



Children's Check-Ups:
Reports on Issues
Critical to the Health
of Minnesota Children



*Check-Up 3: Starting Early to
Prevent Childhood Obesity
July 2012*




Children's[®]
Hospitals and Clinics
of Minnesota





Introduction

The nation's obesity epidemic has reached even our youngest children: one-in-three kids is obese or overweight,¹ and one-in-five kids is obese before starting school.² Weight problems are particularly prevalent among our poorest families.³

Obesity is impacting our health and well-being, our health care system, our economy and our society at large. And the worst is yet to come as health officials expect obesity rates to keep climbing over the next two decades.

At Children's Hospitals and Clinics of Minnesota (Children's), we see a growing number of overweight and obese children. Many have health problems associated with obesity, including diabetes, early signs of cardiovascular disease, musculoskeletal conditions and psychosocial issues. Conditions once very rare among children, such as liver disease, hypertension and Type 2 diabetes, have become all too common. To address this new reality, Children's is closely examining how we treat kids with weight problems.

Our latest "Children's Check-Ups" report looks at how Minnesota children are faring in the battle against obesity. An emerging body of science indicates that the best window of opportunity to beat obesity may be before our kids ever enter school. It's a conclusion that is gaining acceptance among health experts, including the Institute of Medicine and the White House Task Force on Childhood Obesity.

While there are many programs to fight obesity, few of them target our youngest children. We need to make a bigger difference in a child's first few years, which represent such a key opportunity in so many ways. This early intervention work is an important complement to continued anti-obesity efforts aimed at older children, teenagers and adults.

"Efforts to prevent childhood obesity to date have focused largely on school-age children, with relatively little attention to children under age five. However, there is a growing awareness that efforts to prevent childhood obesity must begin before children ever enter the school system."

– The Institute of Medicine, Early Childhood Obesity Prevention Policies, June 2011 report

Many public health officials consider obesity the greatest public health threat of our time. The earlier we intervene, the better our chances are of defeating it.

We hope this paper can inform a meaningful discussion among government and community leaders, health care professionals, non-profit and for-profit organizations for new ways to fight childhood obesity. By working together, we can maximize our efforts.

Alan L. Goldbloom, MD
President and CEO
Children's Hospitals and Clinics of Minnesota

"The die is cast by the age of five."

- Boyd Swinburn, an obesity expert with the World Health Organization, referring to the significant influence of prenatal and early childhood factors in determining a child's likelihood of becoming obese as a child or later in life.

Minnesota and the Obesity Epidemic

Americans – and Minnesotans – are becoming overweight at an extraordinary rate, with staggering health and economic repercussions.

Adult obesity rates have more than doubled over the last three decades, from 15 percent of adults in 1980 to 34 percent in 2008, according to a national survey.^{4,5,6} Minnesotans do better than average in keeping their weight down. While more than two-thirds of American adults are overweight or obese, less than two-thirds of Minnesota adults are obese or overweight.⁷ Nevertheless, Minnesotans have generally followed this alarming trend over the past four decades.

- Health impact:** Obesity is associated with a host of conditions and diseases that affect overall health and psychological and social well-being. Overweight and obese adults are more likely to develop cardiovascular diseases, stroke, Type 2 diabetes, certain types of cancer, osteoarthritis, and a variety of other conditions.⁸ Obesity-related deaths are conservatively estimated at 110,000 annually,⁹ and may be three times that amount, according to the Centers for Disease Control (CDC).¹⁰
- Economic impact:** The medical costs related to obesity totaled about \$147 billion in 2008, or nine percent of all medical costs for the year.¹¹ In addition, the total costs due to the loss of productivity as a result of overweight and obese workers, as well as the costs of work-related injuries associated with

being overweight or obese, are estimated at about \$177 billion per year.¹² Obese people may experience discrimination in the workplace, and their job performance can be hindered by obesity-related health problems and absenteeism.

The projections are alarming: by 2030, the obesity rate among American adults will rise to about 50 percent, with a corresponding increase in related medical costs.¹³

The Rise in Childhood Obesity

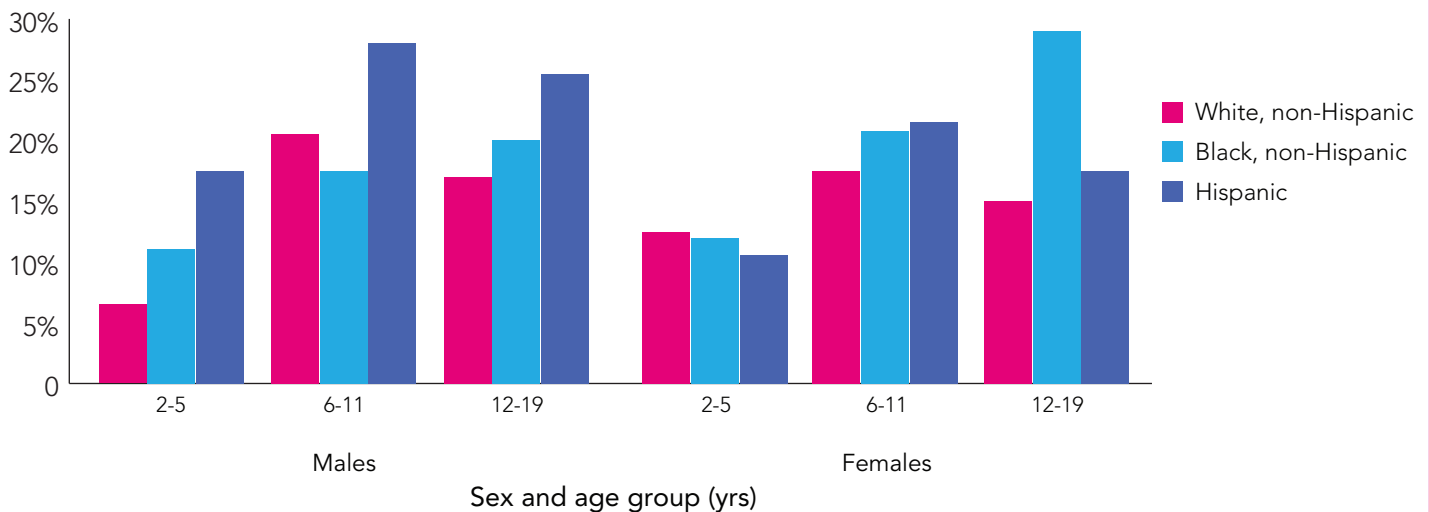
America’s children are quickly following in the footsteps of adults.

