Selected Survey Findings about: CHILDHOOD OBESITY

CCHAPS
Community-wide Children’s Health Assessment & Planning Survey
The CCHAPS Region . . . A 6-County Service Area

An estimated 612,526 children ages 0 – 14 years lived in our community in 2008.

**WISE COUNTY** – Rural
- 10 – 100 people per mile²
- and home to 11,467 children

**PARKER COUNTY** – Rural
- 10 – 100 people per mile²
- and home to 20,550 children

**HOOD COUNTY** – Rural
- 10 – 100 people per mile²
- and home to 8,820 children

**DENTON COUNTY** – Suburban
- 100– 500 people per mile²
- and home to 138,153 children

**TARRANT COUNTY** – Urban
- 1,000 – 2,500 people per mile²
- And home to 401,322 children

**JOHNSON COUNTY** – Suburban
- 100– 500 people per mile²
- home to 32,214 children

**AND GROWING:** There are 666,649 children living in the CCHAPS region in 2010 and by 2015 that number will grow to 730,215 a 9.5% growth rate!

Source: Demographics Expert 2.7 Copyright© 2008, Claritas, Inc. Thomson Healthcare and ad hoc analysis for Hand-in-Hand Program by Sean Allen, PhD
OVERWEIGHT and OBESE defined for children

According to the Centers for Disease Control and Prevention: Body Mass Index (BMI) is a number calculated from a child's weight and height. BMI is a reliable indicator of body fatness for most children and teens. For children and teens, BMI is age- and gender-specific.

**EXAMPLE**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>8 years</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
</tr>
<tr>
<td>Height</td>
<td>132.5 cm</td>
</tr>
<tr>
<td>Weight</td>
<td>30.6 kg</td>
</tr>
<tr>
<td>BMI</td>
<td>17.4</td>
</tr>
<tr>
<td>Percent</td>
<td>76.0%</td>
</tr>
<tr>
<td>Weight Status</td>
<td>Normal</td>
</tr>
</tbody>
</table>

Weight Status based on BMI results

![Weight Status based on BMI results](image)


Provided for the benefit of the children in our community by: Cook Children’s
based on 7,439 parent surveys

about children aged 0 – 14 years

who live in our six-county community

(with an accuracy of ± 1.1% - ± 1.6% at a 95% Confidence Interval)

THE SURVEY SAYS . . .
A profile of children aged 0 – 14: OBESITY

- 15.5% or nearly 95,000 children’s parents report they do not eat healthy meals
- Exercise is related to academic and behavioral problems in school
- 31.4% or more than 192,000 children are overweight or obese
- 30.5% of 2 year olds are already overweight or obese

Source: CCHAPS 2008
Children’s weight status by COUNTY

Based upon BMIs calculated from parent reported height and weight adjusted for age and gender

Average = 31%

Overweight

Obese

DENTON
n = 1,584

PARKER
n = 304

TARRANT
n = 4,424

HOOD
n = 125

JOHNSON
n = 384

WISE
n = 139

CCHAPS n = 6,960 children ages 2 - 15

Source: CCHAPS 2008
Children's weight status by RACE/ETHNICITY

Based upon BMIs calculated from parent reported height and weight adjusted for age and gender

Average = 31%

CAUCASIAN
n = 4,683
12% Overweight
17% Obese

ASIAN
n = 170
8% Overweight
25% Obese

HISPANIC
n = 1,411
13% Overweight
24% Obese

AFRICAN AMERICAN
n = 406
10% Overweight
30% Obese

MULTIRACIAL
n = 154
17% Overweight
26% Obese

Source: CCHAPS 2008
Children’s weight status by AGE

Based upon BMIs calculated from parent reported height and weight adjusted for age and gender

Average = 31%

CCHAPS n = 6,920 children ages 2 - 14

Source: CCHAPS 2008
Children's weight status and ASTHMA

Based upon BMIs calculated from parent reported height and weight and age adjusted for growth and development

