

September 9, 2004

Dear Study Participant,

Thank you for being part of the **World Trade Center (WTC) Pregnancy Study** at the Columbia Center for Children's Environmental Health. Together, with your help, we have been able to look at how air pollutants from the WTC destruction, which you could have been exposed to during pregnancy, affected the size of babies born in the following months.

We are writing to let you know that these results will be published this month in the journal, *Environmental Health Perspectives*. Overall, babies who were born to women who lived near the WTC in the weeks after 9/11/01 were born slightly lighter and shorter than were babies born to women living further away. In addition, women who were in the first 13 weeks of pregnancy on 9/11, regardless of where they lived or worked, had slightly shorter pregnancies.

Please see the other side of this letter for more detailed study results.

As the study continues, follow-up of your child through two and three years of age will help us to determine if the slightly smaller birth sizes observed in some babies has any effect on children's learning ability, physical growth, or general health.

We value your continued participation in this important study. Please feel free to discuss these results with your child's pediatrician. And do not hesitate to contact the Center's WTC Pregnancy Study researchers with any questions you may have. We would be happy to speak with you.

The article reporting the study's results on birth size will be available online this month in *Environmental Health Perspectives*. It can be read on the Internet at <http://ehp.niehs.nih.gov>. If you do not have access to the Internet, or have difficulty locating the article online, please feel free to call the Center at 212-304-7280 to request that a copy of the article be sent to you by mail.

We continue to analyze data from this study on children's learning ability, physical growth, and respiratory health as they become toddlers, and we will share results with you as we have them. Again, thank you for your ongoing participation in this study.

Sincerely,

Sally Ann Lederman, Ph.D.  
Director, WTC Pregnancy Study

Results on birth size from the **World Trade Center Pregnancy Study** indicate that:

- Babies born to women who were living within 2 miles of the WTC in the month following 9/11/01 were slightly smaller than were babies born to women who lived further away. These babies were on average 149 grams (5 ounces) lighter than babies born to women who lived further away or only worked near the WTC but did not live close by.

*Significance:* Previous research has indicated that decreased birth weight can affect children's later learning ability. We do not know at this time if the small decrease in birth weight seen in this study will affect your children's development. The reason that we are following children in this study through ages two and three years is to determine whether these small reductions in birth weight will affect their learning ability.

- Babies born to women who were living near the WTC in the month following 9/11 were also slightly shorter at birth than babies born to women living further away. These babies were on average less than 1 centimeter (0.82 cm or one-third of an inch) shorter than other babies.

*Significance:* It is unlikely that this very slight reduction in a baby's length at birth will affect size later in childhood. As we assess the children's learning ability at ages two and three years, we will also measure their height and weight to determine if babies born smaller are growing as well as other children in the study whose mothers were not in the WTC area following 9/11.

- All women in the study had "full term" pregnancies (lasting at least 37 weeks). However, women in their first 13 weeks of pregnancy on 9/11 (regardless of their distance from the WTC) had a shorter pregnancy by approximately 3.6 days compared to women who were in a later stage of pregnancy on 9/11. Babies born to mothers with shorter pregnancies had a slightly smaller head circumference, averaging just 0.46 cm or about 1/8 inch less than other babies.

*Significance:* In a full term pregnancy, an average difference of 3.6 days in pregnancy length is unlikely to have a major effect on the health of the baby. The slightly smaller head size seen in these babies is also unlikely to affect the child's health. Continued follow-up of your child through ages two and three will help to confirm that these small reductions in pregnancy length and babies' weight and head size does not affect your child's healthy growth and development.

The fact that women in the study who were in their first 13 weeks (first trimester) of pregnancy on 9/11 had a slightly shorter pregnancy, regardless of their distance from the WTC in the weeks following 9/11, indicates that the slightly shorter pregnancy was probably due more to stress than to exposure to WTC contaminants. The fact that only babies whose mothers were in their first trimester of pregnancy were affected is consistent with results from previous studies showing that fetal growth is more sensitive to maternal stress earlier in pregnancy compared to later in pregnancy.

