



# Stepping Into What's Next:

How Before-School Walking Programs Can Help Students Get to School On-Time and Ready to Learn



# Introduction

Schools and communities are working to improve student achievement and child health. Success in meeting these goals calls for the use of a combination of strategies. A growing number of places are looking at ways for children to participate in physical activity before the school day begins and to address the need for reliable transportation for all students. Communities in North Carolina and around the country are using walking school buses, bike trains, and on-campus walking programs as part of the solution.

A walking school bus is a group of children walking to school supervised by adults, and a bike train is the same, just on bicycles. Programs range from informal ones between a couple of families who take turns walking or riding a small group of kids to school, to structured programs with a fixed route and timetable of volunteers. Groups might “pick up” students at their doorsteps or have one or more set meeting locations.

Schools located in places where students are unable to walk or bicycle to the campus organize before-school, on-campus walking programs. Like walking school buses, these range in level of structure from informally encouraging students to walk around the gym or track, to having a set route and ways to track mileage. The exact design and activity selected depend on the specific needs of the school but all prepare students for their school day with physical activity, which is shown to improve test scores, reading ability, grades, behavior, and memory.<sup>i</sup>

## Academic and Health Benefits of Physical Activity

Students who get more physical activity are healthier and earn better grades in school. More North Carolina students could benefit from being active and walking is a low cost physical activity that has the added benefit of giving time for students and adults to socialize.

- In North Carolina in 2010 (the most recent year

with available data), only 42% of elementary age students met the health recommendations for 60 minutes of daily physical activity. Only 32% of children in grades 6 through 8 satisfied these recommendations.<sup>ii</sup>

- Regular physical activity helps students improve cardiorespiratory fitness, build strong bones and muscles, control weight, reduce symptoms of anxiety and depression, and reduce the risk of developing health problems like cancer and heart disease.<sup>iii</sup>
- Students who are physically active tend to have better grades, school attendance, cognitive performance (like memory), and classroom behaviors (such as staying on-task).<sup>iv v</sup>
- Students’ brains show more activity while taking a test after twenty minutes of walking compared to testing taking after twenty minutes of sitting.<sup>i</sup>

### physically active kids have more active brains

BRAIN SCANS OF STUDENTS TAKING A TEST:

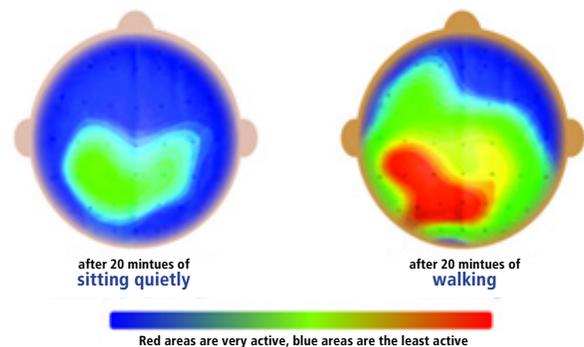


Image courtesy of Dr. Charles H. Hillman and Active Living Research.<sup>vi</sup>

## Absences on Academic Achievement and Health

While physical activity has a positive impact on learning and health, missing several school days, or regularly arriving late for school, can have long-term negative consequences for students.

- Chronic absenteeism (missing more than 14 school days in an academic year) impacts students of all races in school districts across the country.<sup>vii</sup>

- Absenteeism, especially in elementary years, has serious direct implications on reading levels and learning milestones, which in turn is associated with higher dropout rates, diminished health, poverty, and involvement in the criminal justice system.<sup>viii ix</sup>
- In the 2013-2014 school year, one in seven students missed more than 14 days of school.<sup>x</sup>
- In North Carolina, trends are consistent with the national averages, though chronic absenteeism ranges from a low 0.4% in Rowan County to a high of 26.4% in Warren County.<sup>xi</sup>
- The Great Bend, KS school district reported a 40% decrease in tardy students after one year of a walking school bus program.<sup>xiii</sup>
- In Maine, public health evaluators reported a statistically significant decrease in absenteeism after the implementation of a walking school bus program.<sup>xiv</sup>
- A community-based walking school bus in South Providence, RI saw improved attendance in 79% of students enrolled in the program.<sup>xv</sup>
- School 5 in Paterson, NJ achieved a 76% decrease in chronic absenteeism when a walking school bus was implemented alongside other initiatives to improve attendance.<sup>xvi</sup>
- Johnson Elementary in Springfield, MA, where 85% of its students are economically disadvantaged, saw a 4% increase in average daily attendance once its walking school bus program was established.<sup>xvii</sup>

## Barriers to Getting to School

In order for students to succeed in school they need to be able to get to school. Transportation challenges have been noted as one of the key barriers to attendance that contributes to chronic absenteeism and tardiness.<sup>xii</sup> Common barriers preventing students from getting to school include being unable to walk to school due to real or perceived danger, having parents or guardians who are ill or otherwise unable to take their child to school, unaffordable or unsafe public transit, or missing the school bus and having no other transportation option.

