

**WELL-CHILD
VISITS: A FAMILY
OBESITY
PREVENTION
OPPORTUNITY**

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DISCLOSURE TIME

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 - NICHD : 1 R21 HD050944-01
 - The Research Institute at Nationwide Children's Hospital
 - Hawaii State Dept of Health Healthy Hawaii Initiative

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THE PROBLEM

- More kids are obese
- It isn't good for them now or later.
- More common for African-American and Hispanic and Pacific Islander children
- Losing weight is really, really hard even for children.

PREVENTION IS OUR HOPE

- We don't really know how to do that.
- Handily, it is what pediatricians do.

**BACKING UP A FEW
STEPS**

- Mutable causes of obesity?
- What about lean families?
- Parental effects on childhood obesity

**MUTABLE CAUSES OF
OBESITY?**

- Extra calories
- Extra snacks
- Eating out
- Decreased milk, increased pop by 67%
- 28-39% of calories in front of TV

AND THERE ARE LEAN FAMILIES

- Mother's behaviors predict child behaviors
- Lean families
 - Eat three meals/day
 - Don't eat in front of the TV
 - Eat together

PARENTAL EFFECTS ON CHILDHOOD OBESITY

- Maternal obesity triples risk of childhood obesity
- Mom's preferences predict children's
- Maternal habits influence children's habits

SO THE NIH GAVE US SOME MONEY

- **Can Changing How Mom Eats Prevent Obesity in Toddlers?**
 - Gina French, MD
 - Theresa Skybo, PhD, RN
 - Pat Schwirian, PhD, RN
 - Lisa Murray-Johnson, PhD
 - Ihuoma Eneli, MD
 - Amy Sternstein, MD
 - Beth Hashiguchi, MS
 - Judith A. Groner MD

OUR INITIAL QUESTIONS

- **Can Targeting How Mom Eats Prevent Obesity in Her Toddler?**

Can such changes be effectively encouraged by brief messages during routine anticipatory guidance during the first year of life?

METHOD

- Comparison of three anticipatory guidance styles
 - Maternal Focused Eating (MFE)
 - Ounce of Prevention (OP, Bright Futures detailed & enhanced)
 - Bright Futures (BF, usual care condition)

METHOD (cont)

- Randomized at the clinic level
- Intent to treat model

Clinical Sites

- **Pediatric Primary Care Network/Close to Home clinics**
 - 78% Medicaid
 - 13% Self pay/other
 - 9% Commercial Insurance
- **Low income population: high risk for obesity**

THE THREE APPROACHES

- **Maternal Focused Eating (MOMS)**
 - Three meals two snacks/day
 - Turn off the TV while eating
 - Eat in one place in the home
- **Expanded child-centered (OUNCE)**
 - Specific discussion of portion sizes
 - Specific instruction on order of food introduction
- **Usual practice (BRIGHT)**
 - Bright Futures

INTERVENTION IMPLEMENTATION

- Training X 2
- AG delivered at WC visits under one year
- Insertion of messages on well child forms
- Provision of handout materials

Well Child Checklist

<p>Anticipatory Guidance</p> <p>1. Get done on time for the baby's health care visit</p> <p>2. Use the car seat or booster seat and use it on your car</p> <p>3. Keep the baby's car seat and other appropriate equipment out of reach</p> <p>4. Use the baby's high chair, stroller, or playpen</p> <p>5. Use the baby's crib or cot</p> <p>6. Use the baby's car seat, stroller, or playpen</p> <p>7. Use the baby's car seat, stroller, or playpen</p> <p>8. Use the baby's car seat, stroller, or playpen</p> <p>9. Use the baby's car seat, stroller, or playpen</p> <p>10. Use the baby's car seat, stroller, or playpen</p>	<p>Home Delivery (V, SEVEN, SIX, SIX, SIX, SIX)</p> <p>1. Use the baby's car seat, stroller, or playpen</p> <p>2. Use the baby's car seat, stroller, or playpen</p> <p>3. Use the baby's car seat, stroller, or playpen</p> <p>4. Use the baby's car seat, stroller, or playpen</p> <p>5. Use the baby's car seat, stroller, or playpen</p> <p>6. Use the baby's car seat, stroller, or playpen</p> <p>7. Use the baby's car seat, stroller, or playpen</p> <p>8. Use the baby's car seat, stroller, or playpen</p> <p>9. Use the baby's car seat, stroller, or playpen</p> <p>10. Use the baby's car seat, stroller, or playpen</p>	<p>Guidance offered: Feeding: continue breast milk or formula w/ iron; Vit D if breastfeeding; begin baby food w/vegetables; extrusion reflex Add new food q3-4 days; offer new foods > 10 times Portion size -2T twice/day, cereal 2 – 4 twice/ day Start 100% juice in a cup max 3 oz/day</p>
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HEALTHY MOMS Healthy Moms 6 months

