Health Promotion

Both physical activity and nutrition are important elements in promoting health. Regular physical activity and healthy eating can reduce the risk of many health issues such as overweight, hypertension, heart disease, stroke, certain cancers and anxiety and depression.

Tobacco use remains the number one preventable cause of death and disease in the United States and in North Carolina. Research consistently demonstrates the numerous health consequences of tobacco use. Smoking is associated with an increased risk of at least 15 different types of cancer.[1] Approximately 30% of all cancer deaths and nearly 90% of lung cancer deaths – the leading cancer death among men and women - are caused by smoking.[2]

This chapter includes:

Section 5.01 *Physical activity*

Overview

Physical activity is an important factor affecting overall health and body weight. Regular physical activity reduces the risk of overweight and obesity, hypertension, heart disease, stroke, certain cancers, anxiety and depression, along with strengthening bones and muscles and improving general well-being.[3] Physical inactivity is a major behavioral risk factor for these and other chronic disabling diseases.

Weight gain results from an energy imbalance, and when more calories are consumed than are expended, individuals are at risk for gaining weight. Physical activity helps maintain the proper energy balance by increasing the calories that are expended. Decreased physical activity may be caused by increased screen time, poor access to safe recreational facilities, decreased active or playtime for youth and adults, and a built environment that does not encourage active living.[4]

Regular physical activity in youth is very important to their overall well-being and promotes health and fitness. Young people with healthy physical behaviors are more likely to continue leading active lifestyles as adults. Physical activity has been proven to reduce both body fat and abdominal fat in children who are overweight and to decrease the risk of chronic diseases such as obesity, hypertension, osteoporosis, and type 2 diabetes that were once primarily associated with adults.[5] There is also research to support the connection between children's physical fitness levels and positive academic outcomes. Therefore, physical activity may also have an important impact on education, in addition to health.[6]

Overweight and obesity affects more than 65% of both Durham County and North Carolina's adult populations and are associated with a variety of chronic diseases; in fact, North Carolina ranks 5th worst in the U.S. for childhood obesity.[7] Four of the ten leading causes of death in North Carolina are related to obesity: heart disease, type 2 diabetes, stroke, and some kinds of cancer.[8] Physical activity is recommended as an important part of weight management by virtually all public health agencies and scientific organizations including the National Heart, Lung and Blood Institute.[9]

Healthy NC 2020 Objective

Health Promotion

Healthy NC 2020 Objective[10]	Current Durham	Current NC[11]	2020 Target
1. Increase the percentage of adults getting the recommended amount of physical activity.	42.9% (2009)[12]	46.4% (2009)	60.6%

Durham County is currently not meeting the Healthy Carolinians 2020 Objective for the recommended amount of physical activity for adults. The recommendation is for adults to have at least 30 minutes of moderate intensity physical activity such as walking five days per week or at least 20 minutes of vigorous-intensity physical activity such as jogging three days per week.[13] In 2009, 42.9% Durham residents were meeting the recommendations, which is slightly lower than the state at 46.4%.[14]

Secondary Data: *Major Findings*

Physical inactivity is an independent risk factor in multiple diseases and conditions, including obesity and overweight, type 2 diabetes, heart disease, stroke, hypertension, and colon and breast cancers.[15] Lack of physical activity is a risk factor for four of Durham's five leading causes of death from 2005-2009: cancer, heart disease, cerebrovascular disease and diabetes.[16] Overweight and obesity are also risk factors for those causes of death. Durham's rates of overweight/obesity of about 65% in adults, 28.3% in high school students, and 18% in kindergartners[17] would be positively impacted by increased physical activity.

Physical inactivity costs North Carolinians approximately $11.9 billion annually in health care-related issues.[18] This amount includes $2.32 billion in medical costs, $0.79 billion in prescription drug costs, and $8.79 billion in lost productivity.[19] Possible savings related to increased physical activity have been repeatedly demonstrated; for example, walking associated with use of public transportation could save $5,500 per person in 2007 dollars.[20]

Multiple studies, many quoted in the brief *Active Education: Physical Education, Physical Activity, and Academic Performance*, which is a summary of peer-reviewed research, have noted the positive associations between increased physical activity and improved academic performance, better behavior, and decreased school absenteeism.[21] Studies quoted in this brief showed either no influence or a positive influence of increased physical education or physical activity time during the school day on academic performance. A major study from the Cooper Institute was particularly persuasive. When more than 2.59 million Texas public school students in grades 3-12 were tested using FITNESSGRAM in the spring of 2008, significant associations were found consistently and positively between physical fitness and the following:

- Better academic performance
- Increased school attendance
- Decreased negative school incidents (improved behavior).[22]

In several cases, increases in physical activity and the resultant behavioral changes can bring about economic benefits. Every day that a student is not in the classroom costs the school system funding, so improved attendance saves the school money. If student behavior improves, costly interventions may be avoided, also decreasing school costs. Not only does increased physical activity produce health benefits, it can also improve financial health on multiple levels.

Primary Data

2010 Durham County Community Health Opinion Survey[23]

The role physical activity plays in the prevention of health-related issues does not go unnoticed by the Durham community. Results of the 2010 Durham County Community Health Opinion Survey show that close to 45% of Durham residents exercise 20 to 30 minutes three to five times a week. These results are depicted in Figure 5.01(a) below.

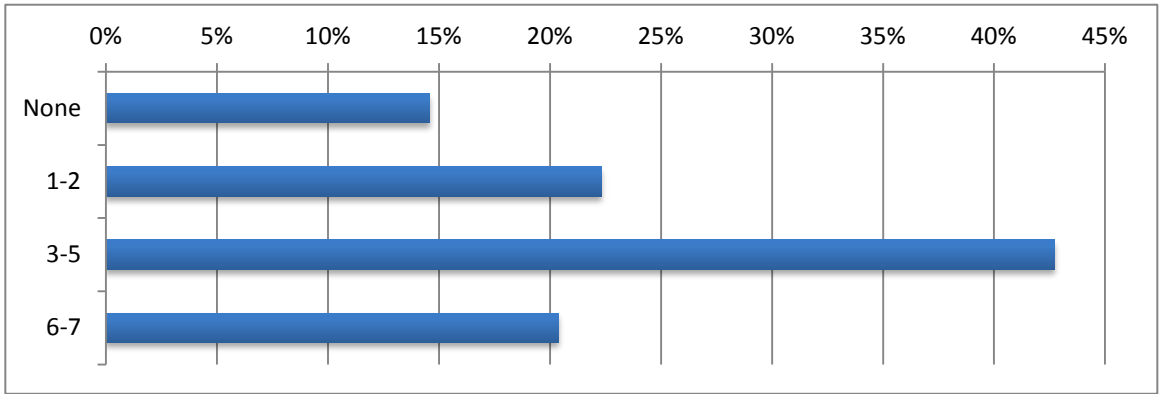


Figure 5.01(a) "How many days per week do you exercise for 20-30 minutes?"

Survey results, as shown in Figure 5.01(b), showed that Durham residents are most likely to engage in physical activity in their neighborhood, home or private gym:

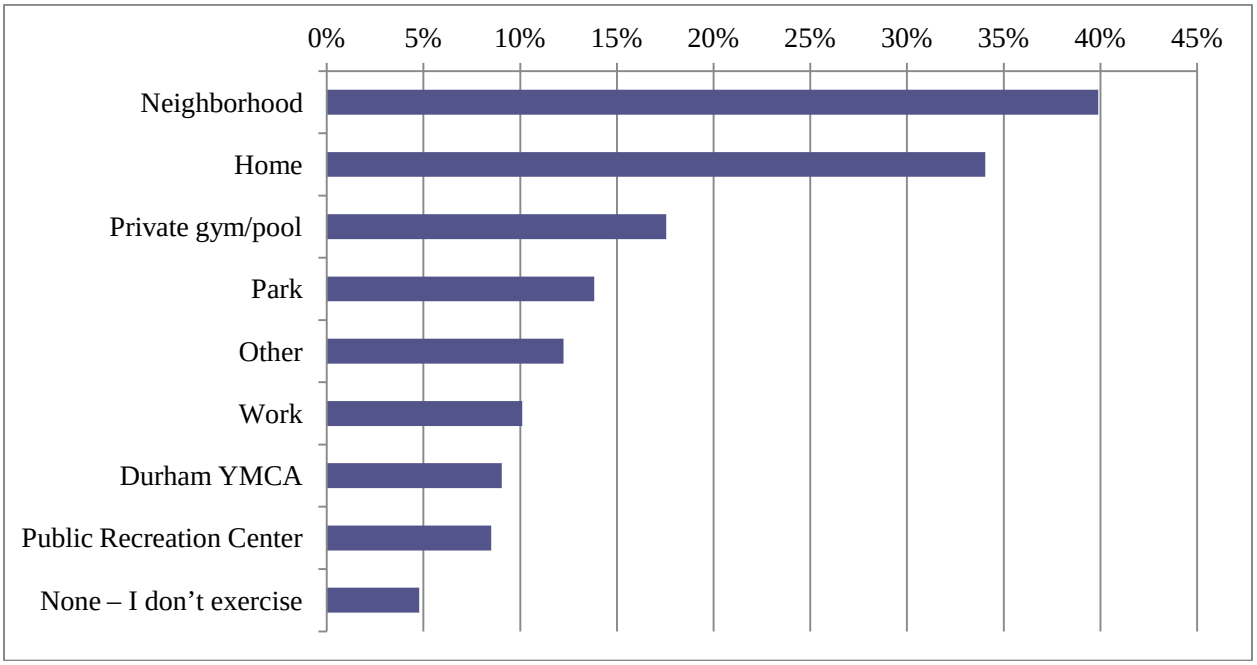


Figure 5.01(b) "Where do you exercise?"

Additionally, when survey respondents were asked, *"What one thing would make Durham County or your neighborhood a healthier place to live?"* the number one response was the category that included healthy eating, nutrition and exercise.

Durham Health Innovations (DHI)[24]

As a step in the process of creating interventions to reduce obesity in Durham, DHI's Achieving Health for a Lifetime (AHL) team conducted focus groups with individuals in the city of Durham. The groups were small, generally five to six people, and were made up of the following populations: adolescent females, Spanish-speaking obese or overweight parents of obese or overweight children, English speaking obese or overweight parents of obese or overweight children, and formerly obese or overweight adults who had lost weight and maintained the loss for over a year. Members of each group were asked questions planned by the researchers and given time to respond in as many ways as they chose. Answers were listed, ranked and prioritized by participants. Below are the highlights:

In answer to the question, *"What methods do you believe work best to lose weight or maintain a healthy weight?"* adolescents' first answer was "daily exercise." Variations of this question were asked to other groups with the following results:

- From the weight-loss maintainers: exercise was the second choice for maintaining weight loss.
- From Spanish-speaking obese/overweight parents of obese/overweight children: exercise tied with healthy eating for first choice.
- Inactive entertainment was the third choice answer from English-speaking obese/overweight parents of obese/overweight children to a question about what might have caused their son's or daughter's overweight.
- Lack of exercise was also cited as the number one reason for weight gain by Spanish-speaking obese/overweight parents of obese/overweight children. "They [my kids] spend a lot of time watching TV and don't exercise."

> "They keep telling us how much "safer" it is than wherever; that's all fine and good, but the point is that it ain't really SAFE yet. You still can't walk alone after dark."
>
> "…[K]ids need things to do, too, so they don't sit at home eating junk and watching TV…."
>
> *--interviews with residents of Northeast Central Durham*

For the health of all of its citizens, but particularly for its low-income citizens who live in unsafe areas, Durham County must creatively address the need for increased physical activity.

