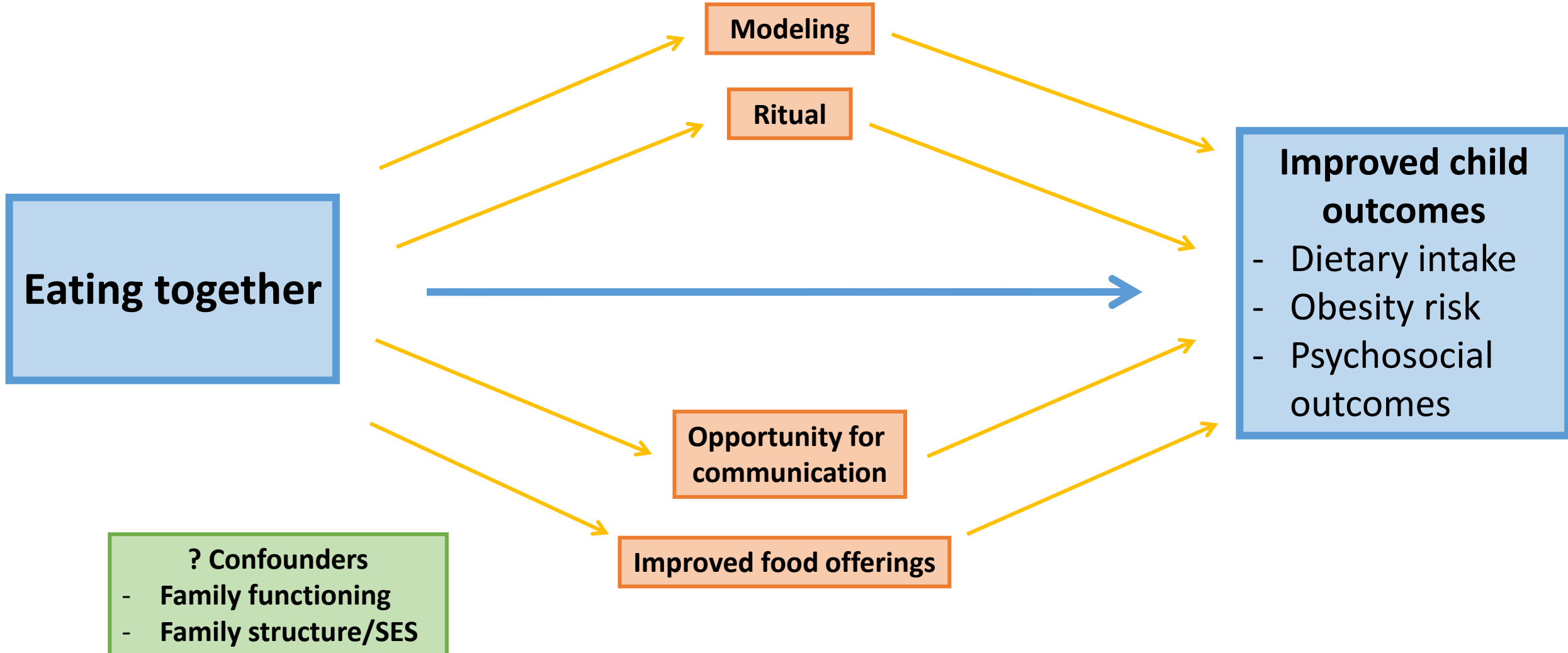
# Benefits of eating together

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- **Improved psychosocial outcomes** (depression, body image)
- **Reduced high risk behaviours** (substance abuse, violence, eating disorders)
- **Improved academic outcomes**
- **Improved dietary intake**
- **Weight/BMI**



# Putative Mechanisms



# Association with dietary intake

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**Narrative review:** Martin-Biggers, 2014

**Meta-analysis:** Hammons & Fiese, 2011

**Inclusion:**

- Peer reviewed: English and present OR
- 8 articles included: all cross-sectional





# Improved nutrient intake

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- Frequency of family dinner associated with higher intakes of
  - Protein
  - Fibre
  - Calcium, Iron
  - Folate and vitamins A, B-6, B-12, C and E



# Increased intake nutrient-dense foods

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- Family meals positively associated with **healthful dietary habits**:
  - more frequent breakfast consumption
  - higher servings of fruit and vegetable
  - higher servings of dairy
- Pooled Odds Ratio: Family meals at least 3 times per week
  - 1.24 (95% CI 1.13, 1.37)





