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"Efficiency - Equity - Clarity"

Active Transportation Policy Issues

Backgrounder

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For the Go For Green "National Roundtable on Active Transportation," April 9-10, 2003

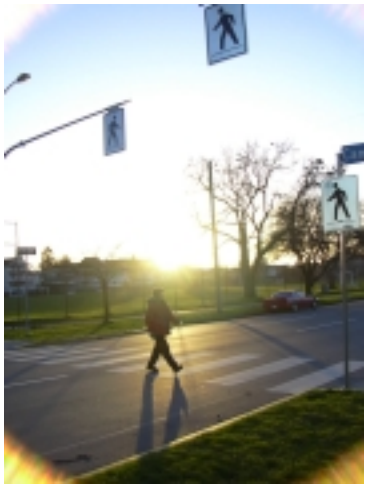
This paper provides background information on active transportation to facilitate discussion of national active transportation policy and legislation at the Active Transportation Roundtable. It was funded by Go For Green *(www.goforgreen.ca).*

Key Concepts:

- *Active transportation* consists of human-powered forms of travel such as walking, cycling, skating, skiing, and manual wheelchairs.
- More active transportation supports public health objectives including increased fitness, reduced pollution and reduced crashes, particularly when it substitutes for motorized travel.
- Active transportation that substitutes for automobile travel provides other significant economic, social and environmental benefits.
- There is evidence that many people want to use more active transportation if given suitable support and encouragement.
- Substantial shifts from driving to active modes are possible with suitable transportation and land use policies.
- Current transportation policy and planning practices undervalue active transportation, and so provide inadequate support for nonmotorized modes.
- More active transportation is particularly beneficial to children, because it supports their physical and social development.
- Several Win-Win transportation strategies justified for their economic benefits (reduced congestion, facility cost savings, consumer savings, etc.) increase active transportation.
- The Canadian federal government has traditionally not supported active transportation, although it supports motorized modes directly and indirectly. Changes are needed to create a more balanced and neutral federal policy with regard to travel modes.
- Policies to support active transport are consistent with other federal objectives, including urban redevelopment, sustainability and pollution emission reductions.
- The federal government can implement a variety of policies and programs that will result in more active transportation.

What Is Active Transportation?

Active transportation (also called *nonmotorized*, *human-powered* or *walk/bike* transport) includes travel modes such as walking, cycling, skating, skiing, and manual wheelchairs.



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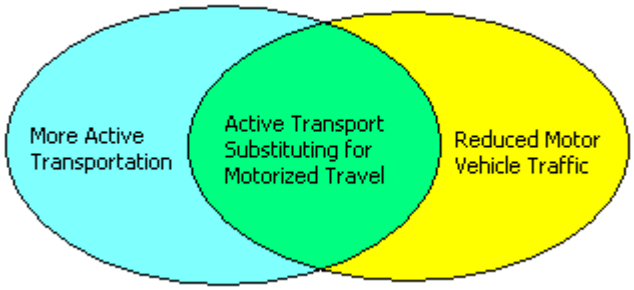
Active Transportation Benefits

Active transportation can provide a variety of benefits to individuals, businesses and governments, particularly when it substitutes for motorized travel, as illustrated below.[1]



More active transport improves physical fitness, and provides additional benefits when it reduces motor vehicle traffic.

Health-Related Benefits

Improved Physical Fitness

Public health officials are increasingly alarmed at declining physical fitness among the general population, which increases medical problems such as heart disease, strokes and diabetes. There are many ways to be physically active, but most, such as sports or exercising in a gym, require special time, money and skill, which discourages people from participating regularly over their lifetime. Many experts consider active transport the most practical way to improve public fitness for the general population.

More active transportation is important for children's physical and social development.[2] Children are particularly vulnerable to vehicle pollution illnesses and traffic crash injuries. An increasing portion of children are overweight and insufficiently active. Walking and cycling gives children independence that contributes to their social and psychological development, and children's travel patterns can create lifelong habits: children who walk and bicycle are more likely to use these modes as adults.

Traffic Safety

Although traffic crash rates measured *per unit of travel* (fatalities and injuries per billion vehicle-kms) have declined substantially during the last half century due to improved driver behavior, safety equipment and roadway design, these gains have been offset by increased vehicle travel. When measured *per capita* (per 10,000 population) as with other public health risks, progress is much smaller. Traffic crashes continue to be the largest single cause of death and disability for people in the prime of life (i.e., 1-45 years).

