

# Iowa Medical Society White Paper

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**Key Messages Physicians  
Should Use To Prevent  
Early Childhood Obesity**

# Iowa Medical Society White Paper: Key Messages Physicians Should Use To Prevent Early Childhood Obesity

## History of the Grant

In the fall of 2003, the Iowa Medical Society (IMS) Committee on Public Health expressed concern about the growing epidemic of childhood obesity and discussed their interest in pursuing a project to address this issue from a physician perspective.<sup>1</sup> After devoting the next meeting to expert presentations on obesity, the Committee<sup>2</sup> applied for and was awarded nearly \$48,000 in grant funding from the Wellmark Foundation for a physician-focused initiative designed to assist physicians in counseling pediatric patients ages 0-5 years old and their parents about the importance of nutrition and physical activity for prevention/treatment of childhood obesity. The project will include a white paper with Iowa-specific and age-appropriate recommendations developed by a consensus panel of Iowa experts. The white paper recommendations will be incorporated into a physician education program and will provide the basis for the development of relevant materials to be used for a clinic-based pilot initiative. IMS also received a \$1,000 AMA *The Fund For Better Health* grant to eventually expand the project outcomes to physician offices across the state.

## Need for Intervention

Centers for Disease Control and Prevention (CDC) Director Julie Gerberding has said “Obesity is the number one health threat in the United States today.” Obesity is nearing epidemic status. It causes at least 300,000 deaths in the United States annually and costs approximately \$100 billion in health care services for the treatment of American adults with obesity.<sup>3</sup> The numbers for Iowa are staggering as well. According to a recent *Journal of Obesity Research* study, health problems caused by obesity cost Iowans approximately \$783 million annually. This same study also determined that obesity-related health problems cost Iowa’s Medicaid program \$198 million a year and increase Iowa’s Medicare costs by \$165 million.<sup>4</sup>

It is well documented that overweight children are more likely to become overweight adults. Nationally, 32% of overweight preschoolers, 50% of overweight school-age children, and 80% of overweight adolescents will become overweight adults.<sup>5</sup> These numbers raise great concern as the 15% of American children who are currently overweight is triple the number of children who were overweight 25 years ago.<sup>6</sup> In Iowa, a 2003 assessment of children ages 0-5 years old participating in the Women, Infants, and Children (WIC) program shows a steady increase in the number of children who are overweight at the 95<sup>th</sup> percentile, increasing from 7.7% in 1985 to 11.6% in 2003.<sup>7</sup>

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<sup>1</sup> The Iowa Medical Society is the professional association for Iowa MDs and DOs. The core purpose of the IMS is to assure the highest quality health care in Iowa through our role as physician and patient advocate. Therefore, the key focus is on physicians; however, it is intended that the project will entail intervention by clinic staff including ARNP’s, Physician Assistants and others who are involved with pediatric well-child checkups.

<sup>2</sup> Key project partners include the IMS, the Iowa Department of Public Health; Iowa Chapter, the American Academy of Pediatrics; the Iowa Chapter of American Academy of Family Physicians; the University of Iowa; the World Food Prize and others.

<sup>3</sup> American Obesity Association, AOA Fact Sheet, [www.obesity.org/subs/fastfacts/obesity\\_what2.shtml](http://www.obesity.org/subs/fastfacts/obesity_what2.shtml)

<sup>4</sup> Ibid.

<sup>5</sup> Serdula, MK et al, (1993). *Preventive Medicine*, 22:167-177.

<sup>6</sup> DHHS, Surgeon General’s Call to Action to Prevent and Decrease Overweight and Obesity 2001

<sup>7</sup> Pediatric Nutrition Surveillance System: PedNSS

Sir John Krebs, the Chairman of the Food Standards Agency in the United Kingdom, 2003 has stated “Reliable medical evidence shows that obese children will die up to nine years younger than their parents will. We could be in the process of reversing a century of increasing medical benefits.”<sup>8</sup> The complications associated with obesity in childhood include: early puberty; menstrual irregularities; genu varum; Blount’s disease and slipped capital femoral epiphysis. There has also been an alarming increase in the childhood onset of serious life-threatening/altering adult diseases associated with obesity in childhood including: hypertension, dyslipidemia, hyperinsulinism/insulin resistance; impaired glucose tolerance, type II diabetes, polycystic ovarian syndrome; asthma, obstructive sleep apnea, sickwickian syndrome, nonalcoholic steatohepatitis, and gall bladder disease. Significant psychosocial disorders are also associated with obesity in childhood. A study published in the April 2003 *Journal of the American Medical Association* said, “The likelihood of an obese child or adolescent having impaired health-related quality of life (QOL) was 5.5 times greater than (for) a healthy child’s or adolescent and similar to a child or adolescent diagnosed as having cancer.”<sup>9</sup>