While the obesity rate has doubled among adults, it has tripled among children. One-in-six children between the ages of two and 19 is now obese, a rate three times higher than it was in 1980.¹⁴ Another one-in-six children is overweight, meaning that one of every three children in America is obese or overweight.¹⁵

In Minnesota, nearly one-out-of-four (23.1 percent) has weight problems. Among Minnesota adolescents (ages 10-17), about 11.1 percent are obese.¹⁶

Children who live in families below the poverty level or who are on public health insurance are far more likely to be obese than children who live in more financially secure homes or who are on private insurance. This disparity is even more pronounced in Minnesota than in other areas of the country.¹⁷

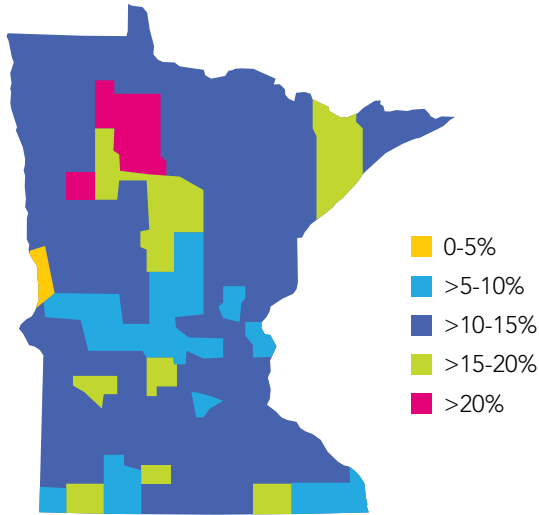
Childhood Obesity in America by Race and Gender



Early Childhood Obesity Prevention Policies, Institute of Medicine, June 2011

Minnesota Obesity Prevalence by County

2007-2009 County Obesity Prevalence Among Low-Income Children Aged 2 to 4 Years



CDC, 2011

“Twenty years ago, polycystic ovary syndrome wasn’t covered in pediatric endocrinology – now it’s commonplace.”

- Dr. Jennifer Kylo, pediatric endocrinologist and diabetes specialist at Children’s

because studies now show that heart diseases, such as arteriosclerosis, begin to develop in childhood.²⁵

Increasing obesity among girls can be associated with a sharp rise in a hormonal imbalance called polycystic ovary syndrome (PCOS), which can lead to diabetes, heart disease and infertility.²⁶

Other health conditions associated with obesity also may put children in immediate danger of asthma, sleep apnea, and liver disease or long-term danger of stroke, some cancers (breast, colon, and kidney), and gallbladder disease.^{27,28} In fact, concern over the rise among children and adolescents of non-alcoholic fatty liver disease, which is a precursor to cirrhosis of the liver, has prompted some experts to call for better and more widespread screening among overweight and obese children.²⁹

Many health problems associated with childhood obesity persist into adulthood, even after corrective action has been taken. For instance, obese adolescents who lose weight in adulthood are still at higher risk to get heart disease than those who were not previously obese, according to a recent study in the *New England Journal of Medicine*.³⁰ Likewise, the increase in childhood obesity is expected to increase the incidence of coronary heart disease by up to 16 percent over the next 25 years.³¹

In addition to those with low incomes, obesity is especially prevalent among racial and ethnic minorities, as well as immigrants. In Minnesota, pediatric obesity is prevalent among Hispanic, black, American Indian, and Pacific Asian children.^{18,19}

The most obvious danger of being an obese or overweight child is the increased likelihood of becoming an obese or overweight adult.^{20,21,22} Additionally, obese children face immediate health problems that can be quite serious.

Pediatricians are increasingly encountering cases of Type 2 diabetes in their young patients (not to be confused with Type 1 diabetes, a genetic form of the disease that is not driven by behavioral choices). A *New England Journal of Medicine* study recently concluded that obesity-related Type 2 diabetes in children progresses faster and is harder to treat than Type 2 diabetes in adults.²³ Today, more than one-in-six Minnesota youth (ages 12-19) has pre-diabetes or diabetes (Type 1 or 2).