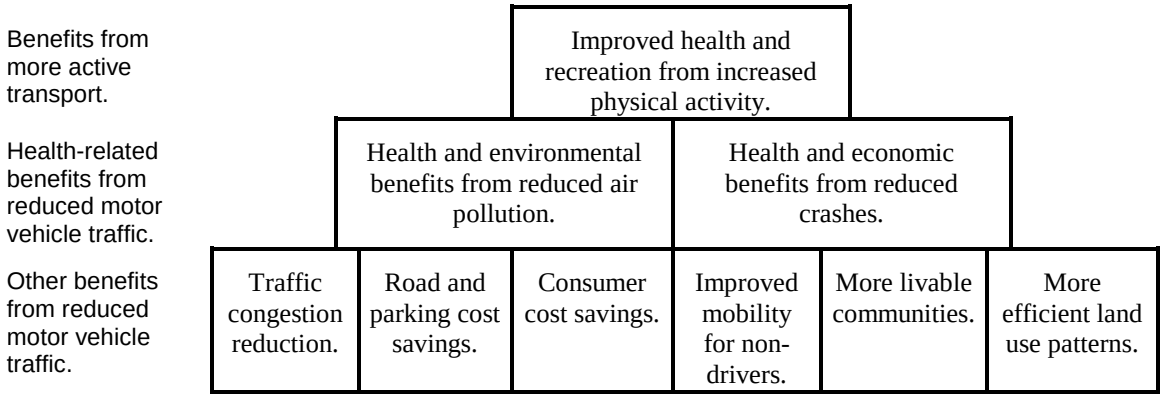
Vehicle Pollution

Motor vehicles are major contributors to air, noise and water pollution. Such emissions probably causes a similar number of premature deaths as traffic crashes.[3] Shifting travel to non-motorized modes provides relatively large pollution reduction benefits because it tends to reduce short urban trips which have relatively high emission rates, so each 1% of automobile travel replaced by walking and cycling is estimated to reduce motor vehicle air pollution emissions by 2% to 4%.[4]

Other Benefits[5]

- Congestion reduction.
- Road and parking facility cost savings.
- Transportation affordability and consumer cost savings.
- Improved mobility options, particularly for non-drivers.
- Improved community livability (improved local environmental quality, which can increase local property values and business activity).
- More efficient land use (reduced sprawl).
- Increased public transit ridership (since most transit trips involve nonmotorized links), leading to additional reductions in automobile travel.

Summary of Active Transportation Benefits



More active transportation provides a variety of benefits to individuals and society. Planning that considers just one or two benefits undervalues active transportation.

What Affects Active Transportation?

Active transportation declined over much of the last century, but in recent years this decline leveled off and is reversing in many communities. There appears to be significant latent demand for active transport, that is, people would walk and cycle more if they have suitable facilities and support.[6] This suggests that improving conditions for nonmotorized travel can increase active transportation, and benefit individuals and communities overall.

Various transport and land use factors affect the amount of active transportation that occurs in a community.[7] These are summarized below. These tend to have synergistic effects (their total impacts are greater than the sum of their individual impacts), so an integrated program that combines several strategies tends to be more effective at increasing active transportation than implementing just one or two of these strategies.

Pedestrian and Bicycle Planning

Nonmotorized planning and investments that improve sidewalks, crosswalks, paths, bikelanes, bikeracks and other facilities can remove barriers to walking and cycling, resulting in more active transportation.

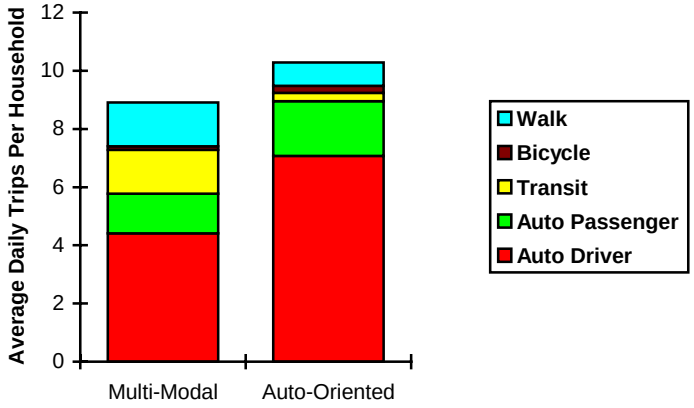
Mobility Management Programs

Mobility management includes various strategies that encourage more efficient travel, including shifts from driving to walking, cycling, ridesharing and public transit. This increases active transportation directly, and helps reduce barriers to walking and cycling, such as wide roads with heavy traffic. Efforts to encourage transit and ridesharing tend to increase active transportation since such trips usually involve nonmotorized links.