### **Complexity of the Issue**

Although obesity is multidimensional and complex, to halt the epidemic we must focus on behavior change. This focus does not change even though many factors (genetic, biological, psychological, socio-cultural, and environmental) are implicated as contributors to obesity. On that basis, the physicians in this project will be focusing on behavior change. This grant is narrowly tailored to focus on the physician intervention aspects of obesity prevention for the selected pediatric population and will not deal with many of the other areas of causation in an in-depth way. However, the Advisory Committee for this grant is aware of the implications of these broader causes for obesity and will take them into account when designing the intervention messages and materials. Further, since the project will primarily focus on prevention of obesity, pediatric patients who are already very obese may need more extensive interventions than this project is intended to provide and therefore may be referred to specialists or child obesity clinics as appropriate .

### **Targeted Patient Population**

Childhood can essentially be divided into three groups: early childhood (ages 0-5 years old), elementary school-age (ages 5-12 years old), and junior high/high school adolescents (ages 13-18 years old). For purposes of obesity prevention/intervention initiatives, different age groups of children will require different approaches to ensure that they are age-appropriate and will have the desired positive impact.

Early childhood is a natural focus for this grant because eating and activity/fitness habits start at birth and develop in these formative years. Leanne Birch’s and others research has indicated that eating habits are formed by age two.<sup>10</sup> Further, in early childhood, parents and childcare workers

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<sup>8</sup> (<http://www.telegraph.co.uk/core/Content/displayPrintable.jhtml?xml=/health/2003/11/21/h>)

<sup>9</sup> Schwimmer et al. *JAMA*. 2003; 289: 1817

<sup>10</sup> Birch, LL, Fisher, JO. Mother’s child-feeding practices influence daughters’ eating and weight. *Am J Clin Nutr* 71 :1 054-1 061 , 2000; Birch, LL, Fisher, JO, Davison, KK. Learning to overeat: maternal use of restrictive feeding practices promotes girls’ eating in the absence of hunger. *Am J Clin Nutr* 78:215-220, 2003; Dietz, W. Health Consequences of Obesity in Youth: Childhood predictors of Adult Disease. *Pediatrics* 101 (3):51 8-525, 1998;Fisher, JO, Birch, LL. Restricting access to palatable foods affects children’s behavioral response, food selection, and intake. *Am J Clin Nutr* 69:1264-1272, 1999; Fisher, JO, Birch, LL. Eating in the absence of hunger and overweight in girls from 5 to 7 y of age. *Am J Clin Nutr* 76:226-231 , 2002; Spruijt-Metz, D, Lindquist, CH, Birch, LL, Fisher, JO, Goran, MI. Relation between mothers’ child-feeding practices and children’s adiposity. *Am J Clin Nutr* 75:581 -586, 2002.

have the single greatest influence on younger children's eating/activity levels at this time in their lives. They control what foods/beverages children have access to and model behaviors that their children emulate. Therefore, what parents say and do while their children are in early childhood will impact their children's life-long nutrition and activity habits. In addition, children generally undergo scheduled well-child exams during early childhood, which provide special opportunities for physicians to address these issues with patients and their parents. This grant will focus on physician interventions with families to promote nutrition and physical activity needs during the well-child visits of children ages 0-5 years old.

### **Consensus Panel<sup>11</sup>**

On August 25, 2004, a diverse consensus panel of Iowa experts<sup>12</sup> met with the purpose of taking national recommendations for physician intervention and counseling about regarding weight, nutrition, and physical activity and developing them into key age- and Iowa-specific guidelines (messages) for pediatric patients ages 0-5 years old. The recommendations on the evaluation and treatment of overweight children and adolescents developed by Doctors Barlow and Dietz from the CDC and published in *Pediatrics*<sup>13</sup> were a key piece of literature considered by the Advisory Committee. Robin Hamre, MPH, RL, LD, Nutrition, Physical Activity and Obesity Program Lead with the CDC, presented on the newest research efforts by Doctors Barlow and Dietz, which incorporates aspects of motivational interviewing. Iowa experts presented evidence-based information about key literature, motivational interviewing techniques, talking to parents, and cultural competence. These presentations in conjunction with the practical experience of panel members provided the basis for development of key message(s) physicians should communicate to pediatric patients (ages 0-5 years old) and their families about nutrition and activity during well-child visits.