Obese children and adolescents are also more likely to have elevated cholesterol and blood pressure levels (significant risk factors for heart disease), breathing and joint problems, depression and other psychosocial problems.²⁴ An expert panel recently endorsed cholesterol screening in children starting at ages nine through 11

EMERGING CHILD HEALTH PROBLEMS ASSOCIATED WITH OBESITY

- Hormonal imbalance
- Asthma, breathing problems
- Joint pain
- Pre-diabetes, diabetes
- Liver disease

The Causes of Obesity

The main reasons for the rapid rise in obesity rates among both adults and children are simple: poor diet and lack of exercise. Put another way, Americans have an increasing energy imbalance in which the calories consumed through food and beverages far exceed the calories burned through physical activity.³²

Other factors also play contributing roles in obesity, such as genes, metabolism, biological bases for food preference, government policy, socioeconomic status, and cultural practices.^{33, 34}

Poor Diet

Americans now consume more processed food and sugary drinks, eat out more at fast food restaurants and have fewer homemade meals with their families than ever before. There are a number of possible reasons for this, ranging from the fast pace of modern life to the easy accessibility of prepared and processed food.³⁵

- Fewer than one-in-five Minnesota adults eat the recommended five fruits and vegetables a day – about the same rate as among Minnesota children, although it drops as children become teenagers.³⁶
- Four-out-of-five children from 12- to 19-years-old have “poor diets” – high in salt and sugar-sweetened beverages and low in fruits, vegetables, fiber and lean protein, according to a recent federal survey.³⁷
- None of the children – zero out of 5,450 surveyed – met the American Heart Association’s criteria for an ideal diet.^{38, 39}

A survey of 5,450 children revealed that none met the American Heart Association’s criteria for an ideal diet.

Parents have tremendous influence on their children’s food behaviors, especially when children are young.⁴⁰ Children whose families regularly eat meals together are much more likely to develop healthy eating behaviors and to maintain a healthy weight.^{41, 42}

- Unfortunately, Minnesota adolescent children are less likely than children in the rest of the nation to regularly eat meals with their families, according to the 2007 National Survey of Children’s Health.⁴³



Studies show that families that eat together are less prone to have weight problems. In Hennepin County 73.3% of children ages 3-5 had one or more meals with family members five or more days per week compared to 43.6% of adolescents ages 14-17.

Hennepin County Human Services and Public Health Department. SHAPE 2010 – Child Survey Data Book, Minneapolis, Minnesota, April 2011

- More than a third (34.4 percent) of Minnesota children ages 12 through 17 do not eat with their families even four times per week – a rate that is higher than the 30.7 percent national average.

Families Eating Together

A survey in Hennepin County found that among families with younger kids, about 73 percent of kids between the ages of three and nine eat dinner with their families five or more days per week.⁴⁴ Kids of all ages from low-income families, however, were significantly less likely to eat five or more meals per week with their families (54.3 percent) than kids who were not in low-income families (68.1 percent) – yet another disparity that may help account for why obesity is so prevalent among children from low-income families.⁴⁵

Lack of Physical Activity

Physical activity is an essential part of a healthy lifestyle. It helps decrease the risk of obesity-related diseases by controlling weight, building lean muscle and reducing fat.

Research also shows that it can improve mental health and academic achievement. The Physical Activity Guidelines for Americans advise children and adolescents to participate in physical activity for at least 60 minutes per day and adults to exercise for at least 30 minutes per day.⁴⁶

Although Minnesotans lead lifestyles that are generally more physically active than those of their peers in other states, Minnesota children are far from meeting the recommended guidelines for physical activity.

- In 2009, slightly less than half of Minnesota 6th graders and 12th graders met those guidelines.⁴⁷
- A local survey puts that rate even lower: Hennepin County's 2010 SHAPE survey found that only 28 percent of Hennepin County children aged six to 13 and 15.7 percent among adolescents (ages 14 to 17) got at least an hour of physical activity every day.⁴⁸
- Boys (31.2 percent) were nearly twice as likely as girls (16.8 percent) to meet the requirement, according to SHAPE.⁴⁹

Most children under age five fail to meet the physical activity guidelines established by expert panels.⁵⁰ One

reason is that parents do not spend enough time being physically active with their children.

- In Hennepin County, about one-in-six children two-years-old or younger (16.7 percent) engaged in physical activities with a parent three or fewer times per week; that drops to more than one-in-four kids (26.5 percent) from the ages of three- to five-years-old, according to the SHAPE survey.⁵¹

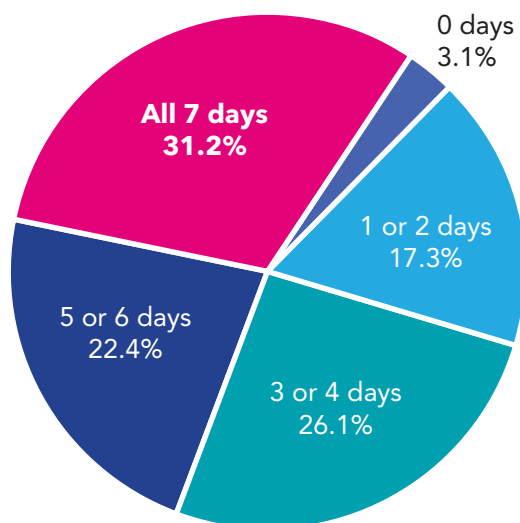
"We've seen more and more young Latinos developing Type 2 diabetes and higher rates of non-alcoholic fatty liver disease (NAFLD), in addition to other serious health problems. The best way to prevent these health issues is to maintain a healthy weight and be active!"