# Decreased intake of unhealthy foods

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- Family meals inversely associated with **unhealthful dietary habits**:
  - intake of fast food
  - intake of sugar-sweetened beverages
  - Intake of fried foods; saturated and trans fats
- Pooled Odds Ratio: Family meals at least 3 times per week
  - 0.80 (95% CI 0.68, 0.95)



# Effects on weight status

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## **Systematic review:** Valdes et al., 2012

- Peer reviewed: English or Spanish
- 11 cross-sectional
- 4 longitudinal

## **Meta-analysis:** Hammons & Fiese, 2011

- Peer reviewed: English and present OR
- 4 cross-sectional
- 4 longitudinal



# Weight status

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- Valdes et al., 2012
  - 6/11 cross sectional studies and 1/4 longitudinal studies found significant inverse association
- Hammons & Fiese, 2011
  - 4 of the 8 studies reported significant inverse association
  - Pooled Odds Ratio: Family meals at least 3 times/week
    - 0.88 (95% CI 0.81, 0.97)



# Key limitations of existing research

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1. Limited research on young children
2. Most studies are cross-sectional
3. Few controlled for potential confounders
4. Few examined context of family meals



# Few studies on preschoolers

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- **Meta-analyses:** Hammons & Friesse, 2011
  - 1 study examining family meals and obesity (Anderson & Whitaker, 2010)
  - 1 study examining family meals and serving of fruit & veg (Fitzpatrick et al., 2007)
- Sweetman et al., 2011
  - 2-5 years olds in UK
  - Family meals not associated with vegetable intake
- Wyse et al., 2011
  - 3-5 year olds in Australia
  - Family meals not associated with fruit or vegetable intake



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# Context matters

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- Television/Other screens during meals
  - Poorer dietary intake (Feldman, 2007; Andaya, 2010)
  - Increased risk of overweight (Vik, 2013)
  - Less healthful foods offered (Fulkerson, 2014; Trofholz et al., 2017)
- Child eating same foods as parents
  - Improved dietary intake (Skafida et al., 2013)
- Meal enjoyment
  - Improved dietary intake (Skafida et al., 2013; Boutelle et al., 2003)



# Context matters

- Where child eats
  - Improved dietary intake (Skafida et al., 2013)
- Child involvement in food preparation
  - Improved dietary intake (Larson et al., 2006; Berge et al., 2016)
- Foods served
  - Fast food served- higher fast food intake (Boutelle et al., 2007)
- Eat meals at regular times
  - Improved dietary intake (Skafida et al., 2013)
  - Lower obesity risk (Horning et al., 2017)



# Intervention Research

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- Critical to elucidate the impact of eating together on child outcomes
- May be important approach for improving children's dietary intake and reducing obesity risk
  - American Academy for Pediatrics
  - European Society for Pediatric Gastroenterology, Hepatology, and Nutrition
  - Canadian Task Force on Preventive Health Care



# Interventions to increase frequency and quality of family meals

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- **Systematic review:** Dwyer et al., 2015
  - 6 interventions identified
    - 1 web-based
    - 5 in-person; 1 home; 4 community-based
  - Results mixed: 4/6 reported increase in family meals
  - Most including skill building (food prep, planning, shopping) and goal setting
- Key barriers to family meals
  - Time constraints
  - Meal planning/ food preparation ability
  - Food preferences of family members





# Effectiveness of differing levels of support: The Simply Dinner Study (Brophy-Herb, 2017)

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- Test 6 interventions:
  - Home delivery of pre-made meals
  - Home delivery of meal ingredients
  - Community kitchens where families prepare meals together to eat at home
  - Healthy eating class: education on meal planning, food preparation & tasting
  - Cooking demos
  - Cookware and flatware delivery
- Outcomes: Family meal frequency, dietary intake, and adiposity

# Tips for creating a family meal routine

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- Have family identify benefits/motivators that are important to them
- Set a realistic goal: Aim for 3 meals/week
- Have family discuss and clearly state the goal
  - What steps have to happen to create this new routine?
- Any meal counts
- Keep it simple
- Enlist help from family members
- Try keeping a log and build in rewards



# Thank you. Questions?



# Citations for images

- @ Artem Zamula Photographee.eu
- Oksana Kuzmina Fotolia.com
- www.ahaparenting.com
- dturnquest.com/weightloss/diet
- <https://publicadministration.un.org/>