Impact of outdoor pollution on indoor air quality. The case of downtown Santiago (Chile) Influencia de la contaminación atmosférica en la calidad de aire de interiores. El caso del centro de Santiago (Chile).

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The influence of outdoor pollution on indoor air quality was studied in downtown Santiago(Bandera street). Carbon monoxide (CO), nicotine, particulate matter, respirable fraction (PM5) and total and carcinogenic polyaromatic hydrocarbons (PAHs) were simultaneously monitored indoors and outdoors in restaurants, offices and other places. The levels of CO changed simultaneously outdoors and indoors ($r = 0.89$) specially during traffic rush hours, demonstrating the importance of outdoor infiltration into the indoor air quality and masking the contribution of other CO indoor sources. The maximum CO concentrations were over 800% and over 1000% higher indoors and outdoors respectively than the 9 ppm CO National Ambient Air Quality. The PM 5 concentrations were very high and showed no significant differences ($p > 0.05$) from indoors to outdoors, or between indoor levels in restaurants, offices and other places. Total and carcinogenic PAHs levels were also very high outdoors and indoors, outdoor