- Dr. Julie Boman, pediatrician and hospitalist at Children's

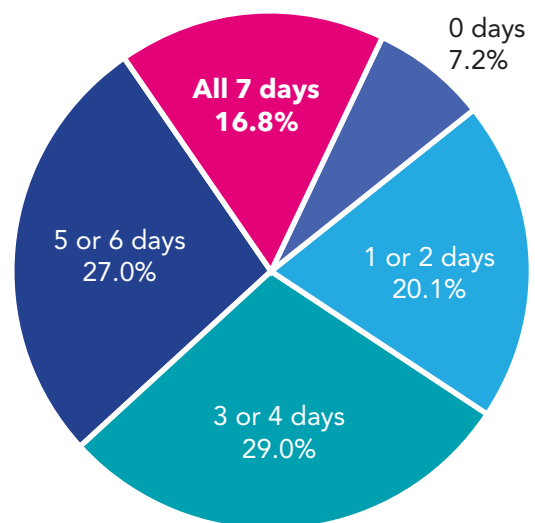
On Average, Boys are more Physically Active than Girls

During the past week, on how many days was the child physically active for at least 60 minutes? *Boys vs Girls*

Hennepin County Boys Aged 6 to 17 years



Hennepin County Girls Aged 6 to 17 years



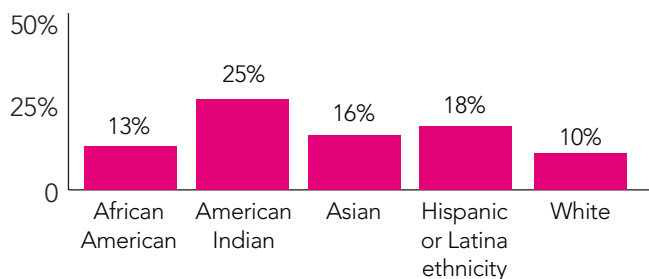
Hennepin County Human Services and Public Health Department. SHAPE 2010 – Child Survey Data Book, Minneapolis, Minnesota, April 2011

Disparities

Underlying all of the problems associated with obesity is the fact that it is more prevalent among ethnic and racial populations, such as Hmong, Latinos, Somali and blacks – especially those with low incomes. In Minnesota, children in families that are on public insurance are more than twice as likely to be overweight or obese as those who are on private insurance. Black and Hispanic children are significantly more likely to be overweight or obese than white children, due to higher rates of obesity among the minority adults and lower rates of breastfeeding, among other factors.^{52,53}

While children from low-income families often have poor diets (due in part to food deserts) and lack of exercise (due to a lack of safe play areas and too much screen time), cultural factors also play a part. The acculturation of young and adult immigrants into American lifestyle behaviors and eating habits is one reason for the rapid rise in obesity in immigrant communities.⁵⁴ Some immigrant families, especially those who have faced food shortages, may view extra weight as healthy.⁵⁵

Percentage of Minnesota WIC Participants Age 2-4 that are Obese, by Ethnicity



Note: In lieu of statewide data, data from MDH on low-income children who participate in Women, Infants, & Children (WIC) are used. Children in WIC are classified as obese if they fall into the top five percentage-adjusted body weights.

Early Childhood Minnesota: Spotlight on Disparities in Income, Race, and Geography; Minnesota Department of Health, 2009

Too Much Screen Time

Research points to a direct relationship between the time spent in front of a screen and the risk of becoming obese.⁵⁶ Screen time is associated with physical inactivity, but also with increased consumption of unhealthy snacks, sugary drinks and fast food, often the ones advertised while children are watching TV.⁵⁷ TV viewing time in childhood also increases the risk of adult obesity and

poor fitness and is a *stronger* predictor of adult obesity than is even adult TV viewing time.⁵⁸

More than a decade ago, the American Academy of Pediatrics (AAP) recommended that children under two-years-old not be allowed to watch *any* TV, citing associated sleep issues, attention deficits and aggressive behavior problems.⁵⁹ Yet nearly half of babies and toddlers (less than two-years-old) engage in screen time, spending on average nearly two hours per day watching TV or DVDs, according to a new survey from Common Sense Media.⁶⁰ TV viewing is another problem with a disproportionate impact on kids of color or from low-income families.⁶¹

Not Enough Sleep

Americans' lack of sleep also impacts their weight.⁶² Infants and young children who do not get enough sleep are more likely to become obese before adulthood, according to a new study.⁶³ The problem, which is particularly prevalent among racial and ethnic minority populations, is due to later bed times and too much TV watching.⁶⁴

From infants to adolescents, children are getting from 30 to 60 minutes less sleep than they did 20 years ago. The biggest decrease has been seen among children less than three-years-old.⁶⁵

Food Deserts

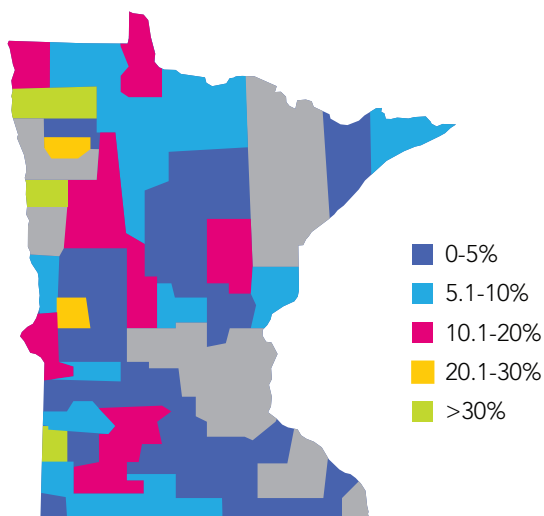
Research shows that those who live in "food deserts" – neighborhoods that lack convenient access to affordable and healthy food – eat less healthy meals than those who have access to healthy food choices.⁶⁶ This makes it particularly hard for residents of these areas – even those fully informed and motivated – to eat fresh fruit and vegetables as part of their diet to maintain a healthy weight for themselves and their children.