Mental health (YRBS and BRFSS)

In another area of health concern, 22% of middle school and 30% of high school students in Durham Public Schools reported feeling sad or helpless.[25] Additionally, 36% of Durham County adults surveyed in the North Carolina Behavioral Risk Factor Surveillance Survey (BRFSS) System reported that their mental health was not good on at least one day in the previous month.[26] Because physical activity can reduce depression and improve general well-being,[27] moving toward recommended levels of physical activity can positively impact mental health.

Youth Risk Behavior Survey (YRBS)[28]

According to the 2009 YRBS in Durham Public Schools (DPS), middle and high school students were less likely to receive recommended levels of physical activity than the average middle school student in North Carolina. Of note are disparities by race and gender; whites reported more physical activity than Blacks or Hispanics and males reported more activity than females.

Additionally, a far higher percentage of DPS middle and high school students watched three or more hours of TV on an average school day when compared to their peers statewide. Black students in DPS were more likely than expected to watch at least five hours of TV, whereas white students were more likely than expected to watch one hour or less of TV per day.

A higher percentage of DPS middle school students played video or computer games or used a computer for something that was not school work three or more hours on an average school day than middle school students in North Carolina or the Central Region. DPS Black and Hispanic students were more likely than expected to exhibit this behavior than the rest of the state or the Central Region, and whites were less likely to do so; see Table 5.01(a) below.

Table 5.01(a) **2009 Middle and High School Physical Activity YRBS Data**[29]

			Durham Sub-Groups				
	Durham	**NC**	**Whites**	**Blacks**	**Hispanic**	**Male**	**Female**
Middle School							
Active 60 min on last 5 of 7 days	56%	60%	78%	52%	43%	68%	46%
Watched 3 or more hours of TV/day	52%	38%	30%	62%	55%	51%	53%
Played video game or used computer for non-school project 3 or more hours/day	33%	26%	37%	42%	19%	37%	28%
Walk or ride bikes to school	21%	18%	8%	26%	15%	21%	21%
High School							
Active 60 min on least 5 of 7 days	38%	46%	45%	36%	29%	52%	28%
Watched 3 or more hours of TV/day	41%	36%	21%	50%	42%	39%	43%
Played video game or used computer for non-school project 3 or more hours/day	24%	24%	25%	25%	19%	29%	20%

2009 Behavioral Risk Factor Surveillance System (BRFSS)[30]

According to 2009 BRFSS data, less than 50% of adults surveyed in Durham and throughout North Carolina reported doing moderate physical activity for at least 30 minutes per day, five days per week, with Durham adults being somewhat less likely than those statewide to be active (see Table 5.02 (b) below for details). Discrepancies of note within sub-groups include:

- Males are more active than females.
- Those with some college education are more active than those without.
- Those with incomes above $50,000 are more active than those with lower incomes.

Table 5.01(b) **Moderate Physical Activity in Durham (and sub-groups) and North Carolina Adults**[31]

Group	Yes*	No
Durham	42.9%	57.1%
North Carolina	46.4%	53.6%
Male	50.3%	49.7%
Female	36.3%	63.7%
White	48.1%	51.9%
Other race	41.0%	59.0%
Age 18-44	43.9%	56.1%
Age 45+	40.9%	59.1%
≤ High school education	34.5%	65.5%
Some college+	47.6%	52.4%
Income < $50,000	37.4%	62.6%
Income $50,000+	49.0%	51.0%

*Yes = Respondents who reported doing moderate physical activity for 30 or more minutes per day, five or more days per week or respondents who reported doing vigorous physical activity for 20 or more minutes per day, three or more days per week.

Barriers

Physical activity patterns in the U.S. have changed dramatically over time; as rates of physical activity have decreased in our country, obesity and overweight rates have increased. The survey respondents of the 2010 Durham County Community Health Opinion Survey cited many barriers to engaging in regular physical activity such as lack of time, lack of access to convenient facilities, dislike for outdoor and sometimes indoor activities, a lack of motivation, a lack of support from family/friends and a lack of safe environments in which to be active. These results are depicted in Figure 5.01(c) below.[32]

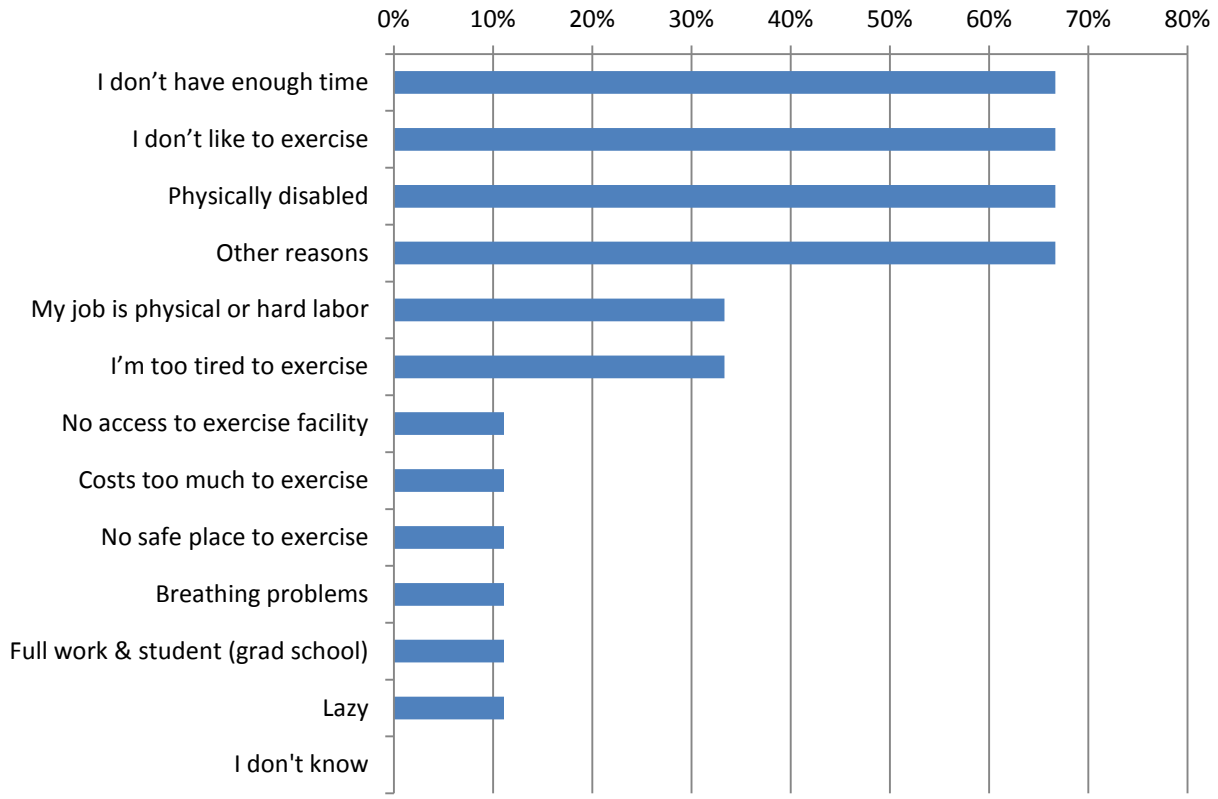


Figure 5.01(c) Barriers to exercising

Of the reasons given, access, cost and safety can be addressed through collaborative community, organization and worksite efforts.

Interpretations: *Disparities, gaps, emerging issues*

Disparities

Racial and economic disparities in physical activity continue to exist. From surveys of both youth and adults it is apparent that no group in Durham is getting close to the recommended amount of physical activity on a regular basis, but certain groups are lacking more than others; females and non-whites at every age level and adults without college education and with incomes below $50,000, as shown in Table 5.01(b) above. Behaviors like television-watching and computer use for non-active recreation interfere with active time and are an issue in all groups. Non-whites at both the middle and high school levels are most likely to engage in these behaviors (black students for both behaviors and Hispanic students for television-watching) making these groups prime targets for behavior change interventions in this area.

Gaps and Unmet Needs

Durham offers many opportunities for physical activity, but not all Durham residents are easily able to take advantage of these. Safety is a major deterrent to outdoor activity in many neighborhoods. Cost and access to recreation facilities compound the problem, especially for residents of lower-income areas.

The creation of built environments that foster physical activity must be a priority in order to increase the physical activity levels of Durham citizens. Particular attention must be paid to the high crime areas of Durham, which have low access to safe outdoor spaces for physical activity.

Schools with inadequate opportunities for physical activity must redouble their efforts to increase these opportunities in schools and should monitor the minutes of physical education (PE), taught by a qualified PE teacher, and physical activity (PA) students have. Reducing or eliminating PE or PA in order to gain instructional time for reading and math should be heavily discouraged and is counterproductive to improving academic performance.

Emerging Issues

Children are spending less time in physical education classes in the public schools. Schools are under intense pressure from federal, state, and local governments to improve scores on standardized tests in reading and math. Physical education (PE) is not a tested subject, and as such, student participation in PE may be on the decline as schools attempt to gain more time for literacy and math instruction. This focus on academic subjects at the expense of physical activity is not only a barrier to students' getting adequate physical activity; it also discounts the value of that physical activity has in improving academic performance.

Likewise, the amount of screen time for children has increased over the past few decades. As discussed in the section above, YRBS data show that Durham adolescents spend more time in front of a screen than average adolescents in North Carolina.[33] Students also get less physical activity in school, due in part to increased accountability for reading and math test scores. The decrease in physical activity can also be attributed to the fact that fewer children walk or bike to school.

The development of new and improved technology presents an opportunity for physical activity that did not exist in previous years. To address some of the barriers to physical activity, such as a lack of interest in outdoor activities, unsafe neighborhoods, inclement or weather that is not ideal, active video games (AVGs) have been suggested as a course to increase physical activity, especially in children. A recent review of 12 studies that explored energy expenditure during AVG play found that AVGs, such as the Wii Fit, do increase physical activity in children, adolescents and some adults.[34] Figure 5.01 (d) below illustrates the amount of time children, ages ranging from six to 18, spend playing active video games.

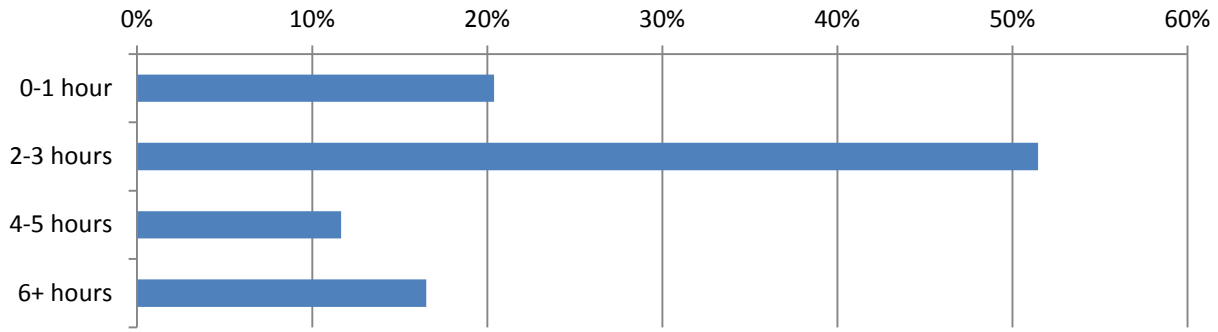


Figure 5.01(d) Time Spent Using the Computer for Physically Active Games[35]

Recommended Strategies

Table 5.01 (c) **Evidence-based Resources and Promising Practices** [36]

Category	Name	Description	Website	Matching 2010 Objective
School	Take 10	Take 10 is a classroom-based physical activity program for kindergarten to fifth grade students. This curriculum tool was created by teachers for teachers and students. It integrates academic learning objectives with movement. Materials contain safe and age-appropriate 10-minute physical activities and creatively incorporates the innovative use of the Take 10! Crew.	http://www.take10.net/whatistake10.asp	Physical Activity & Nutrition Objective 1
Community	"Lighten up Iowa!"	Encourages residents to get involved in a program that promoted physical activity and improved nutrition	http://activelivingbydesign.org/sites/default/files/Iowa.pdf	Physical Activity & Nutrition Objective 1, 2, & 3
Individual	A New Leaf	A New Leaf... Choices for Healthy Living is a structured nutrition, physical activity, and smoking cessation assessment and intervention program for cardiovascular disease (CVD) risk reduction among low-income individuals residing in the southeastern U.S.	http://www.hpdp.unc.edu/WISEWOMAN/newleaf.htm	Physical Activity & Nutrition Objective 2

CDC and US DHHS Guidelines for Physical Activity for Children and Adolescents:[37]

- Children and adolescents should participate in 60 minutes or more of physical activity daily.
    - **Aerobic**: Most of the 60 or more minutes should be moderate- or vigorous-intensity aerobic physical activity, and should include vigorous-intensity physical activity at least 3 days a week.
    - **Muscle-strengthening**: Part of their 60 or more minutes of daily physical activity should include muscle-strengthening physical activity on at least 3 days of the week.
    - **Bone-strengthening**: Part of their 60 or more minutes of daily physical activity, should include bone-strengthening physical activity on at least 3 days of the week.

