Supplemental Figure 1. Overview of the 438 initiated in vitro fertilization cycles in the Environmental and Reproductive Health (EARTH) Study. Abbreviations: SAB, spontaneous abortion; SB, stillbirth; TAB, therapeutic abortion; IUI, intrauterine insemination; IVF, in vitro fertilization.

Supplemental Figure 2. Association between whole grains and in vitro fertilization (IVF) outcomes in 259 women (399 IVF cycles) with embryo transfer in the Environment and Reproductive Health (EARTH) Study. All analyses were conducted using generalized linear mixed models with random intercepts, binomial distribution, and logit link function. Data are presented as marginal mean probabilities adjusted for calorie intake, age, BMI, race, dietary

patterns, and folate and alcohol intake. * indicates that the p-value for the comparison vs. Q1 was <0.05

Supplemental Table 1. Distribution of whole grain, bran, and germ in 273 women (with 283 FFQs) in the in the Environment and Reproductive Health (EARTH) Study.

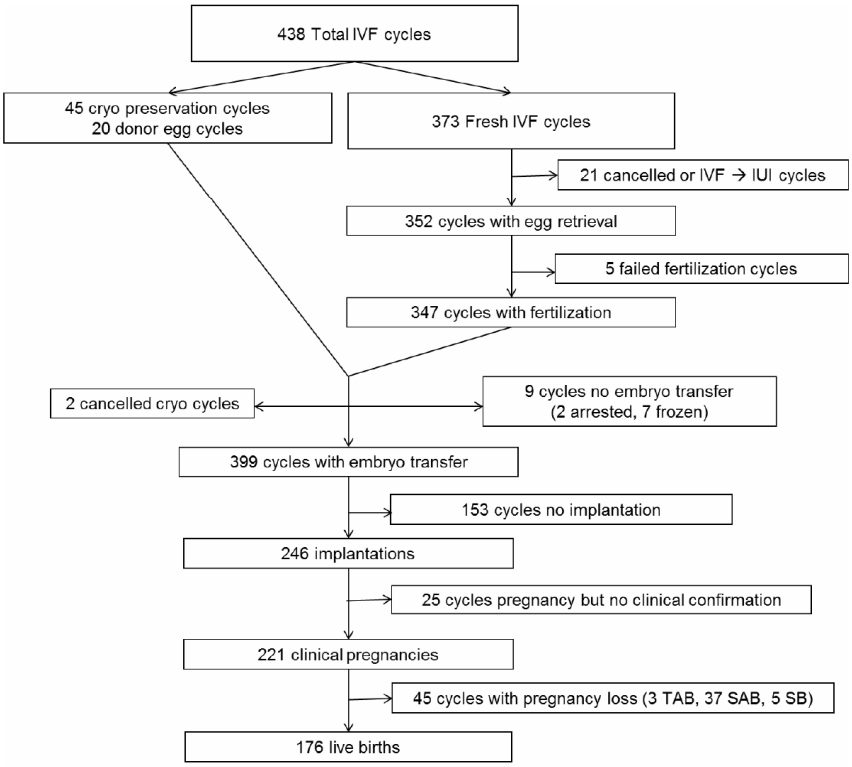
	Value, g/day				
Nutrient	**Min**	**Q1**	**Median**	**Q3**	**Max**
Whole Grain	0.6	21.6	34.2	52.6	195.6
Whole Grain without added sources	0.6	18.8	29.9	46.3	171.2
Total Bran	0.03	4.43	7.81	14.14	70.28
Bran in food	0.03	2.83	4.73	7.62	46.04
Bran added to food	0.00	1.28	2.74	5.82	31.6
Total Germ	0.07	0.92	1.52	2.24	7.88
Germ in food	0.07	0.81	1.27	2.00	7.75
Germ added to food	0.00	0.01	0.06	0.17	6.64

Supplemental Table 2. Association between bran, germ, and fiber intake and clinical outcomes of in vitro fertilization (IVF) in 273 women (438 IVF cycles) in Environment and Reproductive Health (EARTH).

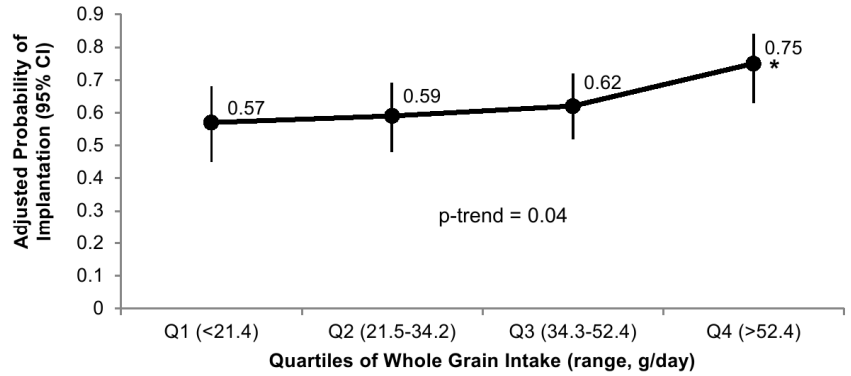
Adjusted Mean Probabilities (95% CI)[a]	Implantation	Clinical Pregnancy	Live Birth
Bran Intake, g/day			
Q1 (<4.4)	0.45 (0.34, 0.55)	0.43 (0.33, 0.53)	0.33 (0.24, 0.43)
Q2 (4.4-7.7)	0.54 (0.44, 0.64)	0.44 (0.35, 0.54)	0.34 (0.25, 0.44)
Q3 (7.8-14.1)	0.62 (0.52, 0.71)*	0.57 (0.47, 0.67)	0.45 (0.35, 0.55)
Q4 (>14.1)	0.70 (0.59, 0.79)*	0.63 (0.51, 0.73)*	0.53 (0.42, 0.65)*
P trend	0.003	0.008	0.006
Germ Intake, g/day			
Q1 (<0.9)	0.57 (0.45, 0.68)	0.54 (0.42, 0.65)	0.40 (0.29, 0.52)
Q2 (0.9-1.5)	0.57 (0.47, 0.67)	0.49 (0.39, 0.59)	0.37 (0.28, 0.47)
Q3 (1.6-2.2)	0.52 (0.41, 0.62)	0.47 (0.37, 0.58)	0.39 (0.29, 0.50)
Q4 (>2.2)	0.64 (0.52, 0.75)	0.57 (0.45, 0.68)	0.48 (0.37, 0.60)
P trend	0.36	0.52	0.24
Total Fiber Intake, g/day			
Q1 (<15.2)	0.52 (0.39, 0.65)	0.45 (0.33, 0.58)	0.34 (0.23, 0.47)
Q2 (15.2-20.1)	0.53 (0.42, 0.64)	0.45 (0.35, 0.56)	0.36 (0.27, 0.47)
Q3 (20.2-26.3)	0.59 (0.48, 0.69)	0.55 (0.44, 0.65)	0.43 (0.33, 0.54)
Q4 (>26.3)	0.66 (0.51, 0.78)	0.62 (0.46, 0.74)	0.51 (0.36, 0.66)
P trend	0.22	0.15	0.13