Nationwide, about 23.5 million people, including 6.5 million children, live in low-income areas that are more than a mile from a supermarket.⁶⁷ Public transportation to supermarkets is often lacking, and long distances separate homes and supermarkets in many rural communities and American Indian reservations. There are pockets of food deserts in economically disadvantaged areas of the Twin Cities as well as in many rural areas of Minnesota.⁶⁸

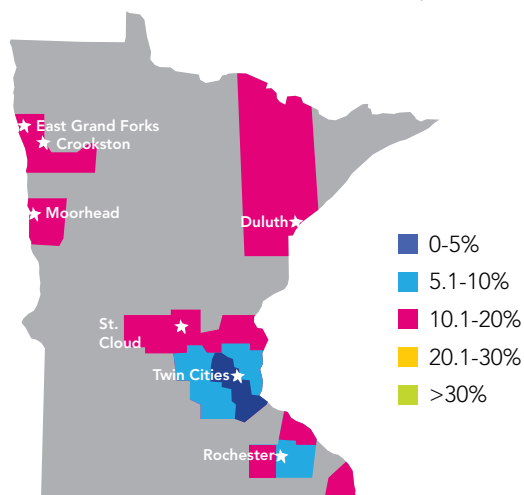


Minnesota "Food Deserts"

Percent of Non-Metro County Population that is Low Income and >10 miles from a Supermarket



Percent of Major Metro County Populations that are Low Income and >1 mile from a Supermarket



Solving the Problem of Childhood Obesity within a Generation. White House Task Force on Childhood Obesity Report to the President, May 2010

Battling Obesity: The Earlier, the Better

The prevalence of obesity among two to five year olds has doubled in the last 30 years; now two of every 10 children that age are overweight or obese – a rate that

is even higher (three-of-10) among low-income children, according to the CDC.^{69,70} By the time they reach ages six to 11, 35 percent of American children will have become overweight or obese.⁷¹

After studying the impact of early weight gain on metabolic health, Boyd Swinburn, an obesity expert with the World Health Organization reached the startling conclusion that **"the die is cast by the age of five."**⁷²

The habits and behaviors established at an early age continue to influence obesity, health and well-being throughout life.⁷³ These habits have proven time and again to be difficult to change. Adults are sometimes able to lose extra weight, but they are rarely able to keep it off. Losing and keeping off extra weight appears to be equally difficult for adolescents. Despite years of anti-obesity programs and interventions from employers, health insurers, health care providers, communities, schools, non-profit organizations, local, state and federal governments, and others across the country, the epidemic of obesity keeps growing.⁷⁴

"The reversal of obesity trends becomes increasingly difficult as excess weight accumulates," according to a recent series on obesity in *The Lancet*. That's why, the authors write, "children are a particularly important focus for action."

After studying the impact of anti-obesity interventions aimed at three different age groups of kids from preschooler to teenagers,⁷⁵ Dr. Swinburn found that interventions early in life could be effective — in sharp contrast to the impact such interventions had among adolescents and teenagers. He cites the Romp & Chomp program in Australia, aimed at promoting healthy eating, active play and achieving healthy weight in children, for producing a sharp reduction in obesity among two-year-olds and 3 ½-year-olds; the achievement was made mostly by significantly reducing the consumption of packaged snacks and sweet drinks while increasing consumption of fruit, vegetables and water.⁷⁶

Although community intervention programs designed to prevent obesity in children are in their infancy, the results strongly "suggest we should get moving to scale up efforts in the under-five's," Dr. Swinburn concluded.⁷⁷



Children's Hospitals and Clinics of Minnesota Research

The NET-Works study, funded by the National Heart, Lung and Blood Institute (NHLBI) through the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), has identified Minneapolis/St. Paul as one of two grant locations nationwide. With the University of Minnesota and HealthPartners as the research investigators, the NET-Works study will focus exclusively on preschool children and their families. Physicians from Children's Hospitals and Clinics of Minnesota, among others, are participants and are helping to recruit families for this study. By including a family advocate who will work with each family to make changes in the home environment related to healthy food choices, reducing screen time, and increasing physical activity, NET-Works hopes to provide a model for early intervention among high-risk children.

This research is part of a growing consensus that in battling obesity, the earlier the screening and intervention, the better. After all, parents and caregivers have control over and responsibility for what their children eat and what they do during this stage of life. The idea is to intervene before the bad habits begin.

On the national scene, the "Let's Move" anti-obesity campaign, led by First Lady Michelle Obama, discussed early childhood interventions in its White House Task Force on Childhood Obesity Report to President Obama in 2010.⁷⁸ It recommended "actions that can be taken very early in a child's life, when the risk of obesity first emerges."⁷⁹ In addition, the Institute of Medicine's June 2011 report on "Early Childhood Obesity Prevention Policies" argued that "because early obesity can track into adulthood, efforts to prevent obesity should begin long before a child enters school."⁸⁰

For example, children who show excess weight for their height should not be dismissed with the assurance that

they will "grow out of it with time." Excess weight at a young age can make physical activity challenging and compromise healthy growth.