Be a Role Model. Eat Healthy Everyday!

Plan and eat 3 meals and 2 healthy snacks a day
 Eat fruits and vegetables with meals/snacks (3 to 7 per day)
 Don't skip meals and avoid eating fast food
 If you drink milk, drink 16-24 oz per day
 Drink plenty of water and limit soft drinks
 Eat meals/snacks in one place with members of your household
 Turn off the TV when eating

Pay attention to what you eat for meals/snacks

Plan and eat 3 meals and 2 healthy snacks a day
 Eat fruits and vegetables with meals/snacks (3 to 7 per day)
 Don't skip meals and avoid eating fast food
 If you drink milk, drink 16-24 oz per day
 Drink plenty of water and limit soft drinks
 Eat meals/snacks in one place with members of your household
 Turn off the TV when eating

Please Note for Child Welfare Staff:

Child's Name _____
 Height _____ Weight _____ Date _____

WEL-01

MOMS

- 6 month Guidance offered:
- Mom food: Eat 3 meals/2 healthy snacks/ day, eat 5-7 servings of fruits/vegetables, drink 16-24oz water, drink milk, avoid fast food, meal skipping
- Create a structure for eating: eat in 1 place, turn off TV, plan meals, eat together, teach baby good nutrition

OUNCE

- Guidance offered:
- Feeding: continue breast milk or formula w/ iron; Vit D if breastfeeding; begin baby food w/vegetables; extrusion reflex
- Add new food q3-4 days; offer new foods > 10 times
- Portion size -2T twice/day, cereal 2 – 4 twice/ day
- Start 100% juice in a cup max 3 oz/day

BRIGHT

- Guidance offered:
- Feeding: breastfeeding
- vitamin D, Fe formula,
- Self- feed, Holding a cup,
- Offer soft table foods,
- watch for allergies,
- choking, no honey,
- no bottle in bed with baby

THE SUBJECTS

- 300 mother infant dyads
- Here for well child care between 2 weeks and 2 months of age
- High risk for obesity
- Exclusions
 - <38 weeks gestation
 - Significant health problem for infant
 - Non English speaking
 - Foster care

OUTCOMES MEASURED AT 6, 12 AND 15-18 MONTHS.

- Heights and weights of children
- Survey of maternal eating and child feeding behaviors
- Measures of whether interventions were carried out

DEMOGRAPHICS

	MOMS	OUNCE	BRIGHT	Total
Mom's Age	23.49	23.25	23.89	23.55
Mom's BMI	29.17	28.09	27.55	28.24
<i>Mom's Education</i>				
< High School	36%	34%‡	19%**	29%
High School Diploma	41%	34%†	48%	41%
Some College or more	24%	33%	33%	30%
<i>Mom's Marital Status</i>				
Single	27%	52%**	49%**	43%
Cohabiting	39%	24%*	30%	31%
Married	31%	19%	18%*	23%
Widow	4%	2%	1%	2%

DEMOGRAPHICS

	MOMS	OUNCE	BRIGHT	Total
<i>Mom's Race</i>				
Black	20%	74%**	61%**	52%
White	66%	21%**	24%**	37%
Other	14%	5%‡	15%	11%
WIC Recipient	91%	96%	93%	93%
Food Stamps	53%	68%*	60%	60%
Private Insurance	11%	7%	18%	12%

