Particle spatial distribution in suburban area Celakovice: The effect of commuter vehicle traffic.

Stolcpartova, J.¹, Vrbova, K.², Dittrich, L.², Pechout, M.², Fenkl M.², Vojtisek-Lom, M.³
1Institute of Experimental Medicine of the Czech Academy of Sciences, Prague, Czech Republic
2 Faculty of Mechanical Engineering, Technical University of Liberec, Czech Republic
3 Faculty of Medical Engineering, Czech Technical University in Prague, Czech Republic
Email: jitka.stolcpartova@biomed.cas.cz

Background
Celakovice is a suburban small city. Inhabitants commute daily to work to Prague by public transportation and many of them by car. This situation is typical for the most small cities and satellites around larger cities.

The Aim

to determine the effect of traffic peaks on particle concentrations near main roads and their effect on farther dwellings.

<table>
<thead>
<tr>
<th>Traffic peaks</th>
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<tbody>
<tr>
<td>Road</td>
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<tr>
<td>2x10⁴ #/cm³ with peaks around 4x10⁴ #/cm³</td>
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<tr>
<td>150m far from road</td>
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<tr>
<td>1.5x10⁴ #/cm³</td>
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After traffic peaks

Up to 10:00 AM 1.5-2x10⁴#/cm³
After 10:00 concentrations gradually decreased to a concentration about 10⁴#/cm³ at midday (3rd February), and 7x10⁴#/cm³ (30th January)

Concentrations along main road were elevated in comparison with places at least 150m far from the road; however, the difference was relatively small.

Concentration between morning and afternoon traffic peaks (7x10³ to 1.5x10⁴#/cm³) was elevated in comparison with Prague background concentration, 7.3x10³#/cm³

Although concentrations followed daily pattern corresponding to traffic intensity, the main road did not seem to be the main source of measured particles in areas 150m from the road.

Supported by EU LIFE+ program, project MEDETOX (LIFE10 ENV/CZ/651), www.medetox.cz