North Carolina is fortunate to have a statewide movement, Eat Smart Move More, which promotes increased opportunities for healthy eating and physical activity wherever people live, learn, earn, play and pray. Eat Smart Move More works to help communities, schools and businesses make it easy for people to eat healthy food and be physically active. It also encourages individuals to think differently about what they eat and how much they move, and to make choices that will help them feel good and live better.[38] Through the movement, a number of resources are available at no charge to the public.

One recommendation to increase physical activity is to implement Eat Smart, Move More community-wide obesity prevention strategies, that include (in relation to physical activity):

- Building active living communities
- Supporting joint use of recreational facilities
- Supporting school-based and school-linked health services
- Encouraging service and community organizations to offer campaigns and promotions, individual and group education, provide supportive relationships, provider education and initiate policy and environmental changes.

Such strategies should all aim towards positive behavior change, increase awareness, knowledge and skills, as well as provide social support.

One of the North Carolina Institute of Medicine's (NCIOM) Prevention Action Plan's priority recommendations is that the State Board of Education implements quality PE and Healthful Living programs in schools. Durham should be a leader and begin implementing these recommendations as follows:

1. Quality physical education that includes 150 minutes of elementary school physical education weekly.
2. 225 minutes weekly of Healthful Living curriculum in middle schools, and 2 units of Healthful Living curricula as a graduation requirement for high schools. The new requirement for middle and high school should require equal time for health and physical education.[39]

Another evidence-based strategy for increasing physical activity within the school setting is the use of Energizers.[40] Energizers are classroom-based physical activities that help teachers integrate physical activity with academic concepts. These are short (about 10 minute) activities that classroom teachers can use to provide physical activity to children in accordance with the request from the North Carolina State Board of Education's Healthy Active Children Policy. While they are already in use in some Durham Public Schools, implementation should be expanded to all schools.

Current Initiatives & Activities

- North Carolina has the Healthy Active Children Policy which requires 30 minutes of physical activity per day for students in grades K-8 and an annual report to the state on meeting this requirement.[41]

  Website: http://www.nchealthyschools.org/components/healthyactivechildrenpolicy

- Durham Public Schools has a local Wellness Policy with standards for daily physical activity, and the system requires schools to provide recess to elementary students each day. Classroom teachers have access to 10-minute energizers that can be incorporated into their daily lessons. All new schools have sidewalks and bike racks to encourage walking and biking to school, and many schools host walk or bike to school days. DPS also encourages after-school physical activity in school-based programs and through the distribution of recreational athletic league registration forms.[42]

  Website: http://dpsnc.net/about-dps/district-policies/523/3021-school-wellness-policy/?searchterm=Wellness%20Policy

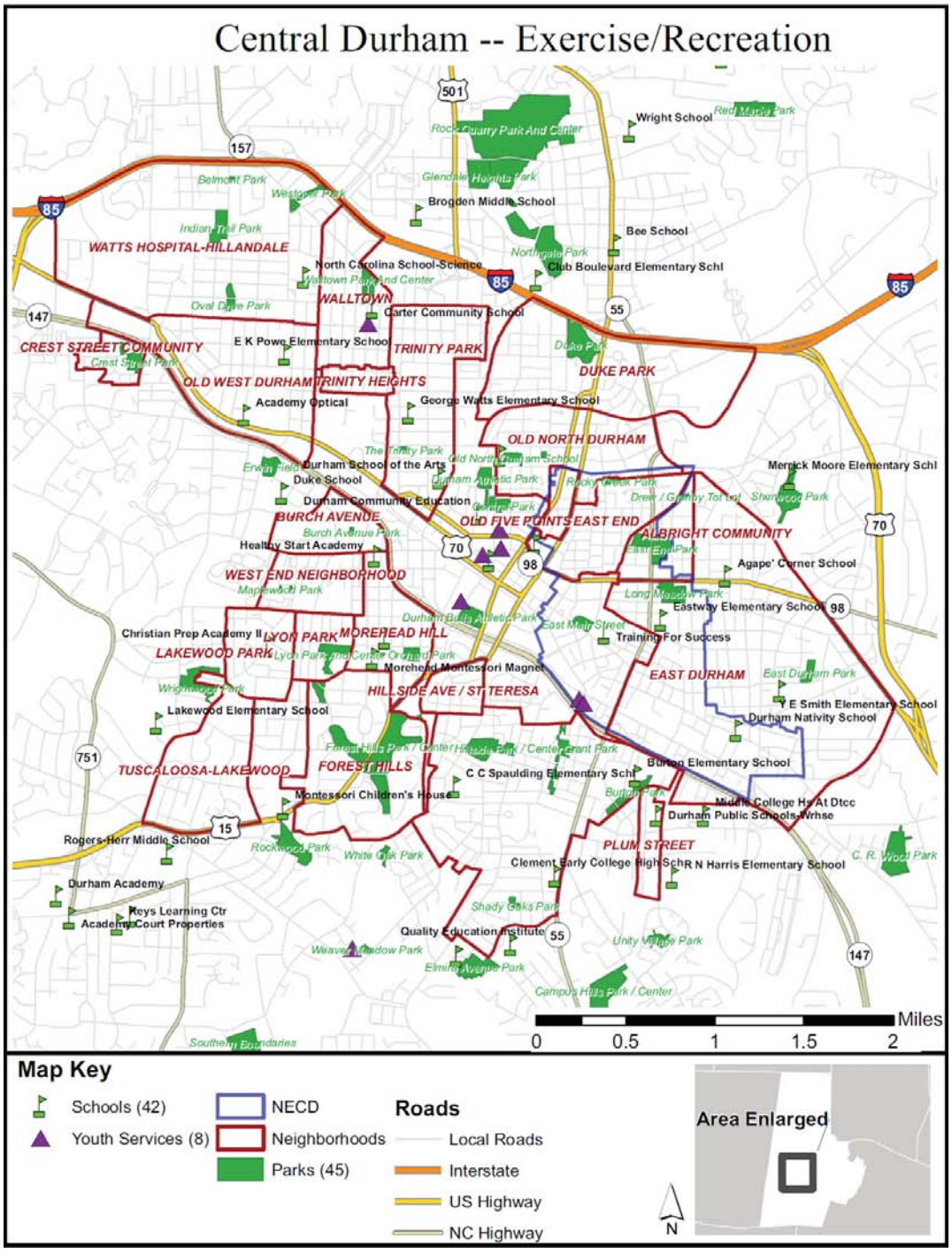
- SPARK and IsPOD
  Durham Public Schools participates in the program, IsPOD: In School Prevention of Obesity and Disease which uses the Sports, Play, and Active Recreation for Kids (SPARK) curriculum in K-8 Physical Education classes. SPARK is a research-based physical education program designed to increase moderate-to-vigorous physical activity, improve fitness levels and sport skills, and enhance the enjoyment of physical education among students. [43]

- **Identified physical activity resources in Durham County**
  Durham has a variety of choices for free and low cost physical activity resources. It is home to 66 parks with varied amenities. The parks and recreation centers are located throughout the city and offer playgrounds, group fitness classes, summer camps and several activities for youth and adults of all ages. In addition, the fields and outside equipment of 28 elementary and 9 middle schools are available for public use after school hours. The Partnership for a Healthy Durham developed a brochure and collaborated with the City of Durham's IT

Department to develop an interactive tool that identifies no or low costs resources for physical activity and places to get fresh fruits and vegetables.

Website: http://www.healthydurham.org
Phone number: (919) 560-7833

- **Identified physical activity resources in Durham County, additional information**
  As part of its efforts to identify physical activity and recreation resources in central Durham, Durham Health Innovations developed a map highlighting these resources.[44]


Central Durham -- Exercise/Recreation
WATTS HOSPITAL-HILLANDALE
WALLTOWN
CREST STREET COMMUNITY
OLD WEST DURHAM
TRINITY HEIGHTS
TRINITY PARK
DUKE PARK
OLD NORTH DURHAM
BURCH AVENUE
OLD FIVE POINTS
EAST END
ALBRIGHT COMMUNITY
WEST END NEIGHBORHOOD
LYON PARK
MOREHEAD HILL
LAKEWOOD PARK
HILLSIDE AVE / ST TERESA
EAST DURHAM
TUSCALOOSA-LAKEWOOD
FOREST HILLS
PLUM STREET
Wright School
Brogden Middle School
Bee School
Club Boulevard Elementary Schl
North Carolina School-Science
Carter Community School
E K Powe Elementary School
Academy Optical
George Watts Elementary School
Durham School of the Arts
Duke School
Durham Community Education
Healthy Start Academy
Merrick Moore Elementary Schl
Agape' Corner School
Eastway Elementary School
Training For Success
Christian Prep Academy II
Morehead Montessori Magnet
Lakewood Elementary School
Y E Smith Elementary School
Durham Nativity School
Burton Elementary School
C C Spaulding Elementary Schl
Montessori Children's House
Middle College Hs At Dtcc
Durham Public Schools-Whse
Rogers-Herr Middle School
Clement Early College High Sch
R N Harris Elementary School
Durham Academy
Keys Learning Ctr
Academy Court Properties
Quality Education Institute
Miles
0 0.5 1 1.5 2
Map Key
Schools (42)
Youth Services (8)
NECD
Neighborhoods
Parks (45)
Roads
Local Roads
Interstate
US Highway
NC Highway
Area Enlarged
N

- ***Eat Smart Move More, Weigh Less***
  Eat Smart, Move More, Weigh Less is a 15 week weight-management program that uses strategies proven to work. Each lesson informs, empowers and motivates participants to live mindfully and make choices about eating and physical activity. The program is offered in the community and local worksites through a collaborative effort between Durham County Health Department and Cooperative Extension.

  Website: http://www.eatsmartmovemorenc.com/ESMMWeighLess/ESMMWeighLess.html
  Phone number: (919) 560-7771/560-0501

- ***Living Healthy***

This is a highly participatory workshop series that takes place once a week for six weeks. These programs are designed to help participants learn the skills and tools to better manage chronic conditions. Behavior change activities are focused on physical activity, nutrition and stress management.

Website: http://www.ncdhhs.gov/aging/livinghealthy/livinghealthy.htm
Phone Number: (919) 560-7771

- ***Let's Move***

A Federal initiative that offers resources and focus to those working at a local level. Durham County can take advantage of this current national emphasis and other federal and state resources to create a county-wide push for increased physical activity as part of an effort to improve the health of all county residents.