Total = 30.5%

Obese, 18.3%
Overweight, 12.2%

Total = 35.1%

Obese, 23.5%
Overweight, 11.6%

"NO" to Asthma

"YES" to Asthma

CCHAPS n = 6,960 children ages 2 - 15

Source: CCHAPS 2008
Children’s weight status and BULLYING

**Been Bullied:**

<table>
<thead>
<tr>
<th>Obese or Overweight</th>
<th>&quot;Normal&quot; weight</th>
<th>Underweight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.9%</td>
<td>10.5%</td>
<td>6.2%</td>
</tr>
</tbody>
</table>

Average = 12.1%

**Bullied others:**

<table>
<thead>
<tr>
<th>Obese or Overweight</th>
<th>&quot;Normal&quot; weight</th>
<th>Underweight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3%</td>
<td>1.7%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

Average = 2.0%

CCHAPS n = 2,790 school aged children ages 5 - 14

Source: CCHAPS 2008
Children’s weight status and BULLYING by gender

Obese or Overweight

- Male: 20.0%
- Female: 12.5%

"Normal" weight

- Male: 12.5%
- Female: 8.6%

Average = 12.1%

 Been bullied or teased a lot at school = YES

CCHAPS n = 2,790 school aged children ages 5 - 14

Source: CCHAPS 2008

Provided for the benefit of the children in our community by: Cook Children’s

11
Children’s weight status and BULLYING by race/ethnicity

 Been bullied or teased a lot at school = YES

<table>
<thead>
<tr>
<th>Obese or Overweight</th>
<th>&quot;Normal&quot; weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>White or Caucasian</td>
<td>Hispanic</td>
</tr>
<tr>
<td>18.5%</td>
<td>17.9%</td>
</tr>
<tr>
<td></td>
<td>12.9%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>11.6%</td>
</tr>
<tr>
<td>12.9%</td>
<td>7.4%</td>
</tr>
<tr>
<td>African American</td>
<td>4.2%</td>
</tr>
</tbody>
</table>

Average = 12.1%

CCHAPS n = 2,790 school aged children ages 5 – 14
For all other races/ethnicities the data was too few to be meaningful

Source: CCHAPS 2008
## Let’s compare answers about weight . . .

<table>
<thead>
<tr>
<th></th>
<th>Denton</th>
<th>Hood</th>
<th>Johnson</th>
<th>Parker</th>
<th>Tarrant</th>
<th>Wise</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OVERWEIGHT &amp; OBESE</strong></td>
<td>29%</td>
<td>33%</td>
<td>33%</td>
<td>31%</td>
<td>32%</td>
<td>42%</td>
<td>31%</td>
</tr>
<tr>
<td>Are you concerned that this child may be <em>overweight?</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Answer = YES</em></td>
<td>7.3%</td>
<td>7.8%</td>
<td>9.5%</td>
<td>8.0%</td>
<td>13.1%</td>
<td>3.8%</td>
<td>15.5%</td>
</tr>
<tr>
<td>Are you concerned that this child may be <em>underweight</em>?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Answer = YES</em></td>
<td>5.4%</td>
<td>4.7%</td>
<td>5.9%</td>
<td>4.0%</td>
<td>5.0%</td>
<td>5.1%</td>
<td>5.1%</td>
</tr>
<tr>
<td>Has this child ever been bullied or teased a lot at school*? <em>Answer= YES</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obese or overweight</td>
<td>14.0%</td>
<td></td>
<td>23.0%</td>
<td>14.0%</td>
<td>17.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Normal” weight</td>
<td>8.4%</td>
<td></td>
<td>7.6%</td>
<td>13.1%</td>
<td>11.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underweight</td>
<td>Insf. data</td>
<td>Insf. data</td>
<td>Insf. data</td>
<td>Insf. data</td>
<td>Insf. data</td>
<td>Insf. data</td>
<td></td>
</tr>
<tr>
<td>How many minutes did your child watch television or play video games yesterday*? <em>Answer &gt; 2hours</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9.8%</td>
<td>1.9%</td>
<td>10.5%</td>
<td>12.4%</td>
<td>12.5%</td>
<td>5.5%</td>
<td>11.4%</td>
</tr>
</tbody>
</table>

