Supplementary Material 9. Mortality effects of short-term ambient PM2.5 exposure and their modification by consecutive days of exposure to high concentrations of PM2.5 in seven major cities in Korea from 2006 to 2019 among those aged 65 years or more.

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|  |  | Percent change per 10 ㎍/m3 increase of PM2.5 (% change1, 95% CIs) |
|  |  | Lag 0 | Lag 1 | Lag 2 | Lag 3 | Lag 0-1 | Lag 0-2 | Lag 0-3 |
| **All-cause (non-traumatic, A00 - R99) mortality** |
| Basic model | 0.40 (0.22, 0.57) | 0.20 (0.03, 0.37) | -0.11 (-0.28, 0.05) | -0.11 (-0.27, 0.05) | 0.40 (0.20, 0.61) | 0.27 (0.04, 0.49) | 0.17 (-0.07, 0.42) |
| Effect modification model |  |  |  |  |  |  |  |
| Consecutive days2 | No | 0.17 (-0.16, 0.50) | 0.33 (-0.18, 0.84) | -0.07 (-0.48, 0.34) | 0.02 (-0.30, 0.34) | 0.40 (-0.04, 0.84) | 0.31 (-0.22, 0.85) | 0.17 (-0.48, 0.82) |
| 1st days | 0.32 (0.09, 0.56) | 0.30 (0.03, 0.58) | -0.23 (-0.45, 0.00) | 0.01 (-0.22, 0.23) | 0.69 (0.27, 1.10) | 0.48 (0.13, 0.83) | 0.40 (0.01, 0.79) |
| 2nd days | 0.44 (0.21, 0.67) | 0.04 (-0.19, 0.27) | 0.01 (-0.21, 0.24) | 0.03 (-0.19, 0.25) | 0.37 (0.10, 0.63) | 0.40 (0.09, 0.71) | 0.49 (0.13, 0.85) |
| 3rd days | 0.11 (-0.17, 0.38) | 0.28 (0.00, 0.55) | 0.06 (-0.24, 0.36) | -0.10 (-0.37, 0.17) | 0.21 (-0.08, 0.51) | 0.14 (-0.17, 0.45) | 0.07 (-0.32, 0.47) |
| 4th days | 0.44 (0.10, 0.78) | 0.60 (0.03, 1.18) | -0.08 (-0.41, 0.26) | -0.30 (-0.68, 0.08) | 0.49 (-0.02, 1.00) | 0.18 (-0.20, 0.57) | 0.13 (-0.31, 0.58) |
| 5th or more days | 0.40 (-0.01, 0.82) | -0.07 (-0.39, 0.24) | -0.39 (-0.91, 0.13) | -0.47 (-0.81, -0.13) | 0.30 (-0.19, 0.79) | 0.02 (-0.29, 0.32) | -0.21 (-0.59, 0.17) |
| **Respiratory (J00 - J98) mortality** |
| Basic model | 0.35 (-0.24, 0.93) | 0.33 (-0.18, 0.84) | 0.27 (-0.29, 0.83) | -0.05 (-0.76, 0.66) | 0.45 (-0.15, 1.05) | 0.55 (-0.12, 1.22) | 0.47 (-0.50, 1.46) |
| Effect modification model |  |  |  |  |  |  |  |
| Consecutive days2 | No | 0.10 (-0.86, 1.07) | 0.29 (-0.67, 1.26) | -0.21 (-1.15, 0.73) | 0.11 (-1.50, 1.75) | 0.26 (-0.79, 1.33) | 0.62 (-0.51, 1.76) | 0.34 (-1.49, 2.19) |
| 1st days | 0.67 (-0.02, 1.37) | -0.11 (-0.80, 0.59) | -0.08 (-0.97, 0.81) | -0.06 (-1.05, 0.95) | 0.99 (0.12, 1.87) | 0.97 (-0.05, 2.00) | 0.38 (-1.18, 1.95) |
