

eTable 1: Response rate of potential study participants and eligible pregnancies, according to occupational status

	Flight attendants	Teachers
	No. (%) <sup>a</sup>	No. (%) <sup>a</sup>
<b>Women</b>		
Target population; no.	6376	2012
Contacted	5096 (80) <sup>b</sup>	1582 (79)
Eligible <sup>c</sup>	2595 (51)	466 (29)
Participants	2273 (88)	381 (82)
<b>Pregnancies</b>		
Among participants; no.	4785	816
First trimester of pregnancy in study period <sup>d</sup>	1185 (25)	153 (19)
Self-reported employment as a flight attendant or school teacher during the pregnancy <sup>e</sup>	898 (76)	123 (80)
Singleton pregnancies	881 (98)	119 (97)
First-trimester exposures assessed <sup>f</sup>	846 (96)	119 (100)
<b>Miscarriage study</b>		
Study pregnancies analyzed <sup>g</sup>	840	118
Live births	660 (79)	88 (75)
Still births	5 (1)	0
Miscarriages	175 (21)	30 (25)
Early (weeks 1-13)	162	25
Late (weeks 14-20)	13	5
Participant women considered for analysis <sup>h</sup>	673	91

<sup>a</sup> Except where indicated.

<sup>b</sup> Of the 20% not contacted, 38% could not be located and 62% exceeded the maximum number of contact efforts.

- <sup>c</sup> Reasons for ineligibility for the main study included unmarried status during the study period (78%), not working as a flight attendant or teacher during study period (11%), surgical sterilization prior to study period (9%), and age out of eligible range (18-45 years, 2%).
- <sup>d</sup> Records-based occupational exposures for flight attendants were available only for 1 August 1992-31 July 1996.
- <sup>e</sup> Eligible study participants may not have worked as a flight attendant or teacher during a pregnancy occurring within the study period. Pregnancy-specific covariates (lifestyle, occupational, medical) were available only for women who self-reported employment as a flight attendant or school teacher during the pregnancy.
- <sup>f</sup> Exposures could not be accurately assessed for flight attendants who also worked as a hair stylist (n=1) or as a school teacher (n=10), who reported proximal melatonin use (n=2), or who had unavailable or irreconcilable flight records (n=22).
- <sup>g</sup> Study pregnancies analyzed further excluded women reporting systemic lupus erythematosus (n=2) or cancer with treatment or therapy prior to or during the pregnancy (n=5; Hodgkin's lymphoma and ovarian, endometrial, and cervical cancers).
- <sup>h</sup> Participant women were excluded from the miscarriage analysis for incomplete questionnaire (n=52), unknown gravidity (n=16), zero gravidity (n=435), or no eligible pregnancies (n=1387).

eTable 2: Association of physical demands at work among flight attendants with early miscarriage (gestational weeks 4-13) according to time period during pregnancy <sup>a</sup>

Models <sup>b</sup>	Weeks 4-8		Weeks 9-13		Weeks 4-13	
	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)
Composite variable model:						
High physical job demands in pregnancy <sup>c</sup>	2.1	(1.0-4.4)	2.8	(1.3-6.4)	2.4	(1.5-4.1)
Single-exposure models:						
Lifting/carrying at least 15 pounds more than 10 times/day at work in pregnancy	0.98	(0.61-1.6)	1.5	(0.96-2.5)	1.2	(0.87-1.7)
Being on your feet more than 8 hours/day at work in pregnancy	1.7	(1.1-2.8)	2.1	(1.2-3.8)	1.9	(1.3-2.7)
Bending at the waist more than 25 times/day at work in pregnancy	2.3	(1.1-4.9)	1.9	(0.92-3.9)	2.1	(1.2-3.6)
Pushing/pulling at least 15 pounds 20 or more times/day at work in pregnancy	0.93	(0.58-1.5)	1.0	(0.62-1.7)	0.97	(0.69-1.4)
Combined exposure model:						
Lifting/carrying at least 15 pounds more than 10 times/day at work in pregnancy	0.75	(0.45-1.2)	1.2	(0.69-2.2)	0.94	(0.64-1.4)
Being on your feet more than 8 hours/day at work in pregnancy	1.7	(0.99-3.0)	1.9	(0.99-3.7)	1.8	(1.2-2.8)
Bending at the waist more than 25 times/day at work in pregnancy	2.4	(1.1-5.2)	1.6	(0.72-3.4)	2.0	(1.1-3.5)
Pushing/pulling at least 15 pounds 20 or more times/day at work in pregnancy	0.76	(0.48-1.2)	0.74	(0.42-1.3)	0.74	(0.51-1.1)

- <sup>a</sup> Models included 797 flight attendant study pregnancies (11 miscarriages in gestational weeks 1-3 and 32 pregnancies with one or more missing covariates were excluded).
- <sup>b</sup> All models additionally adjusted for age at the last menstrual period and parity.
- <sup>c</sup> High physical job demands defined as (1) being on your feet (including standing and walking) more than 8 hours/day or (2) two or more of the following: lifting or carrying objects that weigh at least 15 pounds more than 10 times a day, bending at the waist more than 25 times/day, and pushing or pulling heavy objects requiring at least 15 pounds of force or effort 20 or more times/day.