Local Land Use

Residents of multi-modal communities drive less and use active modes more than residents of more automobile-oriented communities, as indicated in the figure below. Such communities tend to have more mixed-use neighborhoods (so more residents can walk to shops, schools and other services), adequate walking and cycling facilities and good transit service.

Household Travel by Neighborhood Type[8]



Households in more multi-modal communities make more nonmotorized trips and fewer auto trips than households in more automobile-oriented communities.

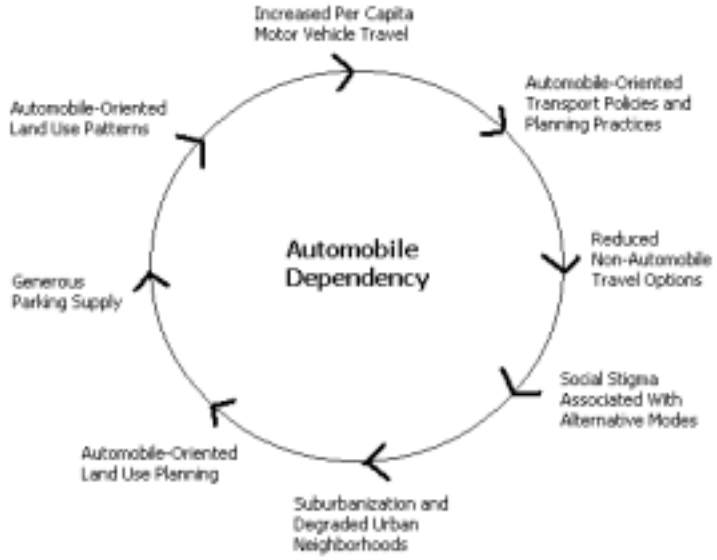
Active Modes In Transport Planning

Conventional transport planning tends to undervalue active transportation. Conventional travel surveys typically find that only about 5% of trips are made by active modes, indicating that they are relatively unimportant and can do little to solve transport problems.

But consider another perspective. What would you rather give up, your ability to drive or to walk? Active modes play a critical role in our lives. The high value placed on motorized travel and the low value placed on nonmotorized travel results, in part, from how transport is measured. Standard travel data ignore or undercount short trips, non-work travel, children's travel, recreational travel and nonmotorized links. For example, most travel surveys classify "auto-walk" or "walk-bus-walk" trips simply as "auto" or "transit," and ignore any walking links. If, instead of asking, "What portion of trips involve *only* nonmotorized travel," we ask, "What portion of trips involve *some* nonmotorized travel," a 20-30% of urban trips would be included and active modes would be recognized as common and important.

Many planning decisions involve tradeoffs between motorized and nonmotorized accessibility. Planning practices that favor motorized travel create more automobile dependent communities that discourage active transport, as illustrated below. Although planning practices that favor motorized travel may individually seem modest and justified, their impacts are cumulative, increasing motor vehicle traffic and reducing active transportation over the long-run.

Cycle of Automobile Dependency



Automobile dependency results from a cycle that increases vehicle travel and reduces alternatives.

Put another way, more neutral planning practices would probably result in more balanced transport systems and land use development patterns that are more supportive of active transportation.

What Is Being Done?

Communities throughout the world are rediscovering the importance of active transportation and implementing programs to support and encourage nonmotorized travel.

