Welcome to the COPE Webinar Series for Health Professionals!

January 18, 2017

The Role of Responsive Parenting in Pediatric Obesity Prevention

12 noon – 1 PM EDT

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Program Manager
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Handouts of the slides are posted at: www.villanova.edu/COPE

The Role of Responsive Parenting in Pediatric Obesity Prevention

Objectives:
1. Define responsive parenting and responsive feeding.
2. Identify areas to target for effective pediatric obesity prevention that incorporate responsive parenting principles.

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Neither the planners or presenter have any conflicts of interest to disclose.

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- Villanova University College of Nursing is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center Commission on Accreditation
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Credits:
- This webinar awards 1 contact hour for nurses and 1 CPEU for dietitians
- Suggested CDR Learning Need Codes: 5070, 5370, 9000, 9020, Level 2

DISCLOSURE
THE ROLE OF RESPONSIVE PARENTING IN PEDIATRIC OBESITY PREVENTION

Jennifer Savage Williams
January 18, 2017

1/12/2017

Childhood Obesity in the United States

One out of 3 children are obese or overweight before their 5th birthday.

Approximately 12.5 million or 17% of children and adolescents aged 2 to 19 years are obese.

1 of every 7 low-income preschool aged children in the US is obese

Pan, et al., JAMA, 2012; 308:2563-2565

The first 1000 days (conception to age 2): target for obesity prevention

- Rapid change in diet, metabolic, and behavioral systems are opportunities
- Early onset obesity comorbidities are more serious
- Infants and toddlers don’t tend to “grow out of it”
- Obesity interventions later in life* have limited success
- Dietary patterns are established early in life
- Experimental studies suggest promising strategies for early obesity prevention (T1 and T2)

*Summerbell et al Cochrane review, 2005; Harris et al, 2009; Haynos & O’Donohue, 2012

Responsive parenting

- Defined as a mother’s/caregiver’s prompt, contingent, & appropriate interaction with child

Why target responsive parenting?

- Language development
- Attachment
- Emotional growth
- Social competence
- School readiness
- Weight status
- Self regulation

Responsive Feeding

Parent is:
1. Aware of cues
2. Accurate interpretation
3. Prompt, developmentally appropriate response


Responsive feeding

- Greater parental awareness of infant hunger and satiety associated with lower neophobia
- Pressure and restriction associated with higher neophobia
- Pressuring associated with decreased satiety responsiveness
- Responsive feeding may reduce risk of overweight

1Cassells et al. 2014 Appetite
2Li et al. 2014 Pediatrics
3DiSantis et al. 2011 Int J Obes

Discordant Feeding Responsiveness → Overweight

- Children with lower self-regulatory abilities consume more snack foods (Riggs, et al., 2010)
- Lower self-regulation linked to excessive weight gain during childhood (Francis & Susman, 2009)

Self-regulation

Self-regulation refers to the ability to inhibit dominant responses and control one’s behaviors

- Children with lower self-regulatory abilities consume more snack foods (Riggs, et al., 2010)
- Lower self-regulation linked to excessive weight gain during childhood (Francis & Susman, 2009)

1Cassells et al. 2014 Appetite
2Li et al. 2014 Pediatrics
Infant fussing and soothing

- Use of food to soothe associated with greater child weight
- Relationship stronger with high temperamental negativity

Stifter et al. 2011 Appetite

Structure-based parenting may influence child eating behavior

Control
- Psychological Control: Pressure, Intrusiveness, Dominance

Control in Feeding
- Restricts all access
- Hiding foods
- Parent perspective
- Takes food away

Structure
- Behavioral Control: Routines, Guidance, Limit setting

Structure in Feeding
- Provides access
- Rules & routines
- Child perspective
- Parent provides, child decides

Gotrich & Pomerantz, Child Devel Pers, 2009; Rollins, Savage, Birch, IJO, 2015

The Intervention Nurses Start Infants Growing on Healthy Trajectories (INSIGHT) Study

Primary Aim: To evaluate a responsive parenting (RP) intervention that is designed to prevent rapid infant weight gain and childhood obesity at age 3 years among first-born infants.

Funding: NIDDK R01DK088244
Study protocol: Paul et al. 2014 BMC Pediatrics

Sample Characteristics
- Demographic characteristics assessed at birth
- Singleton, term newborns ≥ 37 weeks gestation
- Birth weight ≥ 2500 grams
- Primiparous mothers ≥ 20 years old
- English speaking
- No major maternal/infant mortalities
- No plan to move within 3 years
- Retention: 251 (of 279) mothers completed the 1 year visit (90%)
  243 (of 279) mothers and 2 year visit (87%)
INSIGHT Design

• Randomized, controlled trial with birth cohort

Insight responsive parenting intervention prevents rapid weight gain (birth to 6 months)
Only 37% of responsive parenting infants had faster weight gain from birth to 6 months compared to 51% of safety control infants (p=0.05)

