

# Climate Action for Healthy People, Healthy Places, Healthy Planet: **Transportation, Climate Change and Health**



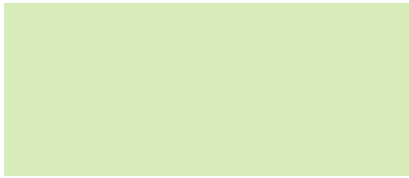
Climate change is the greatest health challenge of the 21<sup>st</sup> century. It threatens our air, food, water, shelter and security — the basics on which human life depends. Climate change exacerbates health inequities by disproportionately impacting people living in poverty and communities of color.

At the same time, action on climate change provides one of our greatest health opportunities because many climate change solutions improve community environments and health and reduce health inequities. Everybody benefits.

In this brief we explain the health and health equity benefits of reducing climate pollution from the transportation sector. For more on **“Climate Action: Healthy People, Healthy Places, Healthy Planet”** please visit: <http://www.usclimateandhealthalliance.org>.

## Key Messages

- Key strategies to reduce transportation greenhouse gas emissions (GHGE) all offer significant health, equity and environmental benefits.
- Transportation is the now the largest source of greenhouse gas emissions in the U.S., contributing 30% of all emissions in 2016.<sup>1</sup>
- Our car-dependent land use, housing and transportation patterns have taken physical activity out of our daily routines. Sedentary lifestyle increases the risk of heart disease, stroke, diabetes, depression, osteoporosis, obesity and some cancers.
  - Replacing car travel with walking, biking, and using public transit increases physical activity and significantly reduces chronic disease risks.
  - Safe walking and biking infrastructure prevents pedestrian and bicycle injuries and deaths.
- Low-income families often have more limited transportation options, and thus struggle to access necessary resources and economic opportunities.
  - Affordable and accessible public transit allows low-income people, youth, seniors and the disabled better access to resources.
- Low-income individuals and people of color are more likely to live in high-traffic areas and are disproportionately affected by motor vehicle emissions and car crashes.
- Motor vehicles are a major source of air pollution, and a leading cause of injury and death due to automobile collisions.
- Low carbon fuels and low or zero emission (electric) vehicles substantially reduce air pollution.
- Everybody benefits from a healthy transportation system that is good for our health, good for our communities, and good for the climate.



In the San Francisco Bay Area, an increase in the average time spent in active transportation from the current 4 minutes to 22 minutes would reduce cardiovascular disease and diabetes by 14%, along with significant reductions in dementia, breast cancer, colon cancer and depression.

## Health and transportation

Our current transportation system causes injury and illness from air pollution, motor vehicle collisions, sedentary behavior, noise and stress.

- Current land use, transportation and housing patterns (often low-density neighborhoods and poor mix of land use) have increased our dependence on automobiles and reduced physical activity in daily life.
- Too little physical activity is associated with heart disease, stroke, diabetes, obesity, osteoporosis, depression and all-cause mortality.
  - More than 60% of U.S. adults do not achieve the recommended amount of regular physical activity.
- Motor vehicle crashes are the leading cause of injury, disability and death in the U.S. for those between 5–24 years old.<sup>2</sup>
  - In 2013 alone, more than 2.3 million U.S. residents were injured and over 32,000 people were killed from auto collisions.<sup>3</sup>
  - Low-income people, people of color and children face a greater risk of injury and death due to motor vehicle collisions, and pedestrians are killed at disproportionately higher rates in the nation's poorer neighborhoods.<sup>4</sup>
- Motor vehicles are a major source of air pollution.
  - Exposure to traffic-related air pollutants (i.e. particulate matter, nitrogen oxides, sulfur oxides, ozone and toxic air contaminants like benzene) increases the risk for heart disease, asthma and other respiratory disease, cancer, premature death, and affects lung and brain development of children.<sup>5</sup>
  - People of color and low-income people are more likely to reside near busy roadways and are disproportionately affected by pollutants from motor vehicles.<sup>6</sup>
- Road traffic is a major source of noise pollution.
  - Excess noise is associated with sleep disruptions, increased risk for heart disease, stroke, stress and disturbances at school and work.
- Transportation is the second largest expense for American households, costing more than food, clothing, and health care.<sup>7</sup>
  - Low-income families often have few low-cost transportation options. As a result, almost 30% of their income goes to transportation alone.

## Climate and transportation

The transportation sector is now the largest contributor to U.S. greenhouse gas emissions.

- The transportation sector contributed 30% of all U.S. emissions in 2016.<sup>1</sup> Transportation is one of the fastest-growing sources of domestic GHGE and accounts for nearly half of the increase in total emissions since 1990.<sup>8</sup>
- On-road vehicles were responsible for the vast majority (83%) of transportation-related GHGE; passenger cars and light-duty trucks contribute 60% of these emissions.<sup>9</sup>
- Reducing personal vehicle use will substantially reduce emissions of transportation-related greenhouse gases and associated pollutants.



## FAST FACT:

Low-income families often have few low-cost transportation options and spend almost 30% of their income on transportation alone.

Low-income people are already greater users of active transportation but need better service, safety and affordability.