Website: http://www.letsmove.gov/

Section 5.02 *Nutrition and access to healthy foods*

Overview

In her Vision for a Fit and Healthy Nation 2010, the Surgeon General of the U.S. noted, "In recent decades the prevalence of obesity has increased dramatically in the United States, tripling among children and doubling among adults. This epidemic increase is the result of specific changes in our environment and behaviors in susceptible people. High calorie, good-tasting, and inexpensive foods have become widely available and are heavily advertised. Portion sizes have increased, and we eat out more frequently. Children drink more sugar-sweetened beverages than they did in the past, and they are drinking fewer beverages such as water and non- or low-fat milk that are healthier for growing minds and bodies."[45] Durham County is facing many similar issues, and the overweight/obesity rates reflect this. In 2009, 65% of Durham County adults were overweight or obese; 28.3% of Durham County high school students were obese or overweight; and 18% of Durham County kindergartners were also found to be obese or overweight.[46] Although many factors affect one's weight, nutrition plays a central role when it comes to weight loss, weight gain and maintenance of weight.

Nutrition can directly, and through its influence on body weight, affect other health problems, including hypertension, high cholesterol, and diabetes. Durham County's nutrition environment—the availability of healthy foods and the culture surrounding eating—strongly influences what its residents eat and ultimately their health.

According to the Dietary Guidelines for Americans 2010 and the North Carolina Institute of Medicine (NCIOM), healthy eating involves getting plenty of fruits and vegetables along with whole grains, and adequate sources of calcium and other important nutrients, while limiting solid fats (saturated and trans), added sugar, and sodium.[47,48] In addition, balancing the calories or energy one gets from food with the calories one uses in living and being active also promotes a healthy weight. Body weight stays constant when those two are equal. Decreasing energy from food and/or increasing energy expenditure through exercise both lead to weight loss. Consumption of nutrient dense foods like fruits and vegetables and whole grains promotes good health and healthy weight, while consumption of calorie-dense, nutrient-poor foods high in sugar and fat do little to promote good health but do promote weight gain. For Durham County residents to improve or maintain both their health and weight, they need to establish eating habits that align with the 2010 Dietary Guidelines.

Healthy NC 2020 Objective

Health Promotion

Healthy NC 2020 Objective[49]	Current Durham	Current NC[50]	2020 Target
1. Increase the percentage of adults who report they consume fruits and vegetables five or more times per day	21.8% (2009)[51]	20.6% (2009)	29.3%

Secondary Data: *Major findings*

Food Insecurity - Data from Feeding America: Map the Meal Gap 2011

Food Insecurity is defined by the USDA as a measure of lack of access, at times, to enough food for an active, healthy life for all household members; or as limited or uncertain availability of nutritionally adequate foods.[52] Food insecurity can affect those both below and above the poverty line. Feeding America attempted to quantify food insecurity for every county in the U.S. by using measures that included unemployment and poverty rates as well as the percentage of the population falling into Hispanic and African American groups.[53] Findings from Feeding America show that 16.7% of the Durham County population (42,840 people) is food insecure; of these, 59% are below the SNAP (Supplemental Nutrition Assistance Program, formerly food stamps) threshold of 200% of poverty, and 41% are above the SNAP threshold.[54] Table 5.02(a) shows how Durham County compares with peer counties in regards to food insecurity.

Table 5.02(a): **Food Insecurity in Durham County, Peer Counties, and North Carolina**[55]

	Durham	Cumberland	Guilford	Wayne	NC
Food Insecurity Rate	16.7%	18.5%	19.2%	18.6%	18.2%
Percent of Food Insecure Individuals Below SNAP Threshold of 200% Poverty	59%	66%	61%	72%	65%
Percent of Food Insecure Individuals Above the SNAP Threshold of 200% Poverty	41%	34%	39%	28%	35%
Average Cost of a Meal	$2.58	$2.38	$2.47	$2.38	$2.49
Additional Money ($) Required to Meet Food Needs in 2009	$18,452,420	$22,803,990	$36,811,160	8,361,150	$687,208,350

Durham County has a lower rate of food insecurity than its peer counties or the state, but it also has the highest percentage of food insecure individuals above the SNAP threshold of 200% poverty. This would seem to indicate that food insecurity is an issue to be addressed at multiple income levels.

Food Deserts[56]

Healthy Food Financing Initiative working group defines a food desert as a *low-income census tract* where a substantial number or share of residents has *low access* to a supermarket or large grocery store:

- To qualify as a "low-income community," a census tract must have either: 1) a poverty rate of 20% or higher, OR 2) a median family income at or below 80% of the area's median family income;
- To qualify as a "low-access community," at least 500 people and/or at least 33% of the census tract's population must reside more than one mile from a supermarket or large grocery store (for rural census tracts, the distance is more than 10 miles).

Food Desert Locator[57]

According to the Food Desert Locator developed by USDA, there are five Food Deserts in Durham County. The areas of Durham County that qualify as "food deserts" are highlighted in pink on the map below. Census tracts (omitting the first seven digits of each number, which are the same for each grid) 1802 and 1002 in Northeast Central Durham are contiguous and are approximately surrounded by Angier Avenue on the southwest and Lynn Road on the southeast, Chandler Road and Clayton Road on the northeast, Cheek Road and Geer Street to the north and Driver Street on the west. Census tract 2009 is to the southwest of the first two and is approximately surrounded by Cook Road and Riddle Road on the south and the D & Southern Railroad to the south and east, Lawson Street, Bacon Street, and Cornwallis Road on the north, and Oak Ridge Boulevard on the east. Census tracts 1501 and 1502 are contiguous and are in the Duke University West Campus area. They are approximately surrounded by NC-751 and Duke University Road on the south, Anderson Street on the east, NC-147 on the north, and Highway 15-501 on the west. Figure 5.02(a) below depicts Durham food deserts.

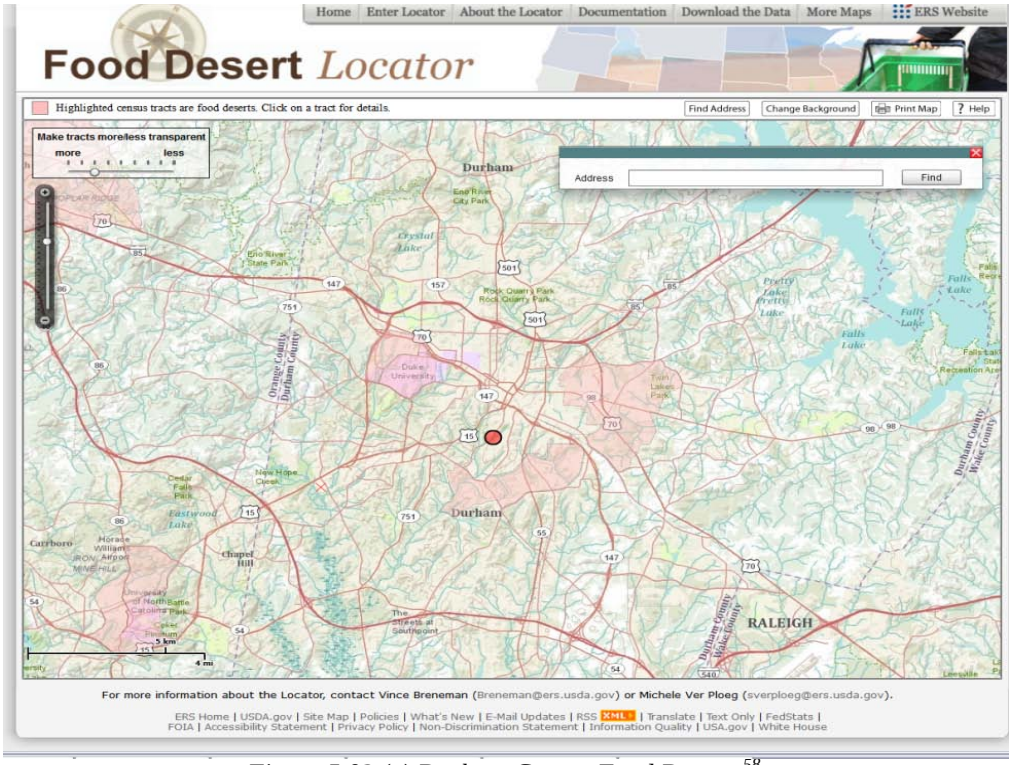


Figure 5.02 (a) Durham County Food Deserts[58]

Table 5.02(b) **Durham County Food Deserts by Census Tract**

Census Tract	Percent low food access	# people with low access	# of people in census tract
3706300**1802**	63.2	4,054	6,410
3706300**1002**	25.45	1,538	6,050
3706300**2009**	16.3	780	4,786
3706300**1501**	27.0	812	3,008
3706300**1502**	27.3	1,671	6,125

One can observe from the map that all Durham food deserts are in urban areas. Those areas of Durham with high concentrations of low-income individuals received particular attention in the identification of food deserts.

Supermarkets and large grocery stores comprised the sources of healthy and affordable foods. Based upon these data sources and measures, the report described characteristics of people and households residing in areas with limited access to healthy and affordable food such as the number of poor people, the number of children or older persons, and the number of households without vehicles.

Primary Data

Given that obesity is at epidemic proportions and eating a key factor affecting weight and health, it is important to learn as much as possible about eating habits. Several studies attempt to do just this at a local level.

Youth Risk Behavior Survey (YRBS) 2009[59]

Results from the YRBS, which was conducted in multiple Durham Public middle and high schools (DPS), across North Carolina, and around the country, indicate some trends among youth. Adequate intake of fruits and vegetables is a marker of healthy eating and several questions on the YRBS address this. Likewise, eating breakfast daily and eating supper at home with family are two behaviors associated with healthy eating. Alternatively, drinking soda and/or other sweetened beverages is a negative eating behavior that promotes weight gain.[60]

Table 5.02 (c): **Percentage of DPS High School Students Eating Particular Fruits and Vegetables One or More Times in the Past Seven Days**[61]

Food Item	Durham	NC	Central Region
Fruit	82.00%	82.50%	83.40%
Green Salad	64.10%	56.40%	60.10%
Potatoes	60.80%	67.20%	69.80%
Carrots	35.60%	36.50%	40.20%
Other vegetables	82.40%	82.60%	83.40%

About 82% of DPS high school students indicated that they ate fruit one or more times during the past seven days. This was similar to high school students across the state and within the Central Region. The only significant variation was that Black students in DPS were more likely than expected to not eat fruit at all.

DPS high school students were significantly more likely to eat green salad one or more times during the past seven days than high school students across the state. This is one area in which Durham showed positive eating behavior.

With regard to eating potatoes, DPS high school students ate significantly less than students in the Central Region. Otherwise there were no significant differences.

DPS high school students ate carrots and other vegetables at similar rates to those of high school students throughout the state and in the Central Region. The significant differences within the DPS population were that White students were more likely than expected to eat carrots, and Hispanic/Latino students were more likely than expected to eat no other vegetables.

Both middle and high school students were asked about breakfast-eating habits and about eating dinner with families. The breakfast questions were identical in both groups, but the dinner questions were not. The middle school question addressed the percentage of students who ate dinner prepared at home with their families on three or more of the past seven days, while the high school question omitted the phrase "prepared at home." Because the questions both addressed the positive behavior of eating with family, they are grouped together.