Savage et al. JAMA Pediatrics 2016

Results – Demographics*
Maternal Characteristics:
• Household income ≥ $75,000 (51%)
• Predominantly white (94%) and non-Hispanic (94%)
• Married (80%)
• Well educated – 67% had at least completed college
• Pre-pregnancy BMI = 25.5
• Age: 28.9 years at recruitment

* No significant differences by study group

INSIGHT responsive parenting intervention protects against overweight at age 1 year
Weight for length ≥ 95th percentile (WHO): 5.5% in responsive parenting infants compared to 12.7% of safety control infants (p=0.05)

Savage et al. JAMA Pediatrics 2016 *Kolmogorov-Smirnov Two-Sample Test p<0.01

Intervention Components – Main Concepts
Overall Goal: to promote self-regulation by setting limits and being responsive within these key areas:

Sleep
• Sleep recommendation: total hours
• Consistent bedtime routines
• Drowsy but awake
• Bedtime between 7-8pm
• Sleep disruptions (e.g., milestones, fears, separation anxiety)
• Opportunity to self soothe

Feeding… what, when, and how
• Bottle feeding tips
• Identifying hunger & fullness cues
• Repeated exposure
• Shared responsibility of feeding
• Age appropriate foods
• Portion size
• Mealtime routines

Emotional/Social Regulation
• Baby’s temperament
• Alternatives to food to soothe
• Positive reinforcement
• Emotion coaching
• Routines/expectations to reduce temper tantrums

Interactive Play
• Tummy time tips
• Activity, game and toy suggestions
• Spend time outdoors
• Limit restrictive devices
• AAP screen time recommendations
• Motor, social, cognitive & language developmental milestones

* These are examples of topics and not exhaustive
While a majority of infants consumed diets low in fruits and vegetables, the INSIGHT RP intervention was associated with healthier dietary patterns.

Parenting infants slept longer at night compared to control babies.

BMI percentile distribution by study group at 2 years.

Risk of becoming or staying >95th percentile from age 1 to 2 years is higher among safety control children.

Chi-square test of independence from 1 to 2 years: p<0.0001
CMH test, Study group X weight status at 1 yr (WHO) p=0.02

Risk of becoming or staying >85th percentile from age 1 to 2 years is higher among safety control children.

Chi-square test of independence from 1 to 2 years: p<0.0001
CMH test, Study group X weight status at 1 yr (WHO) p=0.02
Lessons learned from INSIGHT

- Out of 24 behavioral interventions at 2y or younger, only 4 have had significant effects on weight
  - SLIMTIME
  - Healthy Beginnings
  - Verbestal et al. 2013
  - NOURISH
  - and now INSIGHT

- Commonalities of SLIMTIME, Healthy Beginnings, INSIGHT:
  - Home intervention delivery by nurses targeting first time mothers
  - Multi-component interventions that start early (first weeks of life)
  - Focus on responsive parenting

1Redsell et al. 2015 Mat Child Nutr; 2Paul et al. 2011 Obesity; 3Wen et al. 2012 BMJ

Next step: translation to practice

- What intervention components work in different populations
- integrating intervention into existing community entities

Good health starts outside the doctor’s office, in places where we live, learn, work, and play.

Cross-sector work engages sectors traditionally responsible for health promotion—such as health care providers and public health agencies—and nontraditional partners—such as city planners, members of the media, and business leaders—to work together to improve health.

IOM’s Roundtable on Obesity Solutions

Acknowledgements

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Center for Childhood Obesity Research

QUESTIONS?

Evaluations and CE Certificates

- Those completing the webinar will be emailed a link to the evaluation.
- The email will be sent to the email address that you used to register for the webinar.
- Complete the evaluation soon after you receive the email. The evaluation does expire after 3 weeks. Once expired, you cannot obtain a certificate.
- Once the evaluation is completed, the certificate will be emailed separately within 2 or 3 business days.
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Nicole L. Simone, M.D.
Margaret Q. Landenberger, Associate Professor
Sydney Kimmel Medical College, Thomas Jefferson University
Radiation Director, Jefferson Breast Cancer Center

Diet Modification as a Novel Therapeutic for Cancer Treatment: When Less is More

Date: Wednesday, February 22, 2017
Time: 12:00PM - 1:00PM EST
CE Credit: 1.0 contact hour, 1.0 CPEU
To register: villanova.edu/cope

Questions and Answers!

Moderator: Lisa K. Diawalt, MS, RD, LDN
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Upcoming FREE COPE Professional Webinar

Brie Turner-McGrievy, PhD, MS, RD
Assistant Professor
University of South Carolina

Plant-based Possibilities: Use of plant-based diets for weight loss

Wednesday, March 29, 2017
12:00 PM - 1PM EST
1.0 Contact Hour, 1.0 CPEU
To register: villanova.edu/cope