*school age children only, n = 2,790

*Insf. Data = too few data to be meaningful

Source: CCHAPS 2008
Children's weight status and HOURS OF SCREEN TIME

<table>
<thead>
<tr>
<th>Weight Status</th>
<th>Screen Time &gt;2 Hours</th>
<th>Screen Time &lt;2 Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under weight, 6.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;Normal&quot; weight, 45.1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obese or Overweight, 35.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under weight, 7.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;Normal&quot; weight, 45.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obese or Overweight, 31.4%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CCHAPS n = 2,756 school aged children ages 5 - 14

Source: CCHAPS 2008
CHILDHOOD OBESITY: Nutrition Issues

CCHAPS
Community-wide Children’s Health Assessment & Planning Survey

Provided for the benefit of the children in our community by: Cook Children’s
6-County community: 94,941 children (15.5%) do not eat healthy meals

- 16.1% or 2,299 children
- 19.4% or 3,987 children
- 11.9% or 1,050 children
- 19.0% or 6,121 children
- 13.2% or 18,236 children
- 15.9% or 63,815 children

Source: CCHAPS 2008
Do you believe this child eats healthy meals?  “NO”

Overall: 15.5%

CCHAPS n = 7,439

Source: CCHAPS 2008
Healthy meals and children’s age and gender

The proportion of the children who typically eat healthy meals decreases with age, from 85.0% in 7–8 years to 77.3% in 13–14 years, and is associated with an increase in the proportion of the children who eat non-healthy meals, from 15.0% to 22.7%. Both boys and girls show the same changes with age; so, there is no gender related difference.

Source: CCHAPS 2008 analysis by Xiangrong Shi, Ph.D., Associate Professor, Department of Integrative Physiology, University of North Texas Health Science Center.
Children’s health status and eating healthy meals

Significantly more parents rate their children’s health as poor, fair or good when the those parents also believe that child does not eat healthy meals.

Children who do not eat healthy meals are significantly less likely to enjoy very good or excellent health as rated by parents.

Source: CCHAPS 2008 analysis by Xiangrong Shi, Ph.D., Associate Professor Department of Integrative Physiology, University of North Texas Health Science Center

CCHAPS n = 3,708 school aged children 7 - 14

Provided for the benefit of the children in our community by:
Healthy meals and children’s weight status

Based upon BMIs calculated from parent reported height and weight and age adjusted for growth and development

There is no difference in parent reported dietary quality for children whose BMI places them in the underweight status.

More children who eat healthy meals score a normal weight status based on their BMI.

Children whose BMI places them in the overweight and obese status are significantly less likely to eat healthy meals.

Eats healthy meals

Does not eat healthy meals

CCHAPS n = 3,708 school aged children 7 - 14

Source: CCHAPS 2008 analysis by Xiangrong Shi, Ph.D., Associate Professor
Department of Integrative Physiology, University of North Texas Health Science Center
Healthy meals and children’s performance in school

Children not eating healthy meals are 1.6 times more likely to experience academic problems than those eating healthy meals.

Children not eating healthy meals are 2.0 times more likely to experience behavior problems in school than those eating healthy meals.

CCHAPS n = 3,708 school aged children 7 - 14

Source: CCHAPS 2008 analysis by Xiangrong Shi, Ph.D., Associate Professor, Department of Integrative Physiology, University of North Texas Health Science Center
## Let’s compare answers about nutrition . . .