### **Key Physician Messages**

The following are key messages that physicians should focus on during a pediatric patient's well-child exam. Consensus Panel members were pleased to note that many of the Iowa-specific recommendations outlined below have recently been reinforced in the National Academy of Science's Institute of Medicine report on Childhood Obesity released earlier this week.<sup>14</sup> Providers should try to explain how the nutritional and activity messages below fit in with the child's age and stage of development and discuss the benefits of activity and nutrition. They should also briefly address the serious health consequences for children with poor nutrition and

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<sup>11</sup> The panel discussion generated many outstanding ideas that were beyond the scope of this grant initiative but could be the basis for other childhood obesity projects, including: prenatal counseling in the last trimester of pregnancy; a DVD/CD-Rom/Web-link; and school-based initiatives.

<sup>12</sup> The panel involved: List membership. Not exclusive, good cross-section of people.

<sup>13</sup> Barlow et al. *Pediatrics* 102:3, 1998.

<sup>14</sup> The report is available at <http://national-academies.org>. Examples of the Consensus Panel recommendations that are reinforced by the IOM report include: doctors should routinely measure every child's body mass index (BMI) and actively discuss their patients' weight and BMI in a sensitive and age-appropriate manner; parents can exert a profound influence on their children by promoting healthy foods, a varied diet and an active lifestyle from an early age and serving as role models; parents should consider smaller portion sizes, encourage children to stop eating when they feel full, and avoid using food as a reward; children should avoid sodas and other high-calorie, low-nutrient beverages because of concerns about "empty calories" and displacement of healthier beverages; caregivers should ensure children get at least 30 minutes of daily moderate to vigorous physical activity and to encourage children to make physical activity a regular part of their lives by engaging in active play or sports with them, providing equipment and opportunities, and by cheering on children's active pursuits; and parents should limit recreational TV viewing, video and computer game playing and should not have TV sets in their bedrooms.

low activity. The clinic/office materials and educational/training sessions will be based upon these recommended messages:

**General:**

**Limit sweet drinks (and other sweets) and encourage water instead**

- Sweet drinks are high in hidden calories, have no nutritional value, are bad for children's teeth and most contain high amounts of sugar. Young children should not be drinking soda pop on a regular basis.
- Stress that fruit juice (as a beverage or as a snack) must be limited because it is very high in calories. (Recommend limiting juice to ½ cup a day).
- Water is essential for the body and helps children feel full. Encourage water between meals. The habit of drinking water will remain with the child through adulthood.
- When children eat too many sweets, the amount of calories of the next meal or snack needs to be adjusted.

**Limit “screen time”**

- Includes time spent in front of the TV, playing video games, or on the computer.
- No TV should be in the child's bedroom (emphasize *before* family puts one there).
- Screen time discourages physical activity and some commercials/programs may promote unhealthy foods and behaviors.

**Increase physical play/exercise time**

- Emphasize that it is normal for children to be active. Children (toddlers and preschoolers) should engage in at least 60 minutes and up to several hours per day of daily, unstructured physical activity and should not be sedentary for more than 60 minutes at a time except when sleeping.<sup>15</sup>
- All children birth to age five should engage in daily physical activity that promotes health-related fitness and movement skills.<sup>16</sup>
- Toddlers should accumulate at least 30 minutes of daily structured physical activity.<sup>17</sup>
- Preschoolers should accumulate at least 60 minutes of daily structured physical activity.
- Encourage family recreational activities and walking when appropriate.
- Make it fun – teach kids to love moving!

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<sup>15</sup> National Association for Sport and Physical Education.

<sup>16</sup> National Association for Sport and Physical Education (NASPE). Active Start: A Statement of Physical Activity Guidelines for Children Birth to Five Years. Reston, VA, 2002.

<sup>17</sup> The National Association of Sport and Physical Education talks about “structured” activity in terms of activities designed to facilitate appropriate instruction and reinforcement of “Basic movements skills such as walking, running, jumping, and fundamental motor skills such as throwing, catching, kicking, and striking objects should be emphasized when age- and developmentally appropriate, since they are prerequisites for more complex movements performed during childhood and adulthood. In addition, activities that encourage children to support some body weight with their hands are recommended to develop upper-body strength. These activities should be practiced in both structured and unstructured settings.”