Note: All comparisons use Tukey's HSD; **p<.05 compared to MOMS ; ‡ p<.05 compared to Bright Futures

*p<.10 compared to MOMS; † p<.10 compared to Bright Futures

BASELINE RISK

- 62% of the mothers overweight or obese
- 53% family hx of DM or heart dz
- 49% skip breakfast
- 49% eat while watching tv
- 80% eat fast food every week
- 79% drink two or more cans of soda/day

6 MONTH RESULTS

	MOMS	OUNCE	BRIGHT
Child Juice (oz)	3.31	2.63‡	3.84
Cereal in bottle	1.00	1.86*	2.59**
Bottle in bed	1.00	.85	1.26
Microwave bottle	1.00	.79	1.00
Mom breakfasts/week	6.24	5.94	5.17*
Mom meals w/family /day	0.91	.73	0.68**
Main meal in kitchen	1.00	.59	.46*
TV on > 8 hours/day	1.00	1.24	1.23

Note: All models control for mom's marital status, BMI, education, race, and age;

**p<.05 compared to MOMS ; ‡ p<.05 compared to Bright Futures

*p<.10 compared to MOMS;

12 MONTH DIFFERENCES

	MOMS	OUNCE	BRIGHT
Child juice (oz)	14.95	15.86 [†]	20.90**
Juice from cup (v bottle)	1.00	.60	0.91
Servings fruit/day	1.41	1.27	1.06**
Servings Vegetables/day	1.22	1.05	0.97
Child milk (oz)	24.26	21.65	22.81
Mother breakfast/week	7.61	7.42	7.03
Mom meals with family/day	1.69	2.01 [‡]	1.50
Main meal in kitchen	1.00	1.66	1.41
TV on 8+ hours per day	1.00	1.71	1.47
Child <2 hrs of TV per day	1.00	1.12 [†]	.44*

Note: All models control for mom's marital status, BMI, education, race, and age;

**p<.05 compared to MOMS ; ‡ p<.05 compared to Bright Futures

*p<.10 compared to MOMS; † p<.10 compared to Bright Futures

Limitations

- Single city
- Intergroup demographic differences

CONCLUSIONS

- MFE associated with maternal eating and child feeding improvements in this urban sample families at high risk for child obesity.
- This intervention is inexpensive and easily replicable.
- It may be worth doing.

IN THE MIDDLE I MOVED HERE

- Dr. Iwaishi had obtained a contract from DOH-HHI for physician training in prevention of obesity in preschoolers
- We attempted to apply what worked in the MOMS program

AND AFTER OVER A YEAR OF
WRITING BY COMMITTEE

HEALTHY EATING BUILDS STRONG FAMILIES
12 MONTHS: Find Ways to Love the Foods that Love You!

DOCTOR'S TIPS FOR YOU AND YOUR FAMILY

- Turn off the TV when you eat
- Eat together in one place in your home
- Plan your meals. Don't skip meals
- Eat fruits and vegetables
- Drink 2 or 3 cups of milk each day
- Stay away from fast food and soda

DOCTOR'S TIPS FOR FEEDING YOUR BABY

- The foods what to serve
- Let your baby decide how much to eat
- Try to follow baby's cues
- Serve your baby fresh (cooked) NO hot dogs, nuts, grapes, popcorn or gum

No TV for babies under 2 years

Child's Name: _____
 Weight: _____ Date: _____
 Notes: _____

START LIVING HEALTHY

SOME SUGGESTIONS ABOUT USING THEM

- Avoid nagging if you can
- Join and lead
- Limit your suggestions to a couple

NAGGING
You'll do anything to get away from it.

DemotivateUs.com

HELPING PEOPLE CHANGE

- Speak to their best self
- You can't change what they don't want to change
- Small steps: start by suggesting one thing add as you go

And if you 're going to nag, go with what worked

- Kids do what moms do
- Eat three meals a day
- Turn off the TV while you eat
- Avoid soda and fast food

**[HTTP://WWW.HAWAIIAP.ORG/
PARENTHANDOUTSNUTRITION.H
TM](http://www.hawaiiap.org/parenthandoutsnutrition.htm)**