Walking school buses and bike trains can work directly to solve these issues from arising, and while before-school walking programs do not combat the transportation barrier, a well-planned, motivating program can be an extra incentive for kids to get to school on time. In fact, many organizers of before-school walking programs report that students are often the ones pushing their parents to get to school so that they don't miss out on walking with their classmates.

## Promising Signs of the Role of Walking Programs in Attendance

Many walking school bus programs across the country have begun to measure the effect of their programs on late arrivals and absences:

## Before-School Walking Programs in NC

An increasing number of communities and schools across North Carolina have thriving walking and biking programs. These programs take place in a variety of forms and communities, from a weekly bike train near downtown Charlotte, to morning walks in smaller towns like Four Oaks and Canton. The following case studies share the stories of five of programs and how the organizers keep things running.

# Five Before-School Walking Programs in NC

1

2

3

4

5

## 1. Fairview Elementary and Middle Before-School Walking Program

Sylva, NC

## 2. Meadowbrook Elementary Before-School Walking Program

Canton, NC

## 3. Park Road Montessori Bicycle Fridays

Charlotte, NC

## 4. Kids for Christ

Four Oaks, NC

## 5. Ridgewood Elementary Walking School Bus

Winterville, NC



## 1 Fairview Elementary and Middle Before-School Walking Program

Sylva, NC

Fairview Elementary and Middle School Lead Teacher Eleanor Macaulay has always lived an active lifestyle. After founding a running club at school, Macaulay started a walking program because “it’s important to teach kids early-on to be active.” A walking school bus was not an option because of the school’s location, so she instead focused on time to walk at school.

Soon the program grew from a once weekly program to a robust weekday routine, and the walking time has fostered engagement between students and mentors. Western Carolina University athletes walk with the students two to three times per week, earning community service hours while motivating young students. At the same time, teachers voluntarily walk with the students and have discovered “it’s a good way to connect with kids,” particularly middle school students. Teachers enjoy getting to know their own students outside of the classroom setting as well as getting acquainted with students in other grades.

“They don’t sit and socialize anymore, now they walk and socialize!”

**-Eleanor Macaulay  
Lead Teacher & Organizer**



The program has influenced the culture of the school. For example, the annual PTA fundraiser changed from a carnival to a 5K and fun run, giving children a chance to be active with their families. At the same time, the walking program has transitioned from a voluntary one to something that’s required of all early-arriving students. Macaulay notes that the participation levels stayed the same once the requirement was added. “They don’t sit and socialize anymore, now they walk and socialize!” Next year she’s considering tracking student grades and participation to see if there are any connections, while she also intends to ramp-up the fun factor by calculating total miles walked and translating that to distances on a map such as walking across the United States.



## **2 Meadowbrook Elementary Before-School Walking Program**

Canton, NC

“Tomorrow is Walking Wednesday!” Walking Wednesdays are a student favorite at Meadowbrook Elementary School in Haywood County. Every Wednesday at 7:30 a.m. kids can be found walking around a track before the 8 a.m. school bell rings. On average, one-third of the school’s students participate. The most committed walkers have acquired a large collection of toe tokens, a prize earned by students for every five Wednesdays that they get to school early and walk.

“Keep it simple, it doesn’t have to be a big, elaborate thing. Just get out and walk and move!”

**-Beth Swanger  
PE Teacher & Program Leader**



When PE Teacher Beth Swanger, who leads the program, was no longer able to host an after-school running club and learned about the idea of before-school walking programs from her Regional Active

Routes to School Coordinator, Jackie Moore, Swanger saw the fit for her students. Now, instead of students sitting and waiting for class to begin, they are out and moving. Swanger's words of advice for people wanting to start their own program? "Keep it simple, it doesn't have to be a big, elaborate thing. Just get out and walk and move!"

### 3 Park Road Montessori Bicycle Fridays

Charlotte, NC

Every Friday morning Freedom Park fills with children, bicycles, parents, and pre-ride snacks. The park serves as the meeting point for Park Road Montessori's Bicycle Friday, led by teaching assistants Bethanie Johnson and Heather Ruckterstuhl. Anyone at school can join for the 1.5 mile bike ride to and from school that winds through a greenway, trails, and a few neighborhood streets. And join they do! Three years after the program's inception, an average of thirty students roll out for Bicycle Friday each week. They ride in all weather, and children from age four to grade six participate. A small snack helps entice students who otherwise may not want to join, but for most kids the excitement of biking to school with their friends is more than enough. The program started after Johnson had begun riding her bike to school and loved how it made her feel ready for the school day, and she wondered if kids could also benefit from outdoor activity before class.