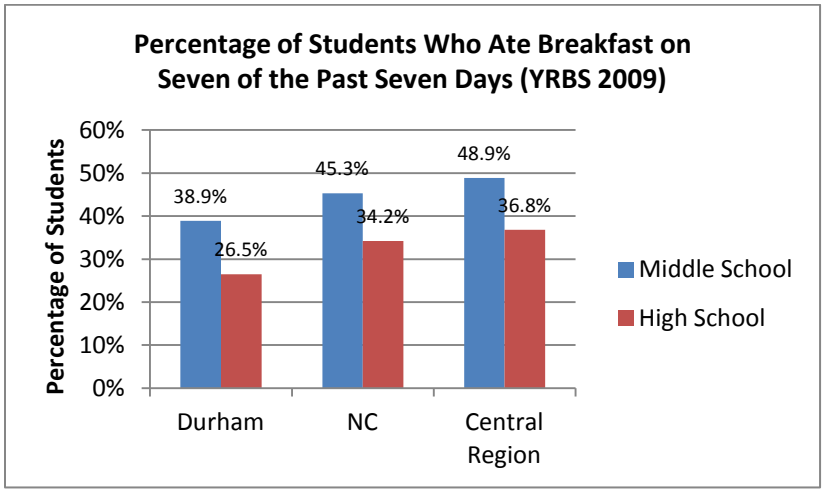


Figure 5.02(b) Percentage of Students Who Ate Breakfast

The breakfast responses, as shown in Figure 5.02(b) above, clearly show two trends: 1) breakfast eating decreases from middle to high school at all locations; 2) Durham students, both middle and high school, are less likely to eat breakfast than those across the state and in the Central Region, but this difference is significant only between Durham and the Central Region.

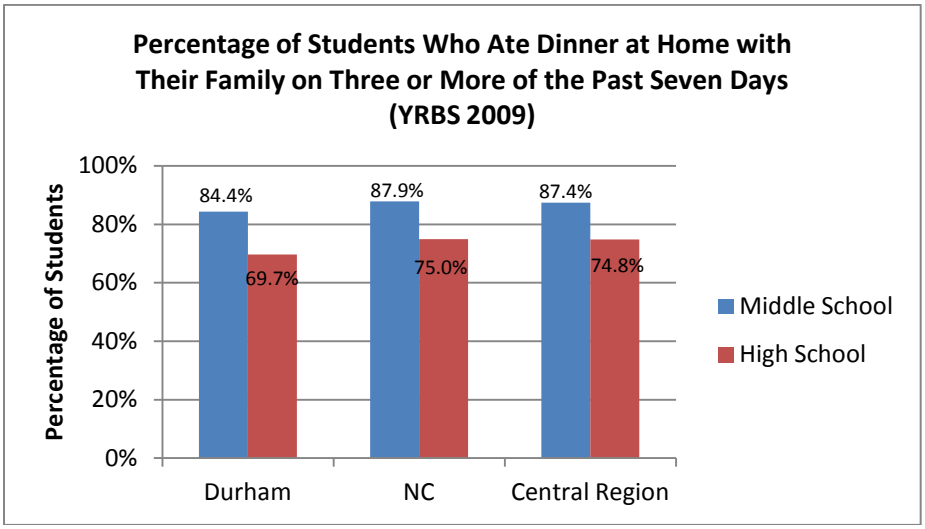


Figure 5.02(c) Percentage of Students Who Ate Dinner at Home

DPS middle and high school students did not differ significantly from students in North Carolina or the Central Region with regard to eating dinner at home with their family. Over 84% of DPS middle school students and nearly 70% of DPS high school students ate dinner at home with their families. The notable difference is the drop-off in this behavior from middle to high school, as depicted in Figure 5.02(c) above.

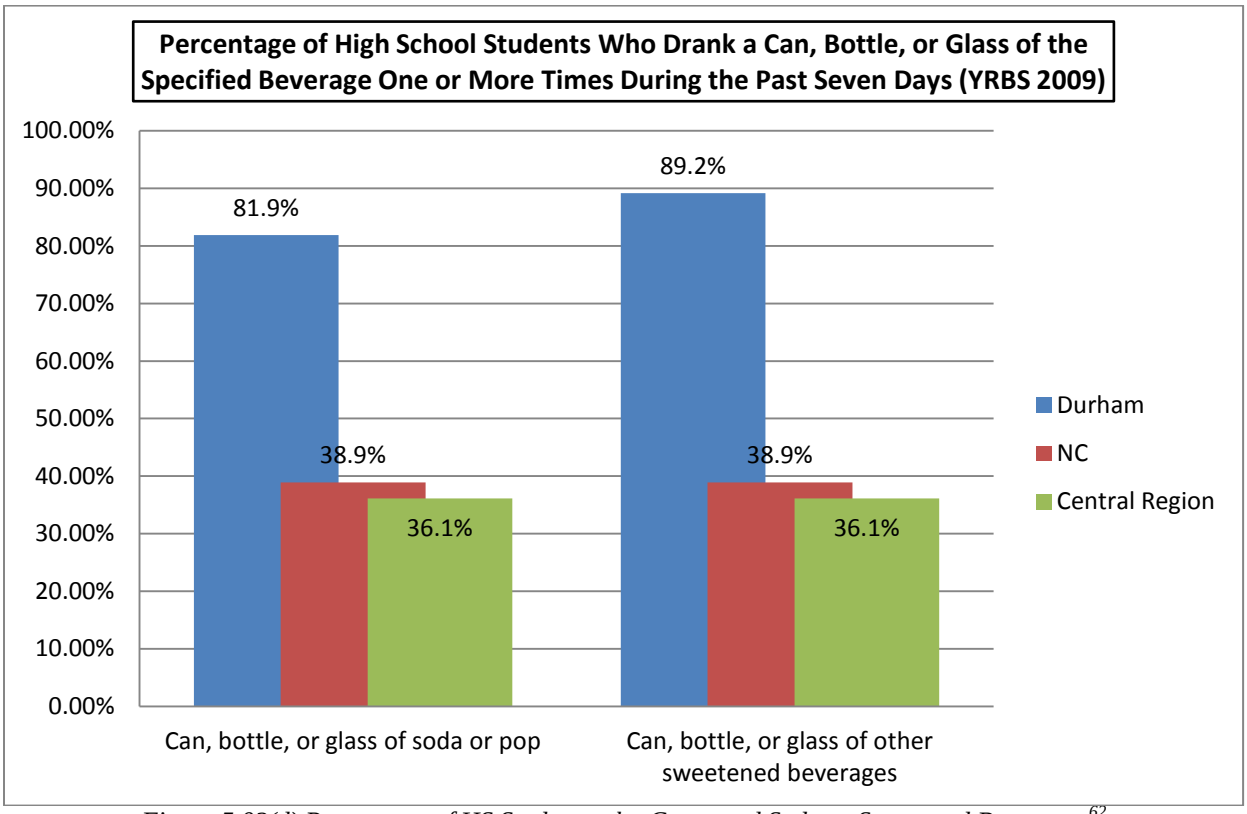


Figure 5.02(d) Percentage of HS Students who Consumed Soda or Sweetened Beverages[62]

A major problem area for DPS high school students is the consumption of soda and other sweetened beverages, as depicted in Figure 5.02(d) above. DPS high school students, 81.9% of whom drank a can, bottle, or glass of soda one or more times during the past seven days, were almost twice as likely as high school students across the state or in the Central Region to drink soda. Similarly, with 89.2% of them drinking a can, bottle, or glass of other sweetened beverages one or more times during the past seven days, they were more than twice as likely to drink other sweetened beverages as students across the state or in the Central Region. The one significant difference within the DPS population is that Hispanic/Latino students were more likely than expected to drink other sweetened beverages. Clearly, the consumption of soda and other sweetened beverages is a behavior to target for change.

Behavioral Risk Factor Surveillance System Survey 2009 (BRFSS)[63]

This survey of adults ages 18-75+, included questions related to fruit and vegetable consumption by Durham County and North Carolina residents as well as various subgroups of the Durham population. Although Durham County residents ate slightly more fruits and vegetables daily than residents of the whole state (21.8% vs. 20.6%, respectively), no group came even close to consistently eating five fruits and vegetables a day. Current dietary guidelines for Americans recommend eating meals containing half fruits and vegetables, and since eating fruits and vegetables promotes healthy weight, Durham County's results indicate a focus area for improving nutrition.

BRFSS results indicate that, in the best cases (females, residents who had some college education, and those earning over $50,000 annually) no more than 28% of Durham residents indicated that they ate at least five fruits and vegetables a day. In the worst cases (males, those with high school or less education, and those earning $50,000 or less annually) less than 18% indicated that they ate at least five fruits and vegetables a day. These results are shown in Figure 5.02(e) below.

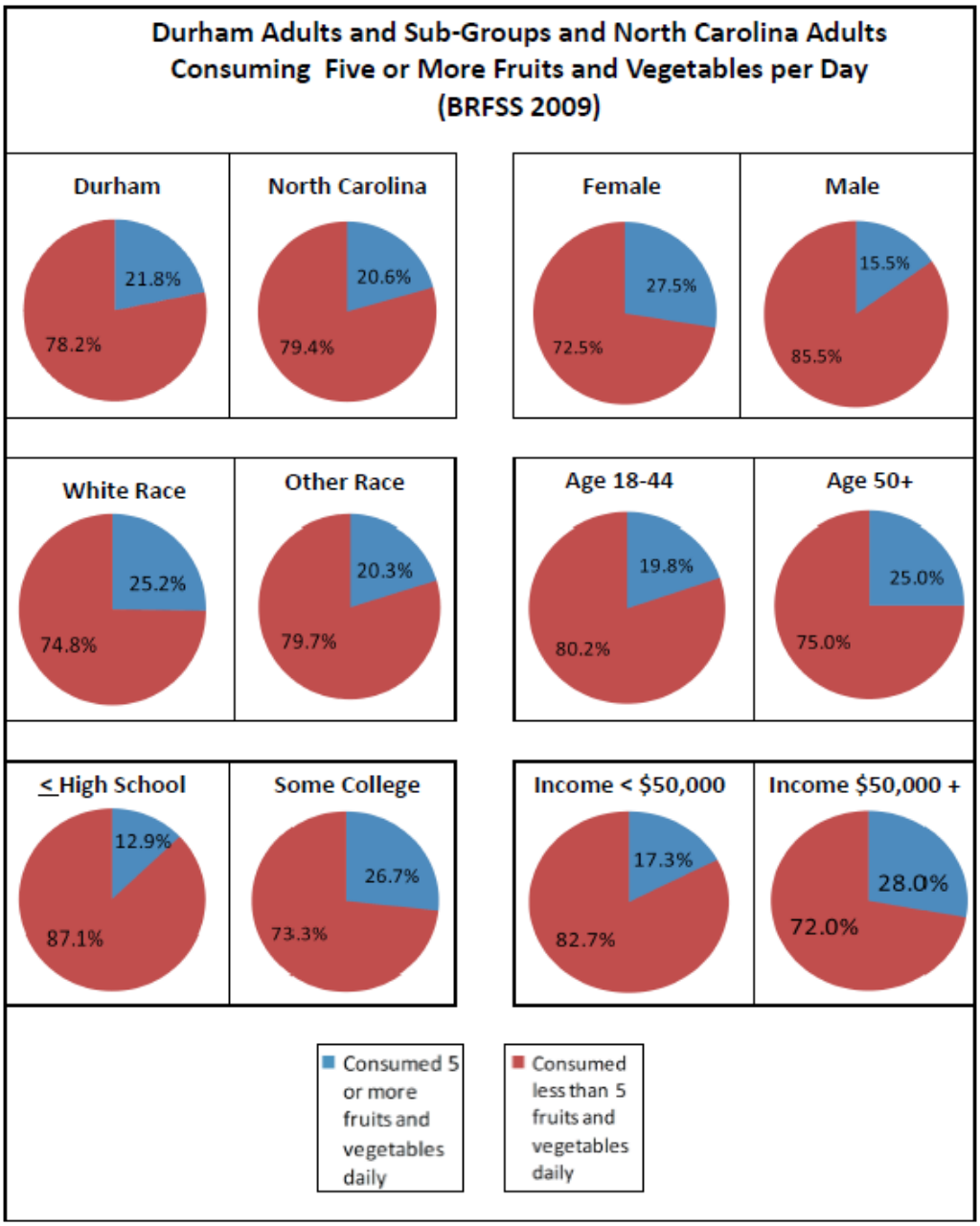


Figure 5.02(e) Adult Vegetable and Fruit Consumption

2010 Durham County Community Health Opinion Survey[64]

There were a number of questions on the 2010 Durham County Community Health Opinion Survey that related to obesity, physical activity and nutrition. Results from the survey show that obesity/overweight was chosen as the second most important health problem in Durham.