[a]All analyses were conducted using generalized linear mixed models with random intercepts, binomial distribution, and logit link function. Data are presented as marginal mean probabilities adjusted for calorie intake, age, BMI, race, dietary patterns, and folate and alcohol intake.

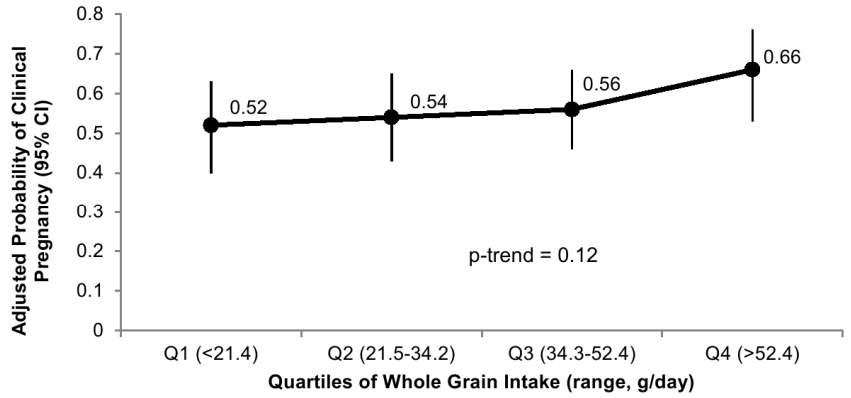
*indicates that the p-value for the comparison vs. Q1 was <0.05.


438 Total IVF cycles
45 cryo preservation cycles
20 donor egg cycles
373 Fresh IVF cycles
21 cancelled or IVF → IUI cycles
352 cycles with egg retrieval
5 failed fertilization cycles
347 cycles with fertilization
2 cancelled cryo cycles
9 cycles no embryo transfer
(2 arrested, 7 frozen)
399 cycles with embryo transfer
153 cycles no implantation
246 implantations
25 cycles pregnancy but no clinical confirmation
221 clinical pregnancies
45 cycles with pregnancy loss (3 TAB, 37 SAB, 5 SB)
176 live births

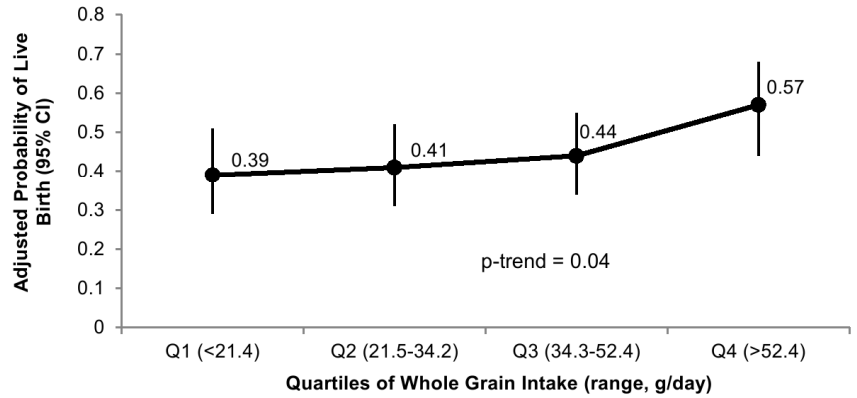
A.


Adjusted Probability of Implantation (95% CI)
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0.57
0.59
0.62
0.75
*
p-trend = 0.04
Q1 (<21.4)
Q2 (21.5-34.2)
Q3 (34.3-52.4)
Q4 (>52.4)
Quartiles of Whole Grain Intake (range, g/day)

B.


Adjusted Probability of Clinical Pregnancy (95% CI)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0.52
0.54
0.56
0.66
p-trend = 0.12
Q1 (<21.4)
Q2 (21.5-34.2)
Q3 (34.3-52.4)
Q4 (>52.4)
Quartiles of Whole Grain Intake (range, g/day)

C.


Adjusted Probability of Live Birth (95% CI)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0.39
0.41
0.44
0.57
p-trend = 0.04
Q1 (<21.4)
Q2 (21.5-34.2)
Q3 (34.3-52.4)
Q4 (>52.4)
Quartiles of Whole Grain Intake (range, g/day)