

TRANSPORTION, AIR POLLUTION AND PHYSICAL ACTIVITIES (TAPAS), A 6-CITY INTEGRATED HEALTH RISK ASSESSMENT PROGRAM OF ACTIVE TRAVEL POLICIES: THE PARIS CASE STUDY

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Background and Aims: Active transportation helps in decreasing the burden of rising chronic diseases, the epidemic of obesity and air pollution emissions. Within the general program developed by the TAPAS consortium we present here the Paris case study.

Methods: We collected data from national or private surveys. Indicators collected are: demographic/geographical characteristics of the city, prevalence and type of active transportation, accident rates, and exposition to pollutants. In addition, we conducted a pilot study using heart rate monitors and specific indicators measured within a trip to measure the energy expenditure (EE) in different transportation modes. Second, we are developing a systematic approach to address and involve stake holders in the active travel initiative.

Results: Paris has 2.2 million inhabitants. The number of people that declare practicing a leisure time physical activity for at least 20 minutes (min) per day is 55.4% and the average daily air pollution (with the suburbs) is 20.9 $\mu\text{g}/\text{m}^3$ for PM₁₀, 13.5 $\mu\text{g}/\text{m}^3$ for PM_{2,5}, 79.7 $\mu\text{g}/\text{m}^3$ for O₃. According to a recent national survey (2000-2008) the number of trips by foot constitutes 46.63% of the total transportation modes with an average time of 14.33 min; the bike represents 2.69% for an average duration of 20.69 min per trip. The public transportation and the car represent 33.52% and 12.12% respectively. Cycling accidents in 2008 were 567 with 5 reported deaths. The pilot study for EE revealed that for a same itinerary a 70 kg male subject increases his EE (kcal/hr) without significantly increasing the time spent commuting (e.g. 173 kcal/hr for the subway vs 495 kcal/hr for cycling). Finally, on-going meetings with several stake holders are arising great interest in the TAPAS initiative leading to valuable collaborations.

Conclusion: The following on-going research offers valuable proof and insight to the development of possible further future policies that would promote the use of active transportation.