<table>
<thead>
<tr>
<th>Question</th>
<th>Denton</th>
<th>Hood</th>
<th>Johnson</th>
<th>Parker</th>
<th>Tarrant</th>
<th>Wise</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OVERWEIGHT &amp; OBESE</strong></td>
<td>29%</td>
<td>33%</td>
<td>33%</td>
<td>31%</td>
<td>32%</td>
<td><strong>42%</strong></td>
<td>31%</td>
</tr>
<tr>
<td>Do you think this child eats healthy meals?</td>
<td>13.2%</td>
<td>11.8%</td>
<td>19.0%</td>
<td><strong>19.4%</strong></td>
<td>15.9%</td>
<td>16.15</td>
<td><strong>15.5%</strong></td>
</tr>
<tr>
<td><strong>Answer = NO</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does this child receive free or discounted meals at school?</td>
<td>4.9%</td>
<td>17.2%</td>
<td>17.2%</td>
<td>8.0%</td>
<td>14.4%</td>
<td>11.4%</td>
<td><strong>12.2%</strong></td>
</tr>
<tr>
<td><strong>Answer = YES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does this child receive assistance from WIC?</td>
<td>2.3%</td>
<td>3.1%</td>
<td>5.9%</td>
<td>4.7%</td>
<td>4.0%</td>
<td><strong>12.7%</strong></td>
<td>3.9%</td>
</tr>
<tr>
<td><strong>Answer = YES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you receive food stamps for this child?</td>
<td>1.9%</td>
<td>6.2%</td>
<td><strong>9.0%</strong></td>
<td>4.7%</td>
<td>4.6%</td>
<td>5.1%</td>
<td>4.3%</td>
</tr>
<tr>
<td><strong>Answer = YES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How often do you talk to this child about healthy eating habits?</td>
<td>24.7%</td>
<td>28.2%</td>
<td>25.8%</td>
<td><strong>33.9%</strong></td>
<td>24.6%</td>
<td>22.4%</td>
<td><strong>25.1%</strong></td>
</tr>
<tr>
<td><strong>Answer = Monthly or less</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are there grocery stores in your neighborhood that have fresh fruits and vegetables?</td>
<td>2.6%</td>
<td>0.7%</td>
<td>2.9%</td>
<td>3.5%</td>
<td>2.3%</td>
<td><strong>13.5%</strong></td>
<td>2.7%</td>
</tr>
</tbody>
</table>

*Source: CCHAPS 2008*
Is Wise County a food “desert”?

Shading on the map indicates if a block group is a part of a Low Access Area (LAA), according to TRF's Supermarket Study of Low Access Areas. LAAs were determined based on low/moderate-income communities' distances from supermarkets, as compared to similar higher-income counterparts.

**SOURCE:** TRF and Capital at the Point of Impact Web site
CHILDHOOD OBESITY: Activity Issues

CCHAPS
Community-wide Children’s Health Assessment & Planning Survey
Exercise and children’s age and gender

The number of children **not exercising** increases as children grow older –

- girls are more likely to not exercise

The number of children who **exercise 4 or more days a week** decreases as children grow older –

- girls are less likely to exercise

---

**Source:** CCHAPS 2008 analysis by Xiangrong Shi, Ph.D., Associate Professor
Department of Integrative Physiology, University of North Texas Health Science Center
There are fewer children whose parents rate their child’s health as poor and fair the more days the children exercise.

Children whose health is rated good are less affected by the number of days of physical activity.

Increasing the number of days of exercise has the greatest impact on increasing the number of children whose parents rate their health as very good and excellent.

CCHAPS n = 3,708 school aged children 7 - 14
Children’s weight status and physical activity

Based upon BMIs calculated from parent reported height and weight and age adjusted for growth and development

Children whose BMI places them in the **underweight** status show no significant difference based on how often they exercise.

Children who exercise, increasingly achieve a **normal** weight status based on their BMI as the number of days exercised increases.

Increasing the number of days of exercise has the greatest impact on reducing the number of children whose BMI places them in the **overweight and obese** status.