The earlier a healthy environment is established and maintained in children's lives either at home or in a child care setting, the less likely they are to become overweight or obese later in life. We already know quite a bit about what works in getting our youngest children off to the right start when it comes to maintaining a healthy weight. The problem is that what we know often isn't put into practice due to a variety of challenges, not least of which is limited resources and disparities in access to services, health care and healthier foods.

Here are some ways we can help our kids maintain a healthy weight right from the start:

Prenatal Conditions and Counseling

What we know:

Addressing prenatal conditions can help reduce a child's propensity for becoming obese. In fact:

- Mothers with weight problems or who gain too much weight during pregnancy are likely to have children with weight problems.^{81,82}
- Children born to mothers who have Type 2 diabetes or who develop gestational diabetes are at higher risk of being overweight and getting diabetes.⁸³
- Children born to mothers who smoked during pregnancy are five times more likely to become obese by age five, and more than twice as likely to be obese by age 10. Despite warnings, about 13 percent of pregnant women in the U.S. still smoke.^{84,85}

Recommendation:

To improve children's health, the Surgeon General recently recommended prenatal counseling regarding the risks of maternal weight and weight gain, the importance of breastfeeding, the link between obesity and diabetes, and the negative impact of smoking, drinking or using drugs.⁸⁶



BMI Screening and Counseling

What we know:

Tracking children’s weight is critical to preventing obesity. However:

- Although most pediatricians now measure height and weight at well-child visits, a recent survey reports that only about half calculate and assess body mass index (BMI), citing a lack of time.⁸⁷
- Another survey indicates that nearly two-of-three (63 percent) overweight children and adolescents reported that they were not told by a health care provider they were overweight.⁸⁸
- A survey of parents of Hennepin County children found that 8.6 percent of parents of babies and toddlers and 13.6 percent of parents of preschoolers said that their providers did not discuss their child’s weight.⁸⁹

Tracking BMI from the age of two may be critical in identifying children at risk for obesity, since young children who gain weight too rapidly may be at an elevated risk for obesity later in childhood.

Recommendation:

Tracking BMI from the age of two is critical in identifying children at risk for obesity, since young children who gain weight too rapidly may be at an elevated risk for obesity later in childhood.⁹⁰ A new study recommends providers

offer BMI screening for children ages two to five based on the knowledge that interventions are much more effective among this group than older children.⁹¹ Parents should expect to discuss their children’s weight at each well-child visit, at a minimum.

Breastfeeding

What we know:

For those mothers and families who are able, breastfeeding is shown to have tremendous benefits. In fact:

- Children who are breastfed have a significantly lower risk of developing diabetes than those who were fed formula or introduced early to solid foods.⁹²
- The longer the child is breastfed, the less likely they will become overweight.⁹³

However:

- Although four-out-of-five Minnesota babies (82.5 percent) start out breastfeeding, by six months of age, only half (50.9 percent) are still breastfeeding.⁹⁴
- Black and Hispanic babies are more likely to be introduced to formula early in their lives than white babies.⁹⁵

Recommendation:

Providers can encourage mothers and discuss with them the benefits of breastfeeding exclusively until six months of age, to the extent they are able, and to continue breastfeeding yet supplement with other food sources until one year.⁹⁶ On par with the rest of the nation as “breastfeeding-friendly communities,” Minnesota birth facilities, health professionals, public infrastructure (public facilities and services) and child care settings could enhance their support of breastfeeding.⁹⁷

Minnesota Infant Breastfeeding Rates: Fewer than 1 in 6 infants are breastfed exclusively until 6 months

State	Ever Breastfed	Breastfeeding at 6 months	Breastfeeding at 12 months	Exclusive Breastfeeding until 6 months*
U.S. National	74.6	44.3	28.3	14.8
Minnesota	82.5	50.9	24.1	15.0

*Recommended standard
 CDC Breastfeeding Report Card 2011



Soothing Tactics

What we know:

Pediatricians have in the past been justifiably worried about a baby's "failure to thrive." In light of the obesity epidemic, recent reports suggest they now need to balance that with a concern about overfeeding. However:

- When a baby is fussy, the first tactic of most parents is to offer food, typically breast milk, formula or juice.
- Parents, especially new ones, may need help in recognizing babies' hunger signals, such as rooting, putting a hand to the mouth, sucking mouth movements, and signs that they've had enough, such as spitting out the bottle or the breast, turning the head away, and closing the mouth.⁹⁸

Recommendation:

Parents need more information and guidance to help understand when soothing tactics, such as holding, cuddling, singing, talking, reading and playing, are more appropriate for the baby's real need than feeding the baby.

More Exercise

What we know:

Consensus is building that parents should make sure that their children engage in physical activity almost from the day they are born. However:

- In the U.S., many children from birth to age five are not engaging daily in physical activity that promotes movement skillfulness and foundations of health-related fitness.⁹⁹

Recommendation:

Those who are in charge of infants' well-being need to understand the importance of physical activity and should promote movement skills by providing opportunities for structured and unstructured physical activity, according to the National Association for Sport and Physical Education.¹⁰⁰ The British Heart Foundation recently issued guidance that children under the age of five years should exercise for three hours a day.¹⁰¹ Even babies who cannot walk should exercise by assuring plenty of opportunities for floor play.