### **Encourage healthy family meals around the table at home**

- Eating meals at home with the family is important for the development of healthy eating habits.
- Limit fast foods and eating out (high in calories and low in nutritional value).
- Eat at the table together, not in front of the TV.
- Eat at specific times (no “grazing”).

### **Develop an understanding of portion size and the role of food**

- Help families understand what a portion is (materials could assist with this).
- Offer small portions of each food and allow for seconds.
- Don’t feed children after the child says, “I am full” – no “clean plate club.”
- Help families understand the relationship between portion size and weight gain.
- Don’t use food as a reward, pacifier or punishment.

### **Emphasize the importance of fruit and vegetables in the diet of a child**

- Parents provide, children decide. Parents need to be empowered to make good food choices to present to children. The children decide whether to eat or not.
- Children may need to be exposed to the same food many times before they decide to try it or like it.
- Stress the nutritional value of vegetables and fruits benefit health because the fiber, vitamins, minerals and anti-oxidants are the building blocks of the body.
- Fruits and vegetables generally do not include empty calories like sugar – so they keep the body satisfied with a sense of fullness.
- Five or more fruits and vegetables a day is the goal, but any increase is beneficial.

### **Infants:**

#### **Breast-feeding**

- Breast-feeding is best primary source of nutrition for infants.
- Breast-feeding may decrease risk for overweight children.
- Breast-feeding teaches infants self-regulation of energy intake.
- Breast-feeding is highly nutritious.
- What mothers eat while they are breast-feeding influences the taste preferences of their babies. The flavor of breast milk changes according to what the mother eats; therefore infants who breast-feed are exposed to more flavors early on, and thus more likely to be receptive to new tastes.
- Even breast-feeding babies can be overfed. Stop when the child is full (see below).

### **General nutrition:**

- Caregivers should become concerned if an Intra-Uterine Growth Retardation (IUGR) infant has too rapid of weight gain after birth, as this may be associated with subsequent obesity.
- Taste is acquired in early infancy; make sure to provide infants with a taste for healthy food.
- Breast milk and/or formula should be used the first year.
- No juice until six months and no juice in “sippy cups” (avoid habit of grazing).
- Take child off the bottle by one year of age (avoid habit of grazing).
- Whole milk should be used from one to two years of age, then switch to low-fat/non-fat milk.
- No bottles should be used in bed.

### **Be in touch with and develop young children’s non-verbal cues**

- The bodies of very young children let them know when they are satisfied/full (satiety). Parents must learn to listen to these nonverbal cues (i.e., child throws food off of the plate signaling that the child is finished eating). Feed babies only when they are hungry and stop when they indicate they are full.
- Early childhood is when children learn to listen to their bodies when their bodies tell them they are full. When parents counteract these cues, by demanding that they keep eating, children learn to ignore their bodies and learn to overeat.
- Don’t automatically associate crying with hunger. It is acceptable that infants cry sometimes. Try other things (check diaper, pick up the child, check length of time since the child last ate) instead of automatically responding with food.

### **Babies need to move and be engaged in activity**

- Babies should not be confined (cribs, play yards, walkers, swings, etc.) for long periods of time.
- Babies' muscles need to be developed through active use.
- Babies should not be watching TV. The American Academy of Pediatrics recommends no television until a child is over 2 years of age.

### **Additional Considerations and Communication Strategies**

*Age-appropriate messages.* Awareness of distinct needs for different age groups should be taken into consideration for the development of the messages and materials as well as the implementation. As children progress through different developmental stages, understanding of their different needs should be emphasized. As noted above, for very young children, parents should be educated on the importance of listening to their children’s nonverbal cues. Parents must be trained to realize when a child is hungry and when he or she has had enough to eat. It is important to address the topics of hunger and satiety in relation to neurological development.

After the age of five, children are more likely to eat the portion served to them rather than follow their appetite.

***Body Mass Index is important.*** Physicians should calculate, record and plot the Body Mass Index (BMI) of each child (start at two years of age) when he or she comes in for a well-child visit. Physicians should also be empowered to talk to parents about their child's weight and health habits to increase their knowledge and understanding. Documentation of BMI percentile should be done in conjunction with sharing the child's growth chart with the parents. This aids in the understanding of the relationship between height and weight. Technically BMI calculation and plotting begins at two years old, however, the height and weight of younger children is still measured and recorded and should be similarly discussed with parents.