CCHAPS n = 3,708 school aged children 7 - 14

Source: CCHAPS 2008 analysis by Xiangrong Shi, Ph.D., Associate Professor
Department of Integrative Physiology, University of North Texas Health Science Center
PHYSICAL ACTIVITY and performance in school

- Academic Problems:
  - None: 14%
  - 1-3 Days: 9%
  - 4-6 Days: 7%
  - 7 Days: 5%

- Behavior Problems:
  - None: 11%
  - 1-3 Days: 10%
  - 4-6 Days: 5%
  - 7 Days: 4%

CCHAPS n = 7,439

Source: CCHAPS 2008
Children’s activity and HOURS OF SCREEN TIME

<table>
<thead>
<tr>
<th>Screen Time &gt;2 Hours</th>
<th>Screen Time &lt;2 Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Exercise, 4.7%</td>
<td>No Exercise, 2.0%</td>
</tr>
<tr>
<td>4 days or more, 67.4%</td>
<td>4 days or more, 77.7%</td>
</tr>
</tbody>
</table>

CCHAPS n = 2,774 school aged children ages 5 - 14

Source: CCHAPS 2008
Let’s compare answers about activity . . .

<table>
<thead>
<tr>
<th></th>
<th>Denton</th>
<th>Hood</th>
<th>Johnson</th>
<th>Parker</th>
<th>Tarrant</th>
<th>Wise</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>OVERWEIGHT &amp; OBESE</td>
<td>29%</td>
<td>33%</td>
<td>33%</td>
<td>31%</td>
<td>32%</td>
<td>42%</td>
<td>31%</td>
</tr>
<tr>
<td>How many days did this child do at least 30 minutes of physical exercise during the past 7 days?</td>
<td>17.0%</td>
<td>9.5%</td>
<td>19.5%</td>
<td>15.9%</td>
<td>24.6%</td>
<td>13.5%</td>
<td>21.7%</td>
</tr>
<tr>
<td>Answer = 3 days or less</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel that my child is safe in our neighborhood.</td>
<td>1.7%</td>
<td>6.2%</td>
<td>3.5%</td>
<td>2.0%</td>
<td>5.4%</td>
<td>0.0%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Answer = Disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel that my child is safe in school.</td>
<td>0.8%</td>
<td>1.6%</td>
<td>0.0%</td>
<td>1.2%</td>
<td>2.4%</td>
<td>2.5%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Answer = Disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are there safe parks / outdoor areas for your child to play in the neighborhood where you live?</td>
<td>5.4%</td>
<td>16.3%</td>
<td>18.1%</td>
<td>15.3%</td>
<td>9.5%</td>
<td>20.6%</td>
<td>9.6%</td>
</tr>
<tr>
<td>Answer = NO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How many minutes did your child watch television or play video games yesterday?</td>
<td>9.5%</td>
<td>4.2%</td>
<td>10.3%</td>
<td>10.3%</td>
<td>10.8%</td>
<td>3.9%</td>
<td>10.2%</td>
</tr>
<tr>
<td>Answer = more than 2 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: CCHAPS 2008
Cook Children’s is committed to...

Giving our community access to the data and the tools to act

Continuing to use the data to research, understand and communicate children’s health issues and potential solutions

Creating a “Center for Children’s Health” to sustain this effort
The Decade of the Child: Healthy Children 2020

Call to Action
The Decade of the Child: Healthy Children 2020

How to get involved...

Children’s health issues are so complex that making a significant difference is a grand journey. It is a journey that is best taken with the right equipment and with the right company. The CCHAPS journey is just beginning and will evolve over time, but here are the first few steps you can take now:

- Explore our Web site at [www.cchaps.org](http://www.cchaps.org) to learn more about CCHAPS and the children’s health issues in our 6-counties.
- Use the data to define and understand a children’s health issue that is important to you.
- Use the tools to begin to build collaborations and act on the data for that issue.
- Contact us to discuss how we can work together to make this 6-county region the healthiest place for children by 2020.
- Visit our Web site often or follow us on [Facebook](https://www.facebook.com) as the CCHAPS journey unfolds.

And,

Thanks for working to make a difference in the life of a child!