Better Diet

What we know:

Child-feeding practices can play a major role in food preferences later in life, and these preferences play a key role in determining the likelihood the child will become obese, researchers say.¹⁰² In fact:

- One longitudinal study showed that children two- to three-years-old are more open to new foods than older children, and that their food preferences were substantially the same five years later.¹⁰³
- Although acknowledging that "children are predisposed to like sweet or salty foods and to avoid sour or bitter foods," that same study concludes that "their preferences for the majority of foods are shaped by repeated experience."¹⁰⁴

Recommendation:

Interventions to reduce intake of saturated fat and sweetened beverages while increasing consumption of fruit and vegetables can be effective and carry little risk, according to a recent expert panel report.¹⁰⁵ A recent study shows that preschool teachers, in collaboration with nutritionists, can be powerful agents of change for improving young children's diets.¹⁰⁶ While there are legitimate issues related to access and affordability of healthy foods that also need to be addressed, it is important that parents and caregivers understand the importance of providing healthy foods and the costs and consequences of not doing so.¹⁰⁷

"The prevalence of obesity among preschoolers in the United States is stark evidence that problem eating behaviors begin early in life."

- Mary Kay Fox, senior nutrition researcher at Mathematica Policy Research Inc.

Limit Screen Time

What we know:

Too much television time during childhood is associated with obesity and persists into adulthood. In fact:

- Children who were obese at age five were more likely to watch three or more hours of TV per day during the week compared to non-obese children.¹⁰⁸
- Children who exceed the AAP's recommended two-hour limit on screen time were "50 percent more likely to be obese and 47 percent more likely to be unfit at age 32," according to a recent study.¹⁰⁹

Recommendation:

Following the national association's recommendations on screen time, the Minnesota chapter of the AAP recommends that no child should have more than two hours of screen time per day and that children under the age of two should have no screen time at all. In addition, no child should have a TV in his or her room.¹¹⁰

More Sleep

What we know:

While the link between sleep and obesity is not fully understood, it is clear that too little sleep is associated with being overweight or obese. However:

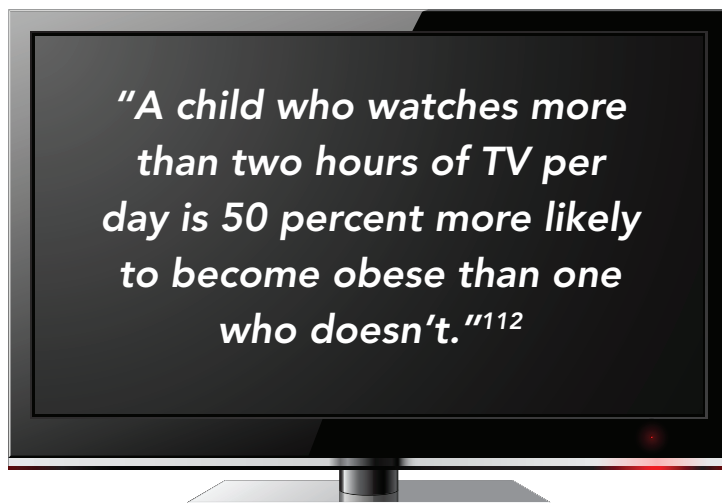
- Children are not getting enough sleep due to later bedtimes and other factors, including too much screen time.

Recommendation:

Providers and others should encourage parents to institute age-appropriate sleep times for their children, the Institute of Medicine recommends in a recent report.¹¹¹

"I'm seeing more young children with obesity troubles, and their parents are often surprised to find their child is classified as overweight or obese. As often as not, the parents are obese themselves."

- Dr. Pamela Gigi Chawla, pediatrician and hospitalist at Children's



No More Denial Among Parents

What we know:

Parents need to be aware of and acknowledge their children's weight problems to help them successfully address those problems. However:

- Many parents and caregivers often do not realize, or are in denial about, when a child is overweight or obese, according to studies.¹¹³
- Parents do not understand the potential consequences of obesity in children.¹¹⁴
- Despite growing rates of childhood obesity and chronic illness among the nation's kids, only 15 percent of American parents rank overall physical health as the top concern for their children, according to a national survey by the YMCA of the USA.¹¹⁵

Recommendation:

Providers and others can help parents recognize that their child is overweight, understand what that means and why it is an important issue to address.

Modeling Family Behavior

What we know:

Obesity is almost always a family issue. While genetics are a factor, so is the behavior that parents and caregivers model for their children. They inhabit the same environment, eat from the same food sources, watch the same TV, and participate (or not) in many of the same physical and recreational activities. Especially at a young age, children tend to emulate their parents, caregivers or older siblings. In fact:

- Using role playing, a study of children two- to six-years-old found food choices closely tracked those of their parents.¹¹⁶

Recommendation:

Help parents, caregivers and older siblings understand their influence as role models. An expert panel on cardiovascular health recently recommended that for children in their first year of life, “parents should create an environment promoting and modeling physical activity and limiting sedentary time.”¹¹⁷

*“Be active with your kids –
do things together.”*

*- Dr. Susan Sencer, director of Children’s
hematology/oncology program*

What Our Community Can Do

While Minnesota is in slightly better shape than most states when it comes to obesity, those working in the health care arena know we need to address this alarming problem with a sense of urgency.

