

### Significance for Connecticut

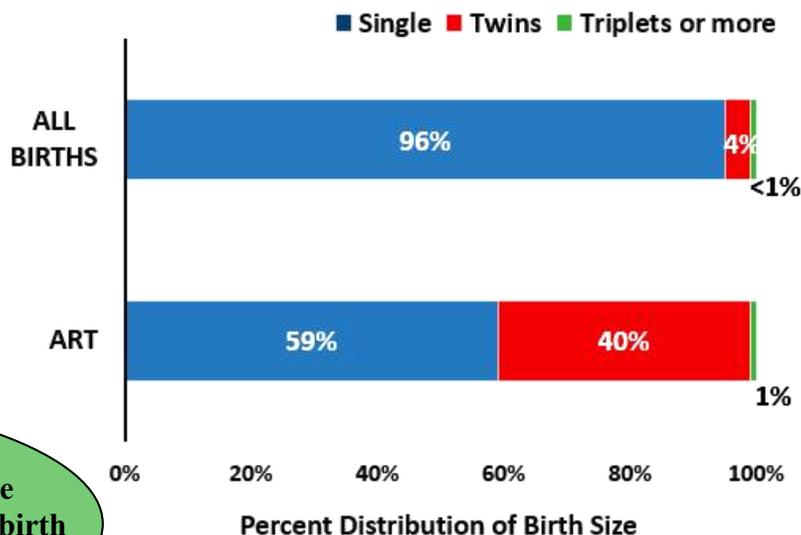
**Assisted Reproductive Technology (ART)** is a term used for a range of methods that are used to help women become pregnant. Techniques involve creating an embryo that is transferred into a woman's body. The rate of ART use in the State of Connecticut is almost twice that of the national average, a rate exceeded by only four other states in the country. Although Connecticut's infertility insurance mandate (PA 05-196) was an important step toward improving ART outcomes, births that result from ART now account for 12% of low birth weight babies born in the state.<sup>1</sup> Improved ART technologies show promise in reducing low birth weight outcomes, which are often associated with twins, triplets, and higher order births that result from ART use.

### ART and Multiple Births in Connecticut

**4.6 in 1,000** women 15-44 years old in Connecticut have ART treatments in a single year.

**10-fold:** The increased risk of twins, triplets, or higher order births with ART treatment.

- Among all births in Connecticut during 2013, 96% were single, 4% were twin, and less than 1% were triplet or higher order.
- Among ART births in Connecticut during 2013, only 59% were single, while 40% were twin, and 1% were triplet or high order.



An ART technique called elective single embryo transfer (eSET) results in a single birth and is very successful for most pregnancies.<sup>2</sup>

#### Data Sources

Information on births in Connecticut during 2013 were obtained from vital records data within the Health Statistics and Surveillance Section, Connecticut Department of Public Health (DPH). Information about ART and associated birth outcomes were obtained courtesy of the ART team from the National ART Surveillance System (NASS), at the Centers for Disease Control and Prevention. This database is mandated by the Fertility Clinic Success Rate and Certification Act of 1992 (Public Law 102-493; <http://uscode.house.gov/statutes/1992/1992-102-0493.pdf>). Although the two databases were analyzed separately in this factsheet, linkage of the two databases are underway within DPH to study more fully ART usage in the state, as well as maternal and infant outcomes. This activity was made possible when DPH joined three other states in Spring, 2013 as a member of the SMART (States Monitoring ART) collaborative. For more information about the SMART collaborative, please go to <http://www.cdc.gov/art/SMART.htm>. The NASS database maintains information on ART methods such as *in vitro* fertilization, zygote intrafallopian transfer, tubal embryo transfer, gamete intrafallopian transfer, and intracytoplasmic sperm injection; use of fertility drugs such as Clomid, Serophene, or injectable hormones, and superovulation induction with inseminations are not maintained in the database.