***Motivational interviewing in the counseling sessions should be a focus.*** Extended contact is crucial with behavior change. It should also be noted that a patient's readiness to change should be taken into account. Patients will make changes when the counseling is directed to the level of readiness of change. A patient's active participation is important, as behavior that is learned can be unlearned. Linda Snetselaar, RD, PhD, provided the consensus panel of Iowa experts with the following sample questions, which may be used in counseling sessions that entail motivational interviewing:

- Would you like to change your eating habits?
- Would you like to change any part of your eating behavior?
- Why do you want to change your existing eating habits?
- If you were to change, what would the payoff be for you?
- What have been your past experiences with change?

As an outgrowth of the responses to these questions, the interviewee becomes more vested. The Advisory Committee may want to provide a patient/parental survey that helps the physician identify the key problem area for a particular patient to focus the motivational interview on that issue, only briefly discussing the other messages outlined above.

***Provide specific strategies a family can use to implement changes.*** Provide parents with concrete suggestions and behavior modifications. For example, if a designated area of concentration for the counseling session is family centeredness, a physician will communicate the importance of participating in activities as a family and suggest that the family join a gym together, go for a nightly walk, or eat at home together at least four times a week. When concrete examples are given as alternatives to pre-established routines, families are more willing to accept and adopt them. It is also important to make resources known to the patient.

***Sensitivity.*** It was noted that obesity could be a highly sensitive topic that can put families on the defensive. Therefore, non-threatening terminology should be used throughout the initiative. The following suggestions regarding how to effectively and sensitively approach parents are excerpted from Kaiser Permanente.

| Overweight Sensitivity<br>"Do no harm" |   |                        |
|--|---|------------------------|
| <u>Instead of:</u>                     |   | <u>Use:</u>            |
| > Obesity                              | → | Overweight             |
| > Ideal Weight                         | → | Healthier Weight       |
| > Personal Improvement                 | → | Family Improvement     |
| > Focus on Weight                      | → | Focus on Lifestyle     |
| > Diets or "Bad Foods"                 | → | Healthier Food Choices |

**Here are some additional suggestions for ways to discuss the child's weight in a non-judgmental way that may keep parents from being offended or defensive when the physician brings up the issue:**

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| <p><u>Explore the family's history of obesity and weight related problems:</u></p> <p>"Are there people in the family who tend to gain weight easily?"</p> <p>"Does diabetes, heart disease, high cholesterol, HTN run in the family?"</p> <p>"It seems like your child might be someone who naturally gains weight easily"</p> <p><u>Focus on lifestyle measures that might be useful to treat or prevent obesity without conveying critical assumptions about their current lifestyle.</u></p> <p>"If a child or family gain weight easily, they may have to work extra-hard on their lifestyle in order to have a healthy body weight"</p> <p>"Do you have some idea of what you might be able to do in your family to help everyone have a healthy weight?"</p> |
|---|

The emphasis of project discussions and materials should be on small doable steps parents can take to increase activity, decrease the intake of unhealthy food and increase the intake of nutritional food rather than labeling children "fat" or "obese." Care should also be taken to ensure that the messages are health literate and culturally competent, respecting cultural beliefs, values, and differences.

**Focus on doable and incremental changes.** Families may already feel overwhelmed with the responsibility of parenting. Being faced with a huge "to do list" can be daunting and result in lack of follow-through by families. Through surveys and/or motivational interviewing, the physician can determine which area is most in need of immediate change and work with the family to decide what should be done to respond. For example, instead of saying no TV to a child that currently watches 3 hours, start by saying to cut out 30 minutes a day. Instead of saying quit going out for fast food to a family that eats out for every meal, recommend cutting back to eating out one meal a day. Another example would be to replace one glass of soda or

juice with water. Focus on the fact that you want something realistic that the family will follow through with. Get parental “buy-in” and set up a method for accountability.

**Summary and Conclusion:**

**KEY MESSAGES**

**General**

- Limit sweet drinks (and other sweets) and encourage water instead
- Limit “screen time”
- Increase physical play/exercise time
- Encourage healthy family meals around the table at home
- Limit portion size
- Offer more vegetables and fruits

**Infants**

- Breast-feeding is best
- Be in touch with and develop children’s nonverbal cues
- Babies need activity and space to move

**COMMUNICATION STRATEGIES**

- Messages must be age-appropriate
- Calculate and record BMI over time
- Motivational interviewing can help empower families to change
- Provide suggestions, alternatives and resources for implementation
- Communication should be sensitive, health literate and culturally competent

**These recommended messages and strategies for communication will be incorporated into the grant education sessions and relevant materials for implementation in two Iowa pilot clinic sites.**

## EARLY CHILDHOOD OBESITY GRANT CONSENSUS PANEL

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