Bicycle Friday was born, but the program started off small, with five to six kids joining every week. Ruckterstuhl knew that if they "show up consistently and provide a space for this change to happen, it will." And she was right. New kids showed up and started telling their friends about the morning ride, and the ride leaders began using communication methods like email newsletters, bulletin board posts, reminder calls, and a Facebook page to advertise the program. What began with families who lived close enough to ride from home now includes parents and kids who drive to the meeting location for the ride.

The leaders credit some of the bike train's growth to having a meeting location with public parking and a playground. This is especially convenient for teachers who ride with the group and are able to leave their cars at the park for the day. Installing new bike racks at the school also helped provide enough space for the growing popularity of two-wheeled transportation. To foster the riders' sense of pride, students make tie-dye shirts with a special Bike Friday patch. Next year, there are goals to spread the program to a nearby combined middle and high school where it's envisioned that students will eventually take the lead; students who may have started riding as grade-schoolers on Bicycle Fridays.



"... Show up consistently and provide a space for this change to happen, it will."

**-Heather Ruckterstuhl**  
**Teaching Assistant & Program Leader**



## 4 Kids for Christ

Four Oaks, NC

Communities and program champions support walking to school for so many reasons. The key is for the reason to resonate with the community. For Anita Stephenson, it was a calling to support students' spiritual growth, and integrating a walk to school helps meet that goal.

For more than six years, Stephenson has been organizing a weekly devotional hosted at two different churches (first a nearby Baptist church and now a Methodist church) near Four Oaks Elementary. After breakfast provided by parent volunteers and devotion, approximately 30 students and a handful of parent volunteers walk the 10 minute route to school together led by the pastor. Parents say that kids who usually are slow to rise in the mornings are up and ready to go on Tuesdays. While walking to school was never the focus of the program, the students enjoy walking as a group and waving at friends in the car school drop-off line. "It makes them feel special," she notes.

To grow the group, she's used yard signs and distributed flyers in the car drop-off line. The students who participate would not otherwise be able to walk to school because they live too far away.

Her advice to those starting a new program? "Don't think it's going to be too complicated....I was amazed at how many people were willing to help."



"Don't think it's going to be too complicated....I was amazed at how many people were willing to help."

**-Anita Stephenson,  
Program Leader**



## 5 Ridgewood Elementary Walking School Bus

Winterville, NC

The Langston Farms neighborhood is ideally situated for its families to walk and bike to Ridgewood Elementary School. Nine years ago when the school opened, a few families joined forces to start a cooperative walking school bus, and the program continues to be run by dedicated parents who take turns walking neighborhood students to and from school. The walking school bus helps foster a strong sense of community within the neighborhood, acquainting families who otherwise may have never known each other.

"If the kids are motivated, then parents will do it."

**-Amanda Funai  
Parent & Coordinator**





Amanda Funai, the current coordinator of the bus, took on leadership responsibilities when the founder's children graduated to middle school. Funai admits that at times being the organizer of a walking school bus that runs daily to and from school requires some real organizational skills, but overall it saves much more time than driving her kids to school every day. She sets the schedule so that a parent from each participating family walks students two to three of the ten school trips per week. A phone notification system lets parents know if inclement weather will change the daily routine. Early on, a Walking School Bus Council

helped set policies for participation so that students and families know what to expect.

As a seasoned walking school bus participant and organizer, Funai offers a lot of great advice for neighborhoods interested in starting their own walking school bus. She encourages getting the school involved – even if it is only to advertise the program. She also suggests having a way to sustain excitement for kids. For some of her walkers, this means pedometers so they can track their steps, but there are countless other ways to get kids exciting about walking. She notes that a once-per-week biking option has been really popular with her group. Finally, she says that the more parents that are involved, the better, as that means less work for everyone. Luckily, “if the kids are motivated, then parents will do it.”

---

## Resources

Use Google or another internet search engine to find these resources.