- Many transport agencies have nonmotorized planning programs with pedestrian and cycling planners to provide professional support for active modes. For example, U.S. federal transportation policy requires each state department to appoint walking and cycling coordinators, and many local and regional governments have similar programs.[9]

- Some communities are now being built or redeveloped to include extensive trails, sidewalks, narrow streets and traffic calming (streets designed to control vehicle traffic speeds) in order to facilitate walking and cycling. This is called *New Urbanism* or creating *walkable communities*.[10] Such areas often have higher residential property values and more business activity than otherwise comparable communities with more conventional development patters, indicating that people want more walkable communities.[11]

- Some transportation agencies and professional organizations now apply significant research and planning resources to active modes in order to identify barriers nonmotorized travel, effective ways to improve walking and cycling conditions, and strategies that shift travel from motorized to nonmotorized modes.[12]

- The United Kingdom's federal transportation plan includes national goals to reduce total vehicle traffic and improve local transport, including walking, cycling and public transit.[13] To help achieve these goals the UK Department For Transport provides technical and financial support to help other levels of government implement *local transport plans*, school transport management programs, and *Home Zones* (residential areas with low traffic speeds).[14]

- Improving nonmotorized facilities tends to help provide basic mobility for people who are physically, economically or socially disadvantaged.[15]

- Efforts to improve public transit service often involve walking and cycling improvements.[16] Conversely, efforts to increase transit ridership generally increase active transportation, since most transit trips involve walking links.

- Many communities are implementing *mobility management* programs that support active transportation, such as Go For Green.[17] However there are no federal policies to support such programs or help them expand at the community level.

- *TravelSmart* is a successful community-based mobility management marketing program in Perth, Australia, a typical, automobile-oriented city.[18] This program provides information, encouragement and targeted facility improvements to help residents choose alternatives to driving for personal travel. It reduced automobile trips by 10%, two-thirds of which consisted of shifts to nonmotorized travel, increasing cycling by 91% and walking by 16%.

- Community-based programs such as *Bike to Work Week* have proven successful at encouraging active transportation, but they require adequate and predictable support.[19]

- Many schools, colleges and universities now encourage students and staff to arrive by active modes, and are improving walking and cycling access.[20] In many cases these efforts more than double the portion of nonmotorized trips.

- The *Walk Friendly* program in Western Australia involves 14 government and community agencies working together to promote walking.[21] Public surveys found that walking is the most preferred form of active recreation: 60% of Western Australians walk for recreation and 25% walk for transportation. Accessible, safe, comfortable and attractive walking conditions, along with promotion programs are important to increase walking.

- *Active Living by Design* is program at the University of North Carolina School of Public Health to develop innovative approaches to increase physical activity through community design, public policies and communications strategies.[22]

- The World Health Organization supports programs to improve nonmotorized travel conditions and encourage active transportation, particularly by children and older people.[23]

- The largest transportation emission reduction strategy in Canada's Climate Change Plan consists of "Increased use of public transit, alternative approaches to passenger transportation and sustainable urban planning," which includes shifts from motorized to nonmotorized modes, and other strategies that reduce excessive motor vehicle travel.[24] It is projected to reduce 7 megatonnes of air emissions.

- Many resort communities are using pedestrian and cycling improvements to attract tourists and help preserve the unique attributes that make them attractive.[25] This is true in both cities and towns, where pedestrian improvements help create more attractive urban environments, and in suburban and rural areas where public paths and trails are popular tourist destinations.

- *Push Play* is a New Zealand program that promotes physical activity for the general population.[26]

- Canada is considered an international leader in developing successful programs that support active transportation, such as *Go For Green* and *Way To Go!*. However, these programs are only implemented in a few communities and have relatively little national impact.

Social Marketing
Social marketing refers to community-based programs to encourage more socially desirable behavior. Social marketing is effective at achieving behavior changes that people generally support but find difficult to make, such as actions that increase personal health or benefits neighbors. It helps people reconcile their actions with their beliefs, providing integrity and pride, as well as helping to solve specific personal and community problems.

There are many successful examples of social marketing, including increased use of seatbelts and child restraints, reduced excessive drinking, more balanced diets and reduced tobacco consumption. These involved a combination of education, persuasion and policy interventions that have changed the way people act.

Resources:
Novartis Foundation Social Marketing (www.foundation.novartis.com/social_marketing.htm)
Social Marketing.Com (www.social-marketing.com)
Social Marketing Institute (www.social-marketing.org)
Social Marketing Network (www.hc-sc.gc.ca/hppb/socialmarketing)

Win-Win Transportation Solutions

As described earlier, current transport policies and planning practices tend to favor motor vehicle travel over active modes. Transport planning reforms are needed to create more balanced transport systems and achieve the full potential benefits of active transportation.

