

## **CCCEH Study of the Effects of 9/11 on Pregnant Women and Newborns**

The Columbia Center for Children's Environmental Health's World Trade Center Pregnancy Study, launched in December 2001, is assessing the effects of prenatal exposure to contaminants released by the WTC destruction on gestational age, birth size, respiratory health, and neurocognitive development in 330 women who had term pregnancies.

In lower Manhattan, the event released large amounts of dust and toxic pollutants into the air, including fine particulate matter derived from the burning of materials during the explosion and fires, construction debris, and asbestos. These exposures are known to be especially toxic to the vulnerable populations of pregnant women and their unborn infants, and have been linked to reduced fetal growth and subsequent neurodevelopmental problems. Widespread psychological distress could also affect birth outcomes and subsequent child functioning.

Thus far, study results show that babies born to women who were pregnant on 9/11 and lived near the WTC in the weeks after 9/11 were born lighter and shorter than were babies born to women living further away. Previous research shows that even small reductions in birth weight may lead to learning and behavioral problems. A summary of other findings is below as are links to published papers.

This study is the only one of its kind to compare women with known exposure levels living and working close to the WTC site to a control group living and working further away from the site. The study is also unique in that pregnant women were enrolled prior to delivery, thereby eliminating participation bias that could arise from already knowing the outcome of their pregnancy.