The obvious question is, “Who is responsible for putting these approaches into practice?” The answer isn’t easy. Issues of sustainable funding, coordination, health care and wellness access, reimbursement and care delivery models all come into play. The reality is that addressing



these challenges is a shared responsibility – ensuring better implementation of the approaches discussed is not up to one group or one sector alone. Health care providers (prenatal, pediatricians, primary care), child care providers, schools, public health organizations, researchers, parent groups, policymakers and individual families all have a role to play.

Fortunately, Minnesota has a wide variety of organizations that can play a role in battling childhood obesity. As we move forward, this report simply suggests that, as a state, we need to identify opportunities to address obesity early in life and employ comprehensive and collaborative approaches that ensure attention to this issue in clinical, community and family environments.

Next Steps for Children’s

As the region’s leading provider of pediatric health care, Children’s has come face-to-face with this issue and fully understands the significance of this epidemic. Children’s is actively exploring ways to address the issue appropriate to our expertise and scope of influence as a provider of care and treatment to children. We also work with others to lend support to broader public health initiatives as well as other clinical approaches outside of our scope, such as those efforts geared toward prenatal counseling.

As we move forward, our efforts will be focused on the following:

- **Internal Care Enhancements** – Children’s pediatricians are already highly engaged in this issue and recognize the devastating health and health-cost impacts of this epidemic. While Children’s does not provide prenatal care, we do see opportunities to develop strategies for the parents and kids we see in our clinics. Our pediatricians currently collect and monitor BMI as well as provide counseling when appropriate. We are also in the process of determining the best way to work with our patients and families in a more formal obesity clinic approach. In addition, we have teamed up with community and advocacy organizations including the Minnesota Chapter of the American Academy of Pediatrics, the Minnesota Department of Health, the Minneapolis Department of Health and Family Support (with State Health Improvement Funding), Sheridan Health Clinic, Comunidades Latinas Unidas En Servicio (CLUES), and Parents in Community Action, Inc. (PICA), to implement a pilot project in the Minneapolis Latino community aimed at increasing healthy behaviors and decreasing obesity rates.

- **Partnerships** – While Children’s implements new programs and clinical approaches within our walls, we will also pursue partnerships with others to add value to efforts that reach outside of our walls. These may include community-based programs to which we lend pediatric health care expertise. For example, Children’s and HealthPartners are launching a substantial initiative to manage and prevent childhood obesity through education and programming. We are working together to create standardized and reliable coordination of care that will result in a seamless experience for children and their families.
- **Convening** – Recognizing the need for information-sharing and coordination, Children’s will identify opportunities to convene interested stakeholders, including prenatal providers, pediatricians, insurers, public health interests and community advocacy groups.
- **Advocacy** – Children’s is often engaged in coalition-based efforts to advance programs and policies geared toward improving children’s health. Beyond that, Children’s will seek opportunities to provide substantive support to efforts geared toward improving the understanding of obesity risks and tools for addressing those risks.

Moving Forward

The obesity epidemic has been described as perhaps the greatest threat to public health in our time. Obesity has a devastating impact on our physical and mental health, on our work lives and our social lives, and ultimately, on our overall well-being. Our collective efforts need to do a much better job of helping school-age children or adults achieve and maintain a healthy weight. To improve the chance of success, we must also place more focus on the youngest children. We can beat obesity by denying it the eating habits and behaviors that feed it. The time to beat obesity is before the extra pounds ever accumulate.

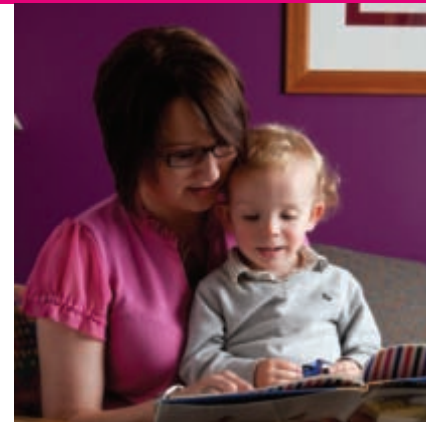
“As is the case in many chronic diseases, it’s easier and more effective to prevent obesity than it is to treat it,” said Dr. Julie Boman. “When it comes to preventing obesity, the earlier we get started with children, the better our chance of success.”

About the Children’s Check-Ups Series

Children’s Hospitals and Clinics of Minnesota partnered with the University of Minnesota State Health Access Data Assistance Center (SHADAC) to assemble data from a variety of sources to better understand how Minnesota is doing on a number of key indicators of children’s health. SHADAC’s collection of data, referred to as a “chart book” on “The Health of Minnesota’s Children,” is the foundation for Children’s Check-Ups, a series of in-depth reports designed to serve as a springboard for a statewide conversation about the health and well-being of Minnesota’s children.

More Resources

Minnesota has a wide variety of people and organizations dedicated to reducing the incidence of obesity in the state. Since there are so many different types of organizations working toward a similar goal – the state and federal governments, public schools, child care centers, health care providers, charitable endeavors and insurance companies – it is no surprise that an equally broad range of initiatives has been developed to address obesity. We have compiled a list as a resource in the interest of helping stakeholders understand much of the good work that is under way and to encourage additional collaboration among these efforts. Please find this list on Children’s website at <http://www.childrensMN.org/checkups>



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