Win-Win Transportation Solutions is a name for policy and planning reforms that help solve transport problems by removing distortions, increasing travel options and encouraging more efficient transport patterns.[27] This is not to suggest that there are no costs or barriers to their implementation, but it does mean that if properly planned and implemented society can benefit overall, regardless of the economic value assigned to health and environmental benefits.

As an example, many commuters receive subsidized parking, typically worth several hundred dollars a year, while people who use other modes receive no comparable benefit. This encourages driving over other commute options. A Win-Win Solution called *Parking Cash Out* allows commuters who are offered free parking the options of choosing its cash equivalent instead, providing more neutrality between travel modes. Parking Cash Out typically reduces automobile commuting by 10-30%. Since it is optional to employees, commuters who choose this option must be better off overall, or they would not choose it. Parking Cash Out is justified on both fairness and economic efficiency grounds (economic benefits such as reduced congestion, facility costs and consumer gains outweigh incremental costs), and helps achieve health goals.

We have identified more than a dozen Win-Win Solutions (see below). They can help achieve a variety of economic, social and environmental objectives, including those related to health. Most of these strategies increase active transportation, either because they encourage walking and cycling directly, or because they create more balanced transportation systems and more walkable communities.

Win-Win Transportation Solutions

- Remove subsidies to oil production.
- Tax exempt transit benefits.
- Pay-as-you-drive vehicle insurance, taxes and road user fees.
- Least-cost transport planning.
- Revenue-neutral tax shifting.
- Road and parking pricing.
- Mobility management programs.
- Smart Growth land use policies.
- More flexible zoning requirements.
- Parking Cash Out.
- Commute trip reduction programs.
- Transportation management associations.
- Location efficient development.
- School and campus transport management.
- Carsharing.
- Nonmotorized transport improvements.
- Traffic calming and speed reductions.
- Road space reallocation.

Specific Federal Policy Actions

Support Active Transportation Programs

- Establish national goals and objectives for more active transportation, and give federal agencies such as Transport Canada responsibility for helping to achieve these objectives.
- Create an ongoing cooperative network including federal and provincial agencies and NGOs to support transport and land use policies and programs that increase active transportation and reduce automobile dependency.
- Educate government officials concerning the benefits in more active transportation.
- Support active transportation marketing and promotion programs.
- Provide federal infrastructure grants for nonmotorized improvements.
- Encourage provincial and local governments to implement nonmotorized planning, infrastructure investments and promotion programs.
- Support research on active transportation promotion, nonmotorized safety, and mobility management strategies.
- Provide support for mobility management programs and pilot projects. Encourage provincial and local governments to implement such programs.
- Incorporate active transportation encouragement policies in federal employment and facility planning decisions.

Planning Reforms

- Use federal funding to leverage support for active transportation by other levels of government.[28]
- Require provincial and local governments to implement smart growth planning reforms in order to qualify for federal infrastructure funds.
- Provide research support to better evaluate nonmotorized travel impacts and benefits.
- Support research and pilot projects to try innovative urban development strategies.[29]
- Support urban sustainability fiscal reforms and investment strategies.[30] Support brownfield redevelopment.[31]

Incentives to Reduce Motor Vehicle Travel

- Require provincial and local governments to implement Employee Trip Reduction (ETR) programs to receive federal infrastructure funds.
- Exempt transit benefits from federal income tax.[32]
- Provide research support and tax incentives to encourage insurance companies to implement Pay-As-You-Drive vehicle insurance pilot projects.
- Sponsor road pricing research and pilot projects. Encourage provincial and local governments to implement road pricing as a mobility management strategy and as a source of matching funds for federal infrastructure grants.
- Consider negative impacts on nonmotorized travel in policy and planning evaluation by Transport Canada and other federal agencies.

Go For Green Recommendations[33]

Go for Green submitted the following recommendations to the Canadian Federal Standing Committee on Finance's consideration for the federal budget.