When survey respondents were asked what one thing would make Durham County or your neighborhood a healthier place to live, their number one response was the category that included healthy eating, nutrition and exercise. When asked to list what they felt were the top three individual risky behaviors that impact the Durham community as a whole, 23% of survey respondents cited poor eating habits as one of their top three. Twenty-five percent of survey respondents also indicated that almost all of their meals were **not** prepared at home.

When asked about barriers to eating a healthy diet, while nearly half said they "eat healthy and it is not hard," an equal number said that it takes too much time to prepare healthy food and shop for healthy food. Cost was a significant barrier as was finding healthy food when eating outside the home. Roughly 18% of respondents felt that healthy food does not taste good and 8% stated that there was no place in the neighborhood to buy healthy food. The availability of healthy food was noted as a community-wide issue, one that impacts the overall quality of life in Durham County.

Durham Health Innovations Town Meetings, Focus Groups and Interviews[65]

In Northeast Central Durham (NECD) students at one elementary school were weighed and measured, and over 40% of the children measured were overweight or obese. Most residents attributed this to the expense and inconvenience of obtaining healthy food (there are only fast food restaurants and no quality grocery stores in the area except the new TROSA store), as well as the poor quality of cafeteria food.

Durham County Community Food Assessment[66]

This small study of 283 people, predominantly from Lincoln Community Health Center, looked at fruit and vegetable consumption in relation to a number of variables, including perceived ability to afford fruits and vegetables, barriers, and sources of food. Only 28% of respondents indicated that they ate fruit more than two to three times per day, while 35% ate vegetables more than two to three times per day. Of those who perceived that they were eating plenty of fruit, only 39% were getting more than two to three servings per day. Of those who perceived they were eating plenty of vegetables, 59.4% were getting more than two to three servings per day.

When study participants were asked about barriers to eating fruits and vegetables, close to 44% noted no barriers. Cost was the biggest barrier for 35% of the respondents. Other barriers mentioned included grocery stores being too far away, difficulty carrying the fruits and vegetables, dislike of fruits and vegetables, time to cook and not knowing how to cook fruits and vegetables.

Only about 25% of respondents indicated that they were never unable to afford to eat balanced meals, while nearly 50% said that they were sometimes unable to afford to eat balanced meals and about 24% said that they were often unable to afford balanced meals.

Food Lion was the most commonly used grocery store. The two most common sites other than grocery stores where participants obtained food were restaurants and fast food places. Other locations included farmers' markets, followed by convenience stores, food bank, and ethnic markets.

As a follow-up to the Durham County Community Food Assessment, a series of six focus groups with 6 to 15 people each were scheduled. The groups included a low-income housing development, an African American Church, two Latino groups (an English class at a community college and a Latino women's support group), a chronic disease support group at the community health center, and a homeless shelter group meeting. A total of 70 people participated. The discussion centered on fruit and vegetable consumption, barriers to obtaining fresh produce, along with ideas to increase fruits and vegetables consumption. Transportation, cost and time were the main barriers to eating produce. Many suggestions were given to improve access to fruits and vegetable consumption including improved transportation, health information and healthy options in workplaces, healthy fast foods for sale, healthy reminders in food stores, trucks that sell produce in neighborhoods, cooperative buying, providing recipes, community gardens, and gleaning produce from harvested fields. The Latino groups in particular emphasized that they did not know how to navigate the American system and they needed more nutrition education.

Food Insecurity Information

A wealth of research has shown that poorer and ethnically diverse neighborhoods have fewer grocery stores with healthy food choices, more convenience stores, and a greater density of fast food restaurants.[67] Poorer areas of Durham, too, have few grocery stores within walkable distance to neighborhoods. Durham also has few retail grocery chains and a plethora of fast-food chains and convenience stores in low-income, food-insecure Durham neighborhoods. Figure 5.02(f) below is a map of central Durham[68] depicting the number and location of grocery stores, convenience stores, fast-food chains, and restaurants in relation to neighborhoods. It is apparent that some neighborhoods lack nearby grocery stores but have abundant convenience stores and/or fast-food restaurants. These neighborhoods are in the same areas highlighted on the food desert map earlier in this section.

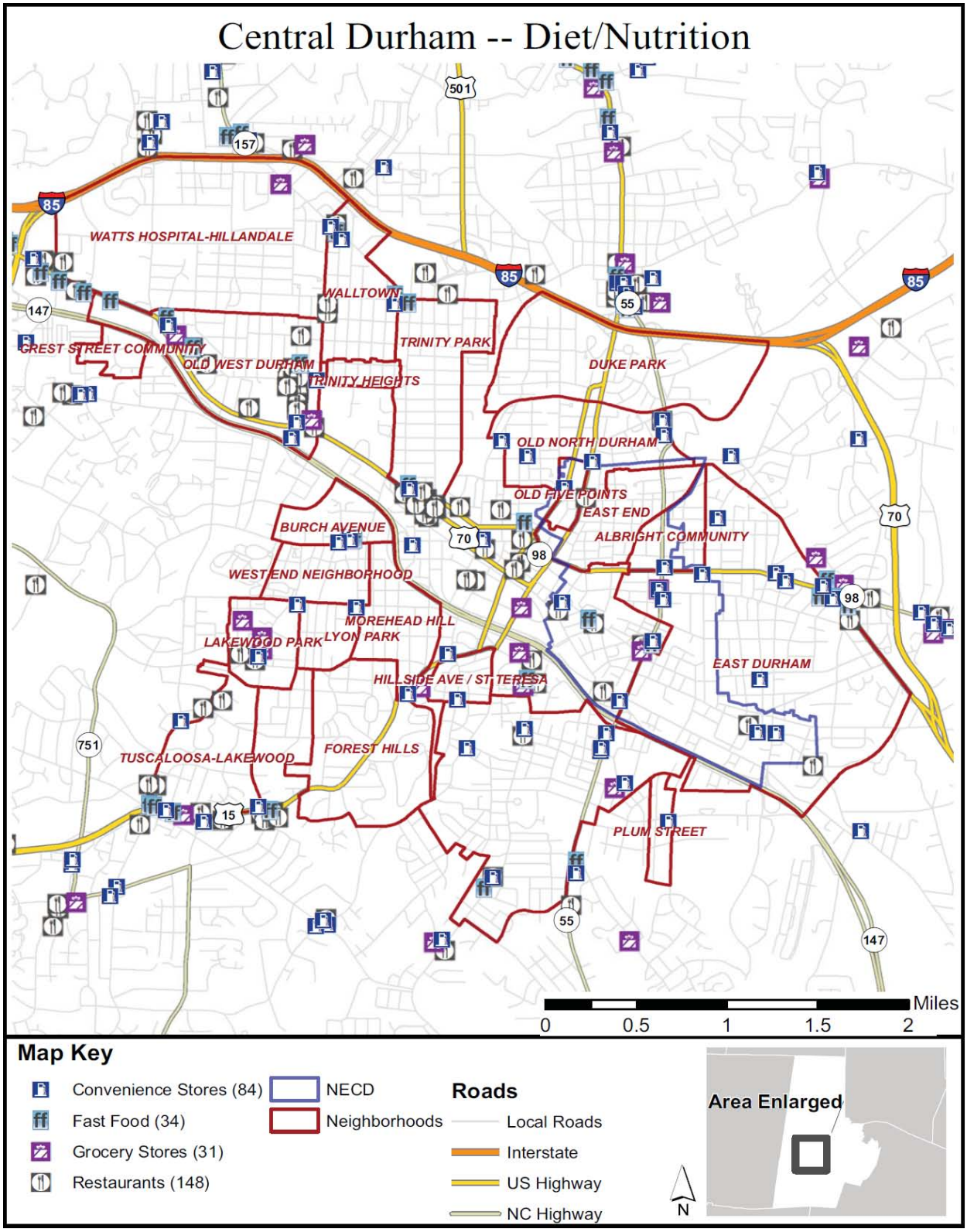


Figure 5.02(f) Central Durham – Diet/Nutrition

Interpretations: *Disparities, gaps, emerging issues*

Results of multiple surveys, focus groups and interviews indicate that the citizens of Durham County recognize that nutrition is a significant issue, especially as it relates to obesity and overall health. In fact obesity was chosen as the second most important health problem in Durham by respondents to the 2010 Durham County Community Health Opinion Survey.[69] In the same survey, the category that included healthy eating and exercise was considered the top group of behaviors that would make Durham a healthier place to live. At the same time, 25% of people said that almost all of their meals were **not** prepared at home. In many families, both parents work different shifts, making it difficult to have family mealtimes.[70] In every local study reported here, the availability of healthy food was noted as a community-wide issue that impacts the overall quality of life in Durham County, and availability, convenience, and affordability of healthy foods are recurrent themes.

From larger studies like the YRBS and BRFSS one can identify several areas in which Durham County could benefit from intervention. These include:

- Increasing breakfast-eating among middle and high school students;
- Increasing the frequency of teens eating dinner at home with family;
- Decreasing teens' use of soda and sweetened beverages (based on the great discrepancy between Durham County and the state and central region, this should be a priority behavior to address).
- Increasing fruit and vegetable consumption among all segments of the population, particularly males, those with no education beyond high school, and those with incomes of $50,000 or less.

While availability and cost (both in time and money) keep people from eating enough healthy foods, people seem to value healthy eating, and many wish to improve their intake. With people across Durham identifying healthy eating and exercise as being the number one factor that would make Durham a healthier place, it is important that more resources be dedicated to promoting healthy lifestyle choices to the citizens of Durham.

Recommended Strategies

Table 5.02 (c) **Evidence-based Resources and Promising Practices** [71]

Category	Name	Description	Website	Matching 2010 Objective
Community	National Fruit and Vegetable Program	The National Fruit & Vegetable Program is a national partnership to increase consumption of fruits and vegetables by all Americans.	http://www.fruitsandveggiesmatter.gov/health_professionals/about.html	Physical Activity & Nutrition Objective 3
Community	Health Bucks Promising	Goals are to make it easier for low-income residents to purchase high-quality local fresh produce; to create incentives to use Food Stamps for fresh produce in at farmers	http://www.naccho.org/topics/modelpractices/database/practic	Physical Activity & Nutrition Objective 3

		markets; and to use sustainable local agriculture.	e.cfm?practiceID=523	
Workplace, School, & Community	Eat Smart Move More	This website is a physical activity and nutrition website that provides interventions in many different categories.	http://eatsmartmovemorenc.com/ProgramsNTools/ProgramsNTools.html and www.myeatsmartmovemore.com	Physical Activity & Nutrition Objective 1, 2, & 3

In order to improve the nutrition of the residents of Durham, multiple strategies should be implemented; these include:

- Provide nutrition education—via live discussions, internet sources, public announcements and in the schools.
- Improve availability of healthy food choices (for example, full-service grocery stores that are more accessible to all residents of Durham) via incentives (to businesses and vendors), policy and environmental changes.
- Support the Durham Public Schools in Child Nutrition Services improvements and provision of nutrition education.
- Encourage people to motivate and support each other in choosing healthier options.
- Use social media to encourage and support citizens who are trying to change their eating habits.
- Increase the number of gardens throughout the county.