尊敬的研究参与者：

感谢您参加在哥伦比亚儿童环境卫生中心进行的**世贸中心（WTC）孕期研究项目**。在您的帮助下，我们对世贸中心被摧毁时产生的大气污染物如何影响宝宝出生时身高体重（您可能在孕期已经受到了这些污染物的影响）这一方面进行了研究。。

我们通过此信告诉您，这些研究结果将刊登在本月的《环境卫生展望》杂志上。总的来说，在**2001年9.11事件**后数周内，居住在世贸中心附近的孕妇产下的宝宝与居住在距世贸中心较远的孕妇产下的宝宝相比，其体重较轻，身高较矮。此外，无论孕妇在哪里居住或工作，如果**9.11事件**发生时正处于其孕期的前**13周**内，她们的孕期都会稍短。

有关详细的研究结果，请见此信另一面。

随着研究的继续，对您宝宝进行两至三年的跟踪研究将有助于我们确定：某些宝宝出生时体重较轻、身高较矮是否会对宝宝今后的学习能力、身体发育或整体健康产生影响。

非常感谢您继续参加这项非常重要的研究。您可以随时与您宝宝的儿科医生讨论这些研究结果。如有任何问题，请尽快与哥伦比亚儿童环境卫生中心的世贸中心孕期研究人员联系。我们很乐意与您交谈。

有关宝宝出生大小的研究结果报告，将于本月登载到《环境卫生展望》杂志的网站上。您可以登录 <http://ehp.niehs.nih.gov> 网站，获得所需信息。如果您无法访问该网站，或无法在网上找到该报告，请致电本中心（电话号码：**212-304-7280**），我们会以邮件形式将此报告的副本寄给您。

当宝宝长到**2—3岁**时，我们会继续分析有关他们学习能力、身体发育、呼吸系统健康的研究结果数据，并将所有研究结果提供给您。再次感谢您继续参加此项研究。

此致敬礼

世贸中心孕期研究项目主任  
Sally Ann Lederman 博士

2004年9月9日

世贸中心孕期研究项目有关宝宝出生大小的研究结果表明：

- 2001年9.11事件后一个月内居住在距世贸中心两英里以内的孕妇产下的宝宝，比居住在较远地区的孕妇产下的宝宝稍小。这些宝宝的平均体重，比居住在较远地区的孕妇产下的宝宝、或工作地点较近而居住较远的孕妇产下的宝宝轻 149 克（5 盎司）。

**影响：**以前的研究已表明：出生体重的较轻会影响宝宝以后的学习能力。现在，我们仍不清楚此项研究显示的出生体重较轻的情况是否会影响您宝宝的发育。我们将继续进行此项研究，直至宝宝长到 2—3 岁，以便确定这些稍微的体重减轻是否会影响他们的学习能力。

- 2001年9.11事件后一个月内居住在距世贸中心两英里内的孕妇产下的宝宝，比居住在较远地区的孕妇产下的宝宝稍矮。这些宝宝的平均身高比其它宝宝矮将近 1 厘米（0.82 厘米或 1/3 英寸）。

**影响：**宝宝出生身高的稍矮似乎不会影响宝宝的后天发育。我们在确定这些宝宝在 2—3 岁时的学习能力时，也将同时测量他们的身高和体重，以确定他们的生长发育是否与其它地区的宝宝相同。

- 所有参加此项研究的妇女都有“足月”孕期（至少 37 周）。然而，如果 9.11 事件发生时正处于孕期前 13 周内（无论她们的居住地点和工作地点距世贸中心有多远），其孕期大约会比 9.11 事件发生时处于孕期前 13 周后的孕妇孕期短 3.6 天。这些孕期稍短的孕妇产下的宝宝的平均头围约比其它宝宝小 0.48 厘米（即 1/8 英寸）。

**影响：**在足月孕期内，3.6 天的平均差异似乎不会成为影响宝宝健康的主要原因。这些宝宝较小的头部尺寸似乎也不会影响他们的健康。继续对您的宝宝进行跟踪研究，直至其长到 2—3 岁，将有助于我们确定：孕期、宝宝出生体重及头部尺寸的稍微减少不会对您宝宝的健康成长和发育造成影响。

参加此项研究的孕妇，如果 9.11 事件发生时正处于其孕期前 13 周内（前 3 个月），无论其在 9.11 事件发生后一周内在哪里居住或工作，孕期都会稍微缩短。这一事实表明：缩短的孕期很可能是由于神经紧张，而非世贸中心被摧毁所造成的污染物所导致。只有 9.11 事件发生在前 3 个月孕期的孕妇产下的宝宝受到影响这一事实也与先前的研究结果一致，即胎儿的发育在怀孕前期对母体的神经紧张的反映比怀孕后期更为敏感。