

## Appendix.

**Table 1. Prevalence of Major Birth Defects in Singletons Born After In Vitro Fertilization, Intracytoplasmic Sperm Injection, and Fresh and Frozen Embryo Transfer Compared With Nonassisted Reproductive Technology Singletons\***

No Infants; Prevalence (%)	Non-ART (n=205641)	IVF (n=1328)	ICSI (n=633)	Fresh (n=1149)	Frozen (n=823)
Any major defect	11078 (5.39)	116 (8.73)	56 (8.85)	108 (9.40)	64 (7.78)
Multiple major defects	1462 (0.71)	21 (1.58)	12 (1.90)	19 (1.65)	14 (1.70)
Chromosome disorders	943 (0.46)	10 (0.75)	11 (1.74)	11 (0.96)	10 (1.22)
Nervous system	919 (0.45)	6 (0.45)	<5	5 (0.44)	<5
Cardiovascular	1495 (0.73)	15 (1.13)	10 (1.58)	14 (1.22)	11 (1.34)
Cardiovascular excluding chromosomal	1241 (0.60)	13 (0.98)	7 (1.11)	14 (1.22)	6 (0.73)
Gastrointestinal	1283 (0.62)	13 (0.98)	6 (0.95)	9 (0.78)	10 (1.22)
Musculoskeletal	2815 (1.37)	40 (3.01)	14 (2.21)	34 (2.96)	20 (2.43)
Urinary	1656 (0.81)	12 (0.90)	7 (1.11)	12 (1.04)	7 (0.85)
Genital	2281 (1.11)	31 (2.33)	13 (2.05)	29 (2.52)	15 (1.82)
Hypospadias (denom boys only)	725 (0.69)	14 (2.02)	<5	7 (1.19)	10 (2.37)

Hansen M, Kurinczuk JJ, de Klerk N, Burton P, Bower C. Assisted reproductive technology and major birth defects in Western Australia. *Obstet Gynecol* 2012;120.

The authors provided this information as a supplement to their article.

© Copyright 2012 American College of Obstetricians and Gynecologists.

Page 1 of 4

---

Cryptorchidism (denom boys only) 1139 (1.08) 14 (2.02) 6 (1.95) 17 (2.90) <5

ART, assisted reproductive technology; IVF, in vitro fertilization; ICSI, intracytoplasmic sperm injection.

\*ART includes 11 singletons born after partial zona dissection or subzonal insemination.

Hansen M, Kurinczuk JJ, de Klerk N, Burton P, Bower C . Assisted reproductive technology and major birth defects in Western Australia. *Obstet Gynecol* 2012;120.

The authors provided this information as a supplement to their article.

© Copyright 2012 American College of Obstetricians and Gynecologists.

**Table 2. Adjusted Odds Ratios (95% Confidence Intervals) Comparing Major Birth Defects in Singletons Born After In Vitro Fertilization, Intracytoplasmic Sperm Injection, and Fresh and Frozen Embryo Transfer With Non-Assisted Reproductive Technology Singletons**