| 2nd days | 0.10 (-0.73, 0.93) | 0.38 (-0.29, 1.07) | 0.37 (-0.29, 1.03) | 0.33 (-0.65, 1.32) | 0.14 (-0.64, 0.92) | 0.31 (-0.61, 1.23) | 0.42 (-0.64, 1.49) |
| 3rd days | 0.14 (-0.68, 0.98) | 0.73 (-0.09, 1.55) | 0.76 (-0.18, 1.72) | 0.40 (-0.40, 1.20) | 0.18 (-0.70, 1.06) | 0.61 (-0.31, 1.54) | 0.92 (-0.27, 2.12) |
| 4th days | 0.03 (-1.14, 1.22) | 1.71 (0.32, 3.13) | 0.31 (-0.68, 1.30) | -0.89 (-2.40, 0.64) | 1.29 (0.27, 2.32) | 1.42 (0.20, 2.65) | 1.07 (-0.18, 2.34) |
| 5th or more days | 0.74 (-0.75, 2.26) | 0.04 (-1.14, 1.24) | -0.37 (-1.65, 0.94) | -0.02 (-0.91, 0.88) | 0.08 (-0.85, 1.02) | 0.19 (-0.71, 1.09) | 0.04 (-1.35, 1.44) |
| **Cardiovascular (I00 - I99) mortality** |
| Basic model | 0.52 (0.20, 0.85) | -0.03 (-0.43, 0.38) | -0.43 (-0.74, -0.12) | -0.28 (-0.58, 0.02) | 0.35 (-0.03, 0.73) | 0.02 (-0.40, 0.45) | -0.15 (-0.61, 0.32) |
| Effect modification model |  |  |  |  |  |  |  |
| Consecutive days2 | No | 0.60 (-0.16, 1.36) | 0.39 (-0.28, 1.06) | 0.01 (-0.60, 0.63) | -0.82 (-1.42, -0.22) | 0.79 (0.10, 1.48) | 0.21 (-0.52, 0.94) | 0.03 (-0.74, 0.81) |
| 1st days | 0.69 (0.25, 1.14) | 0.40 (-0.10, 0.91) | -0.58 (-1.02, -0.15) | -0.58 (-1.02, -0.14) | 0.78 (0.22, 1.35) | 0.48 (-0.17, 1.14) | 0.27 (-0.47, 1.02) |
| 2nd days | 0.72 (0.29, 1.15) | -0.39 (-1.00, 0.22) | -0.40 (-0.82, 0.03) | -0.28 (-0.69, 0.14) | 0.48 (-0.02, 0.97) | 0.23 (-0.35, 0.82) | 0.34 (-0.34, 1.02) |
| 3rd days | -0.15 (-0.67, 0.37) | 0.01 (-0.51, 0.52) | -0.08 (-0.58, 0.43) | -0.29 (-0.79, 0.21) | 0.08 (-0.47, 0.63) | -0.07 (-0.65, 0.51) | -0.40 (-1.06, 0.26) |
| 4th days | 0.45 (-0.18, 1.09) | 0.39 (-0.24, 1.02) | 0.09 (-0.53, 0.71) | -0.56 (-1.32, 0.20) | 0.65 (0.00, 1.31) | -0.04 (-0.75, 0.68) | 0.07 (-0.61, 0.76) |
| 5th or more days | 0.60 (-0.35, 1.55) | 0.28 (-0.36, 0.92) | -0.25 (-0.83, 0.34) | -0.44 (-1.13, 0.25) | 0.33 (-0.65, 1.32) | -0.13 (-0.71, 0.46) | -0.37 (-0.95, 0.21) |
| City specific estimated PM2.5 effects were from quasi-Poisson generalized additive models (GAMs) and pooled with the same exposure lag structure and consecutive day strata using random-effects meta-analyses.1 The % increase mortality risks per 10 μg/m3 increase in PM2.5 concentration2 the six-strata categorical variable designating the number of consecutive days with daily mean PM2.5 concentrations of equal or more than 35 μg/m3 |