Current Initiatives & Activities

- ***DINE for LIFE Program, Durham County Health Department***

DINE for LIFE offers nutrition education in Durham Public Schools and through community groups that have more than 50% of their students/participants receiving benefits through the Supplemental Nutrition Assistance Program (SNAP, formerly Food Stamps).

Website: http://www.dineforlife.org
Phone Number: (919) 560-7789

- ***Eat Smart Move More NC***

A statewide movement that promotes increased opportunities for healthy eating and physical activity wherever people live, learn, earn, play and pray.

Website: www.eatsmartmovemorenc.com
Phone Number: (919) 707-5224

- ***Center for Disease Control and Prevention***

Your online source for credible health information. Includes reports and survey data, including mRFEI, CFESI, BRFSS, and YRBS.

Website: http://www.cdc.gov
http://www.cdc.gov/brfss/
http://www.cdc.gov/HealthyYouth/yrbs/index.htm
http://www.cdc.gov/obesity/
http://www.cdc.gov/obesity/downloads/ChildrensFoodEnvironment.pdf

Phone Number: (800) CDC-INFO

- ***Partnership for a Healthy Durham***

A coalition of local organizations and community members, with the goal of collaboratively improving the physical, mental, and social health and well-being of Durham's residents.

Website: http://www.healthydurham.org
Phone Number: (919) 560-7833

- ***Interfaith Food Shuttle***

Inter-Faith Food Shuttle (IFFS) pioneers innovative solutions to address food insecurity in our community. IFFS volunteers and staff rescue food that would be wasted and distribute it directly or through meal and snack programs. Programs include Backpack Buddies and other children's hunger programs; Culinary Job Training, whose graduates work on Catering with a Cause to raise money for IFFS; community gardens and farms; field gleaning; nutrition education; and others. The group is based in Raleigh but has a Durham Service Center.

Website: http://www.foodshuttle.org
Phone Number: (919) 250-0043

- ***Food Bank of Central and Eastern NC, Durham Branch***

The Food Bank collects food for distribution to agencies serving food insecure people. One of its major warehouses is in Durham.

Website: http://www.foodbankcenc.org/site/PageServer?pagename=Branch_Durham
Phone Number: (919) 956-2513

- ***Durham County Cooperative Extension, Expanded Food and Nutrition Education Program***

The Expanded Food and Nutrition Education Program (EFNEP) www.ces.ncsu.edu/EFNEP/ offers limited resource families nutrition education to help save money on their grocery bills, eat healthy, and move more.

Website: http://durham.ces.ncsu.edu/index.php?page=healthnutrition
Phone Number: (919) 423-1502

- ***Urban Ministries of Durham (UMD)***

The Community Café of UMD serves three meals a day to residents of their homeless shelter and others in need. They also offer emergency food assistance up to once every thirty days for anyone in need.

Website: http://www.umdurham.org/
Phone Number: (919) 682-0538

Section 5.03 *Tobacco*

Overview

Tobacco use remains the number one preventable cause of death and disease in the United States and in North Carolina. Research consistently demonstrates the numerous health consequences of tobacco use. The Surgeon General's 2010 Report details the ways in which tobacco smoke damages every organ in the body, causing heart disease, cancers of the lung, larynx, esophagus, pharynx, mouth, and bladder, and chronic lung disease.[72] Smoking is associated with an increased risk of at least 15 different types of cancer.[73] Approximately 30% of all cancer deaths and nearly 90% of lung cancer deaths – the leading cancer death among men and women - are caused by smoking.[74]

Secondhand smoke and smokeless tobacco also pose serious health risks. In 2006, the U.S. Surgeon General published a report entitled *The Health Consequences of Involuntary Exposure to Tobacco Smoke*, which concluded that no amount of secondhand smoke exposure is safe. Exposure to secondhand smoke can cause heart disease and lung cancer among adults and higher respiratory tract infections among children.[75] Smokeless tobacco products pose serious health threats as well, causing a number of serious oral health problems including cancer of the mouth, leukoplakia, recession of the gums, gum disease and tooth decay.[76]

When smoking is started at a young age it often becomes a life-long habit. Environmental risk factors such as easy access and availability of tobacco products, cigarette advertising and promotion (including in movies), and affordable prices for tobacco products make smoking among young people more common.[77]

Tobacco promotions and advertising efforts are likely responsible for much of the youth smoking initiation and prevalence. Major cigarette companies alone now spend about $12.5 billion per year (or $34.2 million every day) promoting the use of tobacco, many of their marketing efforts directly reach kids.[78]

Nearly 90 percent of all adult smokers begin at or before age 18.[79] More than 6.3 million children under the age of 18 alive today will eventually die from smoking-related disease, unless current rates are reversed.[80]

Healthy NC 2020 Objective

Health Promotion

Healthy NC 2020 Objective[81]	Current Durham	Current NC[82]	2020 Target
1. Decrease the percentage of adults who are current smokers.	14.7% (2010)[83]	19.8% (2009)	13.0%
2. Decrease the percentage of high school students reporting current use of any tobacco product.	15.5% 2009)*[84] 24.6% (2009)**[85]	25.8% (2009)	15.0%
3. Decrease the percentage of people exposed to secondhand smoke in the workplace in the past seven days.	7.5% (2008)[86]	14.6% (2008)	0%

*** 15.5% of teens in Durham County report smoking cigarettes.**
**** 24.6% of teens in the Central Region of North Carolina report using any tobacco product.**

Secondary Data: *Major findings*

Smoking can be linked with many serious health issues. Figure 5.03(a) below depicts Durham's overall death rate from 2005-2009 from lung, trachea and bronchus cancer.[87] Durham's rate is lower than the state and all of its peer counties, with the exception of Guilford County.

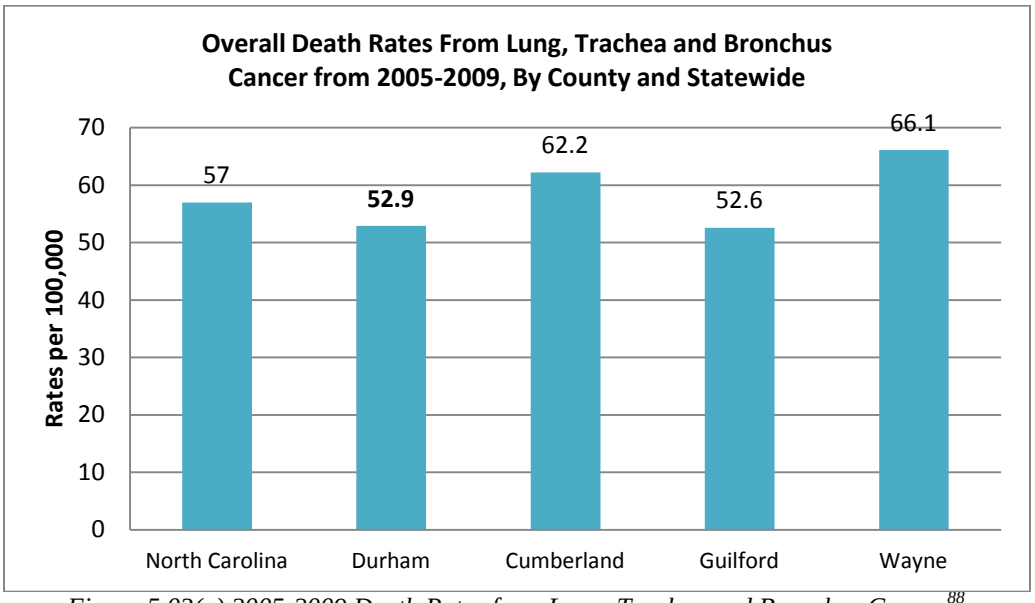


Figure 5.03(a) 2005-2009 Death Rates from Lung, Trachea and Bronchus Cancer[88]

When compared with its peer counties, Durham had about the same number, and often fewer hospitalizations for Chronic Obstructive Pulmonary Disease (COPD) and lung/trachea/bronchus

malignant neoplasms in 2009 than did its peer counties. This is depicted in Figure 5.03(b) below.

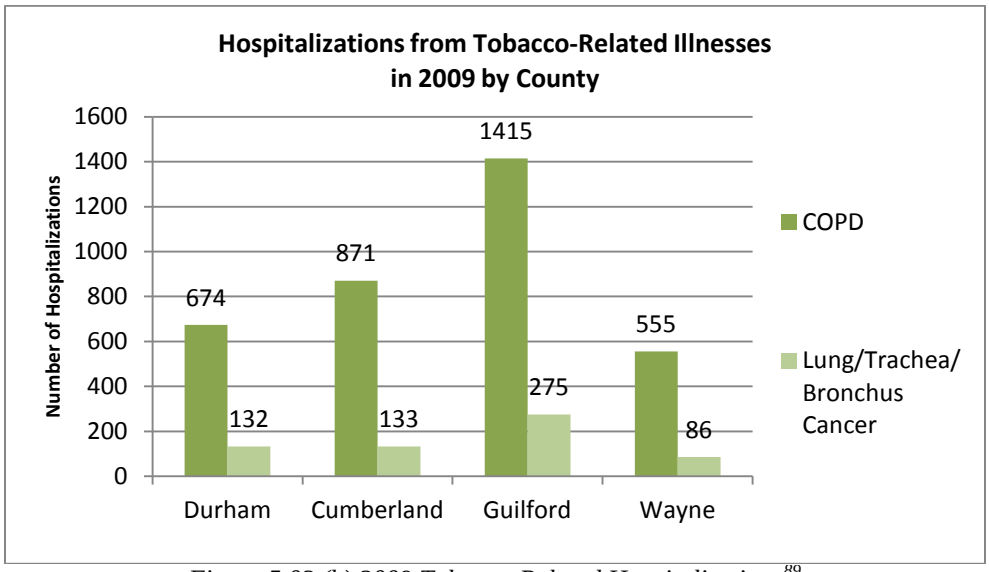


Figure 5.03 (b) 2009 Tobacco-Related Hospitalizations[89]

Primary Data

Adult Smoking

2010 Behavioral Risk Factor Surveillance Survey System (BRFSS) data shows that adult smoking rates in Durham are lower than the state rate at 14.7% *vs* 19.8%, respectively.[90] BRFSS data also indicates that Durham's adult smoking rates were the lowest among its peer counties in 2010, as illustrated in Figure 5.03 (c) below. Additionally, 0.4% of Durham adult residents report using spit tobacco either every day or on some days, while the state rate for adult spit tobacco use is 4%.[91]

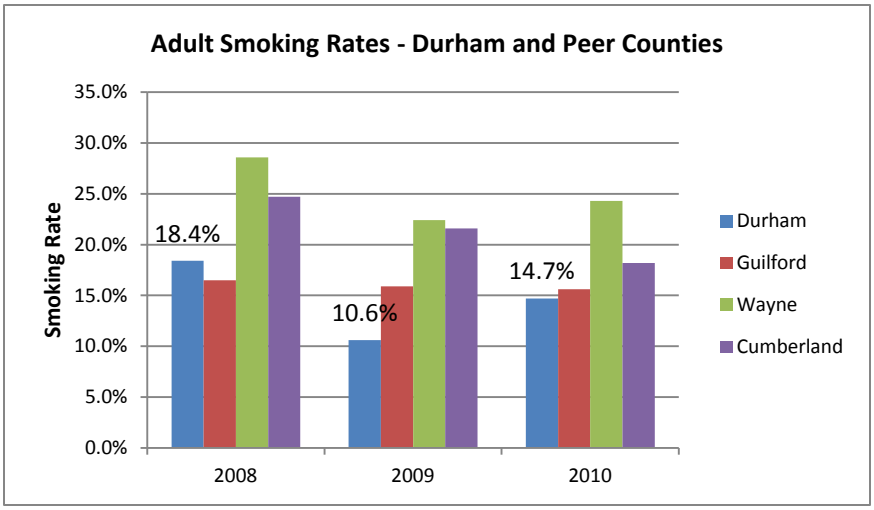


Figure 5.03(c) 2008- 2010 Adult Smoking Rates[92]

A question from the 2010 Durham County Community Health Opinion Survey asked respondents who identified themselves as smokers what they would do if they wanted to quit smoking. The most frequently cited choice was going to a physician's office for help (42.9%) or just quitting by themselves (16.7%).[93] Only 4.8% did not know where to go if they wanted to quit.[94] Results are depicted in Figure 5.03 (d) below.

