



To: Place Directorate

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Date: 02/09/2016

Subject: Essential Evidence on a Page: No 152 Association between recreational and commuter cycling, changes in cycling and Type 2 Diabetes risk

Top line: It seems beneficial to encourage middle and old age adults to engage in commuter and recreational cycling to prevent the development of type 2 diabetes in later adulthood.

Cycling for transport and recreation has been emphasised for its great potential for improving public health. As part of an overall global action plan to prevent and control non-communicable disease, the World Health Organisation has called for a reduction in the prevalence of physical inactivity. The promotion of active transport, i.e., commuter walking or cycling, is a central component of the policy options defined to achieve this goal. Because cycling may be conveniently incorporated into daily life chores such as commuting to school, work, or grocery shopping, it may be a mode of physical activity that appeals to a large part of the population. Additionally, cycling is an environmentally sustainable mode of transport compared to motorised transport. Although habitual cycling is likely to be health- and fitness- enhancing physical activity, its importance for chronic disease prevention in populations has been scarcely investigated. Habitual cycling has, in studies of adults, been associated with a lower incidence of fatal and non-fatal cardiovascular disease, less weight gain, and lower death from all-causes. Cycling may be particularly valuable for type 2 diabetes (T2D) prevention, since a large body of evidence shows that regular engagement in physical activity and lifestyle intervention incorporating physical activity substantially decreases T2D risk.

A number of previous studies have investigated the relationship between active transport, combining cycling and walking, and T2D. However, previous research investigating the relationship between cycling for recreation or transport and risk of T2D is sparse. A new study was undertaken to investigate whether cycling specifically is valuable in the prevention of T2D. Researchers drew on a Danish population with widespread engagement in regular cycling. Based on information from a large population-based study, researchers investigated if the risk of T2D was related to habitual cycling when personal- and lifestyle-related risk factors were taken into account.¹

The researchers found that habitual cycling was related to a lower risk of T2D than no cycling, and that a longer duration of weekly cycling seemed to be preferable to less weekly cycling. The researchers also found that those who took up habitual cycling in middle to old age had a 20% lower risk of T2D compared to those who remained non-cyclists. Consequently, habitual cycling in the general population may have the potential to promote public health by reducing the risk of chronic diseases, such as T2D. The research results also provide evidence that late-in-life initiation of or continued engagement in cycling lowers the risk of T2D. When combining the findings with previous studies that have shown it is possible to increase cycling through promotional activities and infrastructural changes, it can be suggested that national and local governments should prioritise resources to promote cycling.

¹ Rasmussen, M. et al, 2016 Association between recreational and commuter cycling, changes in cycling and Type 2 Diabetes risk, *PLOS Medicine*, DOI:10.1371/journal.pmed.1002076