- The Walking School Bus: Combining Safety, Fun and the Walk to School, National Center for Safe Routes to School
- Bicycling to School Together: A Bike Train Planning Guide, National Center for Safe Routes to School
- How to Start a Walking School Bus or Bike Train, Safe Routes to School National Partnership
- Starting a School Walking Program, Advocates for Health in Action
- The Morning Mile, Fitness Production
- North Carolina Regional Active Routes to School Coordinators  
A joint partnership between NC Department of Transportation and NC Division of Public Health

- <sup>i</sup> Hillman, C.H., Pontifex, M.B., Raine, L.B., Castelli, D.M., Hall, E.E., and Kramer, A.F. (2009). The Effect of Acute Treadmill Walking on Cognitive Control and Academic Achievement in Preadolescent Children. *Neuroscience*, 159, 1044-1054. [http://labs.kch.illinois.edu/Research/Labs/neurocognitive-kinesiology/files/Articles/Hillman\\_2009\\_TheEffectOfAcute.pdf](http://labs.kch.illinois.edu/Research/Labs/neurocognitive-kinesiology/files/Articles/Hillman_2009_TheEffectOfAcute.pdf)
- <sup>ii</sup> Child Health Assessment and Monitoring Program. (July 2011). Children's Physical Activity: North Carolina 2010. <http://digital.ncdcr.gov/cdm/ref/collection/p249901coll22/id/286635>
- <sup>iii</sup> US Department of Health and Human Services. (2008). Physical Activity Guidelines Advisory Committee report. Washington, DC: US Department of Health and Human Services.
- <sup>iv</sup> Centers for Disease Control and Prevention. (2010). The Association Between School-Based Physical Activity, Including Physical Education, and Academic Performance. Atlanta, GA; Centers for Disease Control and Prevention, US Department of Health and Human Services.
- <sup>v</sup> Michael S.L., Merlo C., Basch C., et al. (2015). Critical connections: health and academics. *Journal of School Health*, 85(11), 740–758.
- <sup>vi</sup> Active Living Research. (2015). Active Kids Learn Better. [http://activelivingresearch.org/sites/default/files/ALRInfographic\\_ActiveKidsLearnBetter\\_Jan2015.jpg](http://activelivingresearch.org/sites/default/files/ALRInfographic_ActiveKidsLearnBetter_Jan2015.jpg)
- <sup>vii</sup> US Department of Education. (2016). New Data Show Chronic Absenteeism is Widespread and Prevalent Among All Student Groups. <https://www.ed.gov/news/press-releases/new-data-show-chronic-absenteeism-widespread-and-prevalent-among-all-student-groups>
- <sup>viii</sup> Hickman, G.P., Bartholomew, M., and Mathwig, J. (2007). The Differential Development Trajectories of Rural High School Dropouts and Graduates: Executive Summary. Phoenix, AZ: The College of Teacher Education and Leadership at the Arizona State University at the West Campus.
- <sup>ix</sup> US Department of Education. (2016). Chronic Absenteeism in the Nation's Schools. <https://www2.ed.gov/datastory/chronicabsenteeism.html#intro>
- <sup>x</sup> US Department of Education. (2016). New Data Show Chronic Absenteeism is Widespread and Prevalent Among All Student Groups. <https://www.ed.gov/news/press-releases/new-data-show-chronic-absenteeism-widespread-and-prevalent-among-all-student-groups>
- <sup>xi</sup> NC Early Childhood Foundation. (n.d.). Chronic Absenteeism. <http://buildthefoundation.org/chronic-absenteeism/>
- <sup>xii</sup> Safe Routes to School National Partnership. (2014). Addressing Attendance through Safe Routes to School. <http://www.attendanceworks.org/wordpress/wp-content/uploads/2015/01/Safe-Routes-to-School-Chronic-Absenteeism-12-15-14-webinar-Revised.pdf>
- <sup>xiii</sup> PedNet. (October 2016). Kansas Statewide Walking School Bus Final Report.
- <sup>xiv</sup> Maine Center for Disease Control and Prevention, Department of Health and Human Services. (2015). Walking School Bus Process and Outcome Evaluation Report.
- <sup>xv</sup> Safe Routes to School National Partnership. (2014). Addressing Attendance through Safe Routes to School. <http://www.attendanceworks.org/wordpress/wp-content/uploads/2015/01/Safe-Routes-to-School-Chronic-Absenteeism-12-15-14-webinar-Revised.pdf>
- <sup>xvi</sup> Zalkind, C. (2015). For NJ. students to succeed, epidemic of chronic absenteeism must end. NJ.com. [http://www.nj.com/opinion/index.ssf/2015/09/for\\_nj\\_students\\_to\\_succeed\\_epidemic\\_of\\_chronic\\_abs.html](http://www.nj.com/opinion/index.ssf/2015/09/for_nj_students_to_succeed_epidemic_of_chronic_abs.html)
- <sup>xvii</sup> Interview with Michelle Norman, 6/6/17



**saferoutes to school**  
north carolina