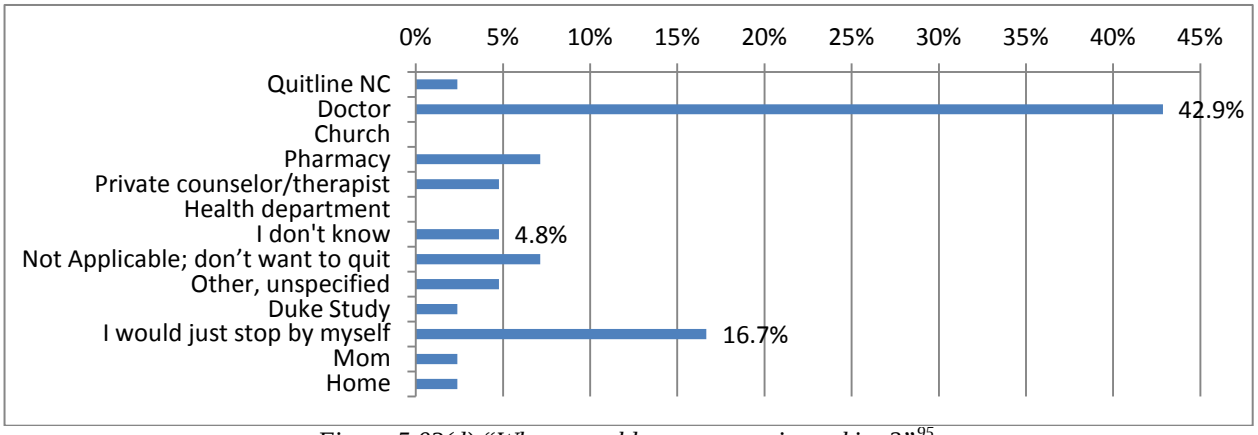


Figure 5.03(d) "Where would you go to quit smoking?"[95]

Youth Smoking

There is no data available to determine Durham County youth use of all tobacco products. However, according to 2009 Durham County Youth Risk Behavior (YRBS) data, 15.5% of high school students in Durham reported being current cigarette smokers, which is lower than North Carolina's high school smoking rate of 17.7%.[96] YRBS data also indicates that 5.8% of middle school students in Durham reported current cigarette use, which is lower than North Carolina's middle school smoking rate of 7.5%.[97] When examining use of any tobacco product, North Carolina Youth Tobacco Survey (YTS) data indicates that 25.8% of high school students in North Carolina's central region report using any tobacco product.[98]

Interpretations: *Disparities, gaps, emerging issues*

Disparities

Men and those with low incomes and low educational levels are more likely to smoke than their counterparts. BRFSS data indicates that in 2009, 23.1% of men and only 17.7% of women in Durham County were smokers.[99] In addition, 10.1% of college graduates in Durham were smokers, compared with 30.9% of those who had not earned a high school degree, as well as 25.5% of those with a high school diploma or GED and 21.1% of those with some post-high school education; see Figure 5.03(e) below.[100] This data also demonstrates a tremendous disparity in smoking rates among various socioeconomic levels, with a smoking rate of 30.9% in

households with an income of less than $15,000 and a smoking rate of 10.4% in households with an income of more than $75,000; see Figure 5.03(f) below.[101]

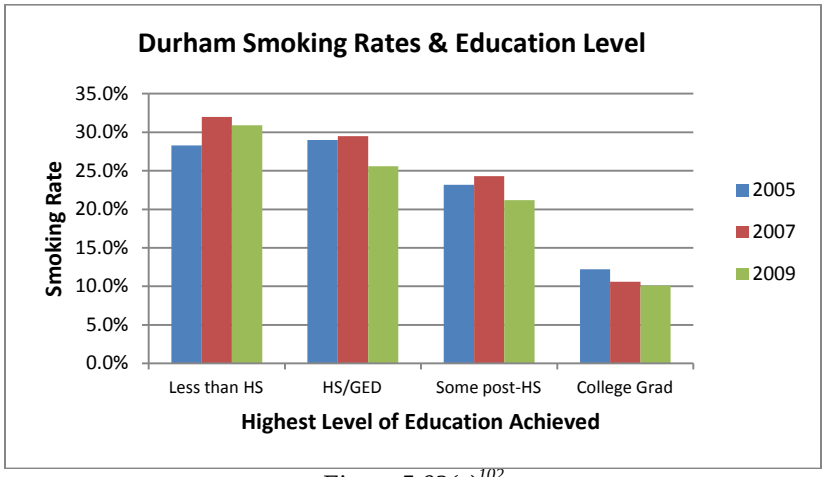


Figure 5.03(e)[102]

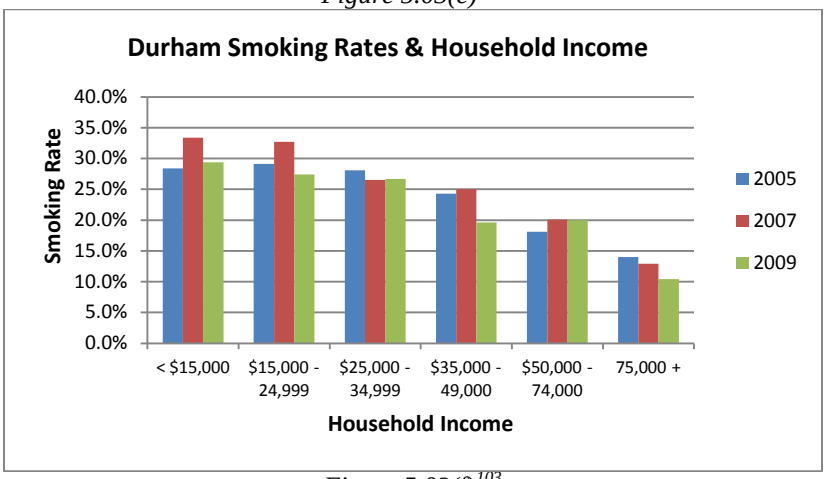


Figure 5.03(f)[103]

Persons with disabilities are also more likely to smoke cigarettes. 2009 BRFSS data indicates that 27.4% of those with a disability were current smokers while only 17.2% of those without a disability reporting being current smokers.[104]

Emerging Issues

Although the rate of exposure to secondhand smoke in the workplace in Durham is less than it is for North Carolina as a whole, Durham has not yet met the Healthy Carolinians objective of 0%. However, the most recent available data is from 2008, and the implementation of the statewide Smoke Free Bars and Restaurants Law in 2010 will surely decrease this rate at both the state and county levels.[105]

Although new policies and laws are protecting some from exposure to secondhand smoke, Youth Tobacco Survey data indicates that an alarming number of youth in the Central Region of North Carolina are still exposed to the harmful effects of secondhand smoke: 37.7% live in homes where others smoke and 51.7% are in the same room as others who smoke during the week.[106]

Recommended Strategies

Table 5.03(a) **Evidence- based Resources and Promising Practices**[107]

Category	Name	Description	Website	Matching 2010 Objective
Workplace	The Quit Smoking Program	The Quit Smoking program aims to aid working adults in smoking cessation.	http://cbpp-pcpe.phac-aspc.gc.ca/intervention/113/view-eng.html	Tobacco Objective 1
Schools	Project SHOUT	Project SHOUT aims to prevent smoking and smokeless tobacco use for the long-term among junior high school students. The three-year intervention is delivered within the school.	http://cbpp-pcpe.phac-aspc.gc.ca/intervention/90/view-eng.html	Tobacco Objective 2
Community	Excerpt from CDC's Best Practice for Comprehensive Tobacco Control Programs	This comprehensive approach combines educational, clinical, regulatory, economic, and social strategies	http://www.cdc.gov/tobacco/stateandcommunity/best_practices/pdfs/2007/bestpractices_complete.pdf	Tobacco Objectives 1, 2 and 3

These recommendations are from the North Carolina Prevention Action Plan:[108]

1. **Fund and implement a Comprehensive Tobacco Control Program**

The North Carolina General Assembly should provide additional funding to the North Carolina Division of Public Health (DPH) to prevent and reduce tobacco use in North Carolina. Funding for the North Carolina Health and Wellness Trust Fund should not be eliminated, and teen tobacco use prevention initiatives should be at the forefront of this comprehensive tobacco control program. All funds should be used in accordance with best practices as recommended by the Centers for Disease Control and Prevention.

2. **Increase North Carolina Tobacco Taxes**

The North Carolina General Assembly should increase the tax on cigarettes and other tobacco products to match the national average, and use funds from the revenues to support prevention efforts.

3. **Continue to Expand Smoke-free Policies in North Carolina**

The North Carolina General Assembly should amend existing laws to require all worksites to be smoke-free. In the absence of a comprehensive smoke-free law, Durham County fulfills this recommendation by passing a recent ordinance that prohibits smoking in the following places: City of Durham Grounds; City of Durham Parks System Athletic Fields; City of Durham Parks System Playgrounds; City or County Bus Stops; Durham County Grounds; Durham Station Transportation Center; and most sidewalks.

4. **Expand Access to Cessation Services, Counseling, and Medications for Smokers Who Want to Quit**

Insurers, payers, and employers should cover evidence-based tobacco cessation services, including counseling and appropriate medications. Providers should provide comprehensive evidence-based tobacco cessation counseling services and appropriate medications.

Current Initiatives & Activities

- ***QUITLINE NC***

QuitlineNC provides North Carolinians with free, on-one-one support that can make all the difference when you're ready to quit for good. Quitline pairs callers with an experienced Quit Coach, who will work them to create a plan for quitting and then support them to stick to that plan. QuitlineNC is free, confidential and available 8 AM – 3 AM, seven days a week.

Website: http://www.QuitlineNC.com
Phone Number: 1 (800) QUIT-NOW

- ***Tobacco.Reality.Unfiltered. (TRU)***

TRU is North Carolina's youth tobacco use prevention movement. TRU incorporates peer education, youth advocacy and a mass media campaign in an effort to create North Carolina's first tobacco-free generation. TRU is currently funded by the Health and Wellness Trust Fund, which has been abolished by the NC General Assembly, and therefore the future of the TRU Movement is unknown at this time.

Website: http://www.realityunfiltered.com
Phone Number: Durham TRU Coordinator: (919) 560-7845

- ***Fresh Start Quit Smoking Program***

Fresh Start is an effective quit smoking program that was developed by the American Cancer Society, and is facilitated by staff at the Durham County Health Department. The program takes place in four one hour sessions over the course of 4 weeks, and is free to Durham County residents.

Website: http://www.durhamcountync.gov
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