## Major Health Benefits with Active Transportation

In the San Francisco Bay Area, an increase in the average time spent in active transportation from the current 4 minutes to 22 minutes would reduce cardiovascular disease and diabetes by 14%, along with significant reductions in dementia, breast cancer, colon cancer and depression. Additionally, it would reduce greenhouse gas emissions (14%) and air pollution, too. However, without attention to safer active transportation infrastructure, it could significantly increase the burden of cycling and pedestrian fatalities.<sup>10</sup>

## Healthy Transportation: Good for our health and good for the climate

There are many ways to improve our transportation system so that it's better for our health, for our communities, and for the climate.

- One of the best ways to improve our health and reduce climate pollution is to spend less time driving cars and more time walking, biking, and using public transit - together called “active transportation.”
  - Studies show that shifting from car travel to active transportation provides big reductions in chronic disease.
  - Nearly 50% of all trips in urban areas are three miles or less and 28% are one mile or less, both easy bicycling distances.<sup>11</sup>
  - Walking, biking and public transit must also be safe to ensure that expanding active transportation doesn't lead to more injuries. In 2013, approximately 17% of automobile crash fatalities included pedestrians and bicyclists.<sup>3</sup>
  - Studies have shown that the health benefits of physical activity, such as biking and walking, are greater than any harm due to increased pollution exposure from being active outdoors.<sup>12</sup>
  - “[Complete Streets](#)”, better road and sidewalk design, segregated bike lanes, lighting, shade, and bike parking make biking and walking safer and more pleasant.
  - Programs such as “[Safe Routes to School](#)” or walking school buses can increase the safety and security of children and promote active transportation.
- Better active transportation infrastructure and public transit is especially important to reduce inequities. Due to the high cost of driving, low income people are already greater users of active transportation but need better service, safety and affordability.
  - Affordable and accessible public transit allows low-income people, youth, seniors and the disabled better access to resources and opportunities.
  - Active transportation reduces transportation costs, allowing people to spend more on healthy food and housing.

- Free or discounted public transit fees for students and low-income people could increase school attendance, decrease contact with juvenile justice system, increase available funding for schools and provide more disposable income for families.<sup>13</sup>

- Zero-emission vehicles and hybrid low carbon vehicles reduce air pollution and climate pollution.
  - Zero-emission vehicles (battery electric and hydrogen fuel cell) produce zero tailpipe smog-forming or greenhouse gas emissions.
  - Using today's average U.S. electricity mix of renewable and non-renewable resources, an electric car will cut harmful carbon pollution by about half compared to the average new vehicle.<sup>14</sup>
- Low carbon fuel standards and automobile fuel efficiency standards reduce air pollution and climate pollution.
  - For example, in California, new vehicle emission standards are aimed at reducing greenhouse gas emissions by 34% in 2025,<sup>15</sup> and nationally, the U.S. EPA's Low Carbon Fuel Standards Program 2017-2025 model year light-duty vehicles are projected to save approximately 2 billion metric tons of GHGs over the lifetimes of those vehicles.<sup>16</sup>

## What can we do?

The health sector can play an important role in creating healthy, equitable, climate resilient communities. We can talk to our patients, colleagues, communities and policy-makers about how a healthy transportation system is good for our health, good for our communities, and good for the climate. We can support strategies that will move us toward a healthy transportation system:

- Design healthy communities that allow more people to live closer to jobs, schools, services and destinations such as parks and stores, including infill and transit-oriented development.
  - Anti-displacement measures and affordable housing are critical to ensure that low-income residents are not displaced through gentrification, as “smart growth” may increase property values.
- Increase funding and planning for safe bicycle and pedestrian infrastructure, [Complete Streets](#), and programs such as [Safe Routes to School](#) to encourage active transportation and reduce the risk of injuries.
- Increase funding for transit infrastructure and transit operations that increase capacity and convenience and lower costs for riders. Provide low-cost transit discounts for students and low-income people.
- Implement and strengthen low carbon fuel standards and vehicle efficiency standards.
- Develop strategies to increase the use of electric vehicles, including electrification infrastructure and financial incentives.
  - Ensure mechanisms that allow low-income populations to benefit from EV ownership, such as enhanced rebates and charging stations in multi-unit housing.<sup>17</sup>



### ! FAST FACT:

An electric car will cut harmful carbon pollution by about half compared to the average new vehicle.



## DID YOU KNOW?

Nearly 50% of all trips in urban areas are three miles or less and 28% are one mile or less, both easy bicycling distances.

## Summary

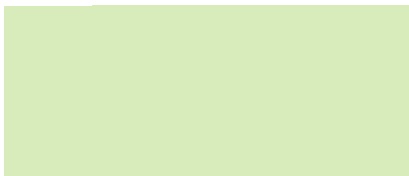
We can reduce climate pollution and improve the health of our communities at the same time by supporting a healthy transportation system. The biggest gains in health will come from increases in walking, biking and public transit use. Reducing petroleum use in vehicles through fuel efficiency, low carbon fuels and zero emission vehicles will reduce air pollution and greenhouse gas emissions. We know what we need to do to create a healthier, more equitable and more climate-friendly transportation system. We need your support to get there.



## For More Information

- Healthy, Equitable Transportation Policy: Recommendations and Research  
<http://www.policylink.org/find-resources/library/healthy-equitable-transportation-policy-recommendations-and-research>
- Getting Involved in Transportation Planning  
<http://www.changelabsolutions.org/publications/getting-involved-transportation-planning>

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## FAST FACT:

Studies show that shifting from car travel to active transportation provides big reductions in chronic disease.

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