	IVF	ICSI	Fresh Embryo Transfer	Frozen Embryo Transfer
<b>Any defect:</b>				
Adjusted OR (terminations and births)	1.50 (1.24-1.83)	1.62 (1.23-2.13)	1.68 (1.37-2.05)	1.33 (1.03-1.72)
Adjusted OR (births only)	1.55 (1.26-1.90)	1.48 (1.09-2.02)	1.66 (1.35-2.05)	1.31 (0.99-1.74)
<b>Multiple major defects:</b>				
Adjusted OR (terminations and births)	1.81 (1.16-2.81)	2.39 (1.34-4.25)	2.02 (1.28-3.20)	1.88 (1.10-3.23)
Adjusted OR (births only)	2.47 (1.50-4.04)	2.55 (1.26-5.17)	2.68 (1.61-4.46)	2.17 (1.12-4.21)
<b>Chromosomal:</b>				
Adjusted OR (terminations and births)	0.75 (0.40-1.41)	2.32 (1.26-4.26)	1.17 (0.64-2.14)	1.14 (0.60-2.17)
Adjusted OR (births only)	1.36 (0.55-3.33)	3.15 (1.29-7.66)	1.59 (0.65-3.89)	2.23 (0.91-5.43)
<b>Nervous system:</b>				
Adjusted OR (terminations and births)	0.96 (0.43-2.16)	0.34 (0.05-2.45)	0.93 (0.38-2.25)	0.52 (0.13-2.09)
Adjusted OR (births only)	1.47 (0.60-3.55)	0.61 (0.08-4.56)	1.35 (0.50-3.61)	0.95 (0.23-3.90)
<b>Cardiovascular:</b>				
Adjusted OR (terminations and births)	1.34 (0.80-2.24)	2.04 (1.09-3.83)	1.50 (0.88-2.56)	1.58 (0.86-2.88)
Adjusted OR (births only)	1.49 (0.85-2.60)	2.04 (1.01-4.12)	1.60 (0.90-2.84)	1.69 (0.87-3.29)
<b>Cardiovascular, excluding chromosomal:</b>				
Adjusted OR (terminations and births)	1.57 (0.90-2.73)	1.84 (0.87-3.90)	1.96 (1.15-3.34)	1.20 (0.53-2.68)
Adjusted OR (births only)	1.47 (0.80-2.70)	1.77 (0.79-3.97)	1.88 (1.05-3.35)	1.10 (0.45-2.67)
<b>Gastrointestinal:</b>				
Adjusted OR (terminations and births)	1.56 (0.90-2.71)	1.58 (0.70-3.54)	1.27 (0.66-2.45)	1.93 (1.03-3.64)

Hansen M, Kurinczuk JJ, de Klerk N, Burton P, Bower C. Assisted reproductive technology and major birth defects in Western Australia. *Obstet Gynecol* 2012;120.

The authors provided this information as a supplement to their article.

births)	1.66 (0.94-2.96)	1.21 (0.45-3.25)	1.28 (0.64-2.58)	1.84 (0.91-3.71)
Adjusted OR (births only)				
<b>Musculoskeletal:</b>				
Adjusted OR (terminations and births)	2.13 (1.55-2.94)	1.58 (0.93-2.69)	2.10 (1.48-2.96)	1.73 (1.11-2.71)
Adjusted OR (births only)	2.00 (1.43-2.80)	1.22 (0.66-2.24)	1.98 (1.39-2.82)	1.40 (0.83-2.38)
<b>Urinary:</b>				
Adjusted OR (terminations and births)	1.10 (0.62-1.95)	1.39 (0.66-2.94)	1.28 (0.72-2.27)	1.06 (0.50-2.24)
Adjusted OR (births only)	0.83 (0.41-1.68)	1.55 (0.67-3.58)	1.18 (0.62-2.24)	0.87 (0.36-2.08)
<b>Genital:</b>				
Adjusted OR (terminations and births)	2.11 (1.47-3.02)	1.84 (1.06-3.19)	2.26 (1.55-3.28)	1.64 (0.98-2.74)
Adjusted OR (births only)	1.78 (1.23-2.59)	1.70 (0.98-2.95)	1.90 (1.29-2.79)	1.52 (0.91-2.55)
<b>Hypospadias (boys):</b>				
Adjusted OR (terminations and births)	2.94 (1.71-5.03)	1.40 (0.45-4.39)	1.70 (0.80-3.61)	3.48 (1.84-6.57)
Adjusted OR (births only)	2.58 (1.49-4.44)	1.26 (0.40-3.94)	1.48 (0.70-3.13)	3.13 (1.64-5.96)
<b>Cryptorchidism (boys):</b>				
Adjusted OR (terminations and births)	1.81 (1.06-3.09)	1.80 (0.80-4.06)	2.62 (1.61-4.27)	0.64 (0.20-1.99)
Adjusted OR (births only)	1.59 (0.93-2.71)	1.61 (0.71-3.66)	2.26 (1.39-3.68)	0.58 (0.18-1.83)

ART, assisted reproductive technology; IVF, in vitro fertilization; ICSI, intracytoplasmic sperm injection; OR, odds ratio.

Hansen M, Kurinczuk JJ, de Klerk N, Burton P, Bower C . Assisted reproductive technology and major birth defects in Western Australia. *Obstet Gynecol* 2012;120.

The authors provided this information as a supplement to their article.

© Copyright 2012 American College of Obstetricians and Gynecologists.

Page 4 of 4