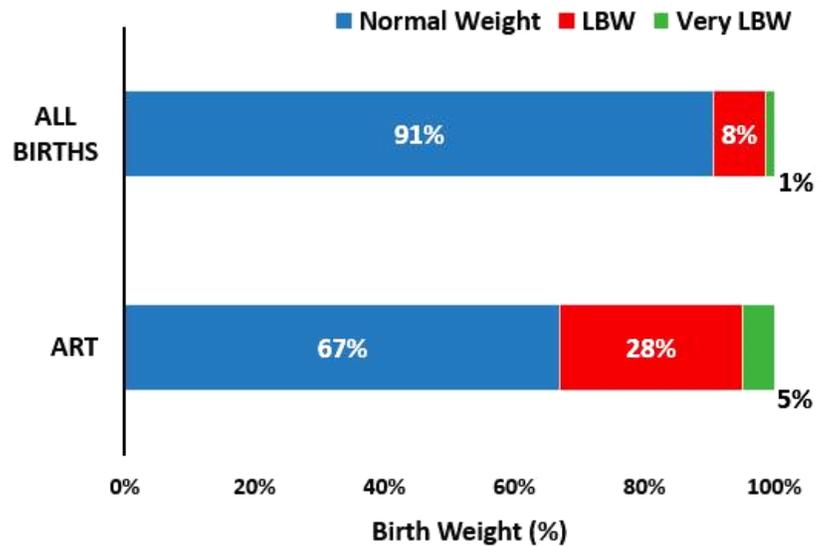
# ART and Low Birth Weight (LBW)\* in Connecticut

12% of LBW babies born in Connecticut are the result of ART treatments.

28% of ART treatments result in a LBW baby, compared to 8% of all births in the state.

1 in every 6 LBW babies born from ART treatments is very LBW.

Low birth weight babies have a higher risk of delayed childhood development, lower school achievement, and even medical complications or death during infancy.<sup>3,4</sup>



\*A low birth weight (LBW) baby has a birth weight less than 2,500 grams, or about 5.5 pounds. A very LBW baby has a birth weight less than 1,500 grams, or 3.3 pounds, while a moderate LBW baby has a birth weight from 1,500 to 2,499 grams.

## Strategies for Connecticut

Encourage families considering ART to consult with their fertility specialist about all methods of ART, and to consider eSET, when appropriate.<sup>5</sup>

Encourage best practice clinical guidelines that reduce the rate of twin births.

For additional information about infertility and ART, please see:

ART website at the Connecticut Department of Public Health: <http://www.ct.gov/dph/ART>

Centers for Disease Control and Prevention: <http://www.cdc.gov/art/index.html>

Society for Assisted Reproductive Technology: <http://www.sart.org>

March of Dimes: <http://www.marchofdimes.com/pregnancy/thinking-about-fertility-treatment.aspx>

The American Society for Reproductive Medicine: <http://www.reproductivefacts.org>

### References

- <sup>1</sup> Sunderam, S, Kissin, DM, Crawford, S, Anderson, JE, Folger, SG, Jamieson, DJ, Warner, L, Barfield, WD (2015). Assisted Reproductive Technology Surveillance—United States, 2013, MMWR 64(ss11);1-25 ([http://www.cdc.gov/mmwr/preview/mmwrhtml/ss6411a1.htm?s\\_cid=ss6411a1\\_w](http://www.cdc.gov/mmwr/preview/mmwrhtml/ss6411a1.htm?s_cid=ss6411a1_w)), accessed on September 7, 2016.
- <sup>2</sup> Kissin, DM, Kulkarni, AD, Kushnir, VA, Jamieson, DJ, for the National ART Surveillance System Group (2014). Number of embryos transferred after *in vitro* fertilization and good perinatal outcome. *Obstetrics and Gynecology* 123(2, Part 1): 239-247.
- <sup>3</sup> Pelletier, T, Maternal Substance Abuse and Child Development Project, Emory University School of Medicine, Department of Psychiatry and Behavioral Sciences, Atlanta, Georgia ([http://www.psychiatry.emory.edu/PROGRAMS/GADrug/Feature%20Articles/Mothers/Long%20term%20effects%20of%20Low%20Birth%20Weight%20\(mot08\).pdf](http://www.psychiatry.emory.edu/PROGRAMS/GADrug/Feature%20Articles/Mothers/Long%20term%20effects%20of%20Low%20Birth%20Weight%20(mot08).pdf)), accessed on September 8, 2016.
- <sup>4</sup> Low Birth Weight. March of Dimes Foundation, 2014. (<http://www.marchofdimes.com/baby/low-birthweight.aspx>), accessed on September 8, 2016.
- <sup>5</sup> Assisted Reproductive Technology: Single Embryo Transfer. U.S. Centers for Disease Control and Prevention, 2016 (<http://www.cdc.gov/art/patientresources/transfer.html>), accessed on September 8, 2016.

**Contact:** Carol Stone, PhD, MPH, MA, MAS, Health Statistics and Surveillance Section, Connecticut Department of Public Health, Hartford Connecticut.  
[Carol.Stone@ct.gov](mailto:Carol.Stone@ct.gov) (860-509-7147)

This factsheet can be viewed at:  
<http://www.ct.gov/dph/ART>