- The Federal Government undertake the creation of a *National Secretariat for Active Transportation*, linked to the Infrastructure Agency, to be established as a critical component of Canada's strategies to address Climate Change, community transportation issues of congestion, and population health issues caused by physical inactivity. The National Secretariat for Active Transportation would:
    - Host a national Round Table process on Active Transportation, prepare a national strategy paper, and report promptly to the Federal Government.
    - Implement the National Active Transportation Strategy as approved by the Federal Government, including the 7% criteria on relevant funding.
    - Undertake research to determine international and domestic 'best practices' related to the implementation of comprehensive Community Active Transportation Plans.
    - Undertake a Social Marketing Campaign to educate Canadians and create behaviour change resulting in conversion of short distance automobile use, to Active Transportation trips.
    - Work with municipalities to begin the process of retrofitting suburban communities with more efficient Active Transportation and Transit infrastructure that encourages intermodal use.
    - Support and encourage the adoption of Active and Safe Routes to School programs in Schools across Canada.
    - Put strategies in place for community institutions, including workplaces, schools, and places of commerce to improve the efficiency of the movement of people and goods.
    - Evaluate and report national progress against the National Active Transportation Strategy to relevant Ministers.

- The Federal Government establish a national requirement that 7% of all infrastructure funding allocated to urban transit, road and other transportation construction, be set aside for Active Transportation infrastructure including:
    - bike paths and lanes,
    - sidewalks,
    - paths and trails
    - traffic calming measures,
    - intermodal connection facilities e.g. secure bicycle parking at transit connections
    - safety enhancements including establishing safe "Active Transportation corridors for travel to school and the workplace.

- It is further recommended that policy requiring these types of infrastructure enhancements be required by federal, provincial and municipal legislation, and that agreements be sought by the three levels of government to achieve this end, while determining appropriate mechanisms to administer not less than a 7% allocation to Active Transportation.
- The Federal Government investigate and adopt appropriate federal tax incentive measures to encourage Canadians to choose Active Transportation wherever possible, for short trip travel to work, school, leisure and transit destinations.
- Federal and Provincial Territorial Governments substantially increase support to national and regional initiatives, which have proven successful in educating and creating behaviour change among Canadians in choosing Active Transportation. These programs include: Active and Safe Routes to School, and the Commuter Challenge, which are over subscribed and under-resourced.

- The Federal Government invest $10 million dollars annually in community based education and programming to encourage Canadians to adopt Active Transportation as a strategy to reduce emissions and enhance health and quality of life.
- The Federal Government in partnership with Provincial/Territorial governments set a goal of increasing use of Active Transportation modes among Canadians to 20% over the next 10 years.
- As a major employer of Canadians, the Federal Government demonstrates leadership by piloting workplace commuter projects at its installations across the country.

Resources

Active Living by Design (www.activelivingbydesign.org) encourages physical activity and health through community design and public policy strategies.

BMJ, "Cycling and Health Promotion," *British Medical Journal* (http://bmj.com/cgi/content/full/320/7239/888), Vol. 320, 1 April 2000, p. 888.

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Centre for Alternative and Sustainable Transport (CAST) (www.staffs.ac.uk/schools/sciences/geography/cast/casthome.html)

CORDIS, *Best Practice to Promote Cycling and Walking* CORDIS, European Union (www.cordis.lu/transport/src/adonisrep.htm), 1999.

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Local Government Commission (www.lgc.org) has resources for nonmotorized facility planning.

Roger Mackett, *How to Reduce the Number of Short Trips by Car*, Centre for Transport Studies, University College London (www.ucl.ac.uk/transport-studies/shtrp.htm), 2000.

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Rails-to-Trails Conservancy, *Improving Conditions for Bicycling and Walking; Best Practices*, FHWA (www.fhwa.doc.gov) and Rails-to-Trails Conservancy (www.railtrails.org), 1999.

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Walkable Communities, Inc. (www.walkable.org) works create more foot-friendly communities.

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[3] Pollution-related illnesses are more likely to involve older people, and so tend to cause smaller reductions in Potential Years of Life Lost (PYLL) than traffic crashes.

[4] Charles Komanoff and Cora Roelofs, *The Environmental Benefits of Bicycling and Walking*, National Bicycling and Walking Study Case Study No. 15, USDOT, January 1993, FHWA-PD-93-015.

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[24] *Climate Change Plan for Canada*, Government of Canada, (www.climatechange.gc.ca), 2002.

[25] MOST (http://mo.st). Todd Litman, *First Resort; Resort Community Transportation Management*, VTPI (www.vtpi.org), 1999.

[26] *Push Play* (www.pushplay.org.nz).

[27] "Win-Win Transportation Solutions," *Online TDM Encyclopedia*, Victoria Transport Policy Institute (www.vtpi.org), 2003.

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