Locations of ART Clinics in the United States and Puerto Rico, 2012

Number of ART clinics in the United States in 2012 .................................................. 486
Number of ART clinics that submitted data in 2012 .................................................. 456
Total number of ART cycles started in 2012 at clinics reporting data ......................... 176,247*
Number of live-birth deliveries resulting from ART cycles started in 2012 ................. 51,267
Number of infants born as a result of ART cycles performed in 2012 ......................... 65,160

* This number includes 18,585 cycles started with the intent to freeze and bank all resulting eggs/embryos. The remaining 157,662 cycles in 2012 were performed with the intent to transfer at least one egg/embryo, and this is the number of cycles from which data for live-birth deliveries and infants born are based. The 176,247 total cycles in 2012 does not include 27 cycles in which a new treatment procedure was being evaluated.
Types of ART Cycles—United States, * 2012

- Fresh non-donor: 56.5% (99,665 cycles)
- Frozen donor: 5.0% (8,893 cycles)
- Frozen non-donor: 21.6% (38,150 cycles)
- Egg/embryo banking: 10.5% (18,585 cycles)
- Fresh donor: 6.2% (10,954 cycles)
- New treatment procedure: <0.1% (27 cycles)

* Total does not equal 100% due to rounding.
ART Use by Age Group—United States, * 2012

- Age: <35
  37.8% (66,637 cycles)

- Age: 35–37
  20.0% (35,279 cycles)

- Age: 38–40
  19.0% (33,571 cycles)

- Age: 41–42
  11.1% (19,577 cycles)

- Age: 43–44
  6.6% (11,625 cycles)

- Age: >44
  5.4% (9,558 cycles)

* Total does not equal 100% due to rounding.
Types of ART Cycles by Age Group—United States,* 2012

* Percentages of ART cycles that used fresh or frozen embryos from nondonor or donor eggs are in parentheses.
† Total does not equal 100% due to rounding.
Percentages of ART Cycles That Resulted in Live Births, by Type of ART and Clinic Size—United States, 2012

Clinic Size (number of ART cycles performed in 2012)
- <96
- 96-186
- 187-435
- >435

- Fresh nondonor
- Frozen nondonor
- Fresh donor
- Frozen donor

Percentages:
- Fresh nondonor: 29, 31, 30, 29
- Frozen nondonor: 28, 31, 33, 52
- Fresh donor: 44, 46, 52, 52
- Frozen donor: 32, 33, 33, 35
Outcomes of ART Cycles Using Fresh Nondonor Eggs or Embryos, by Stage, 2012

- 99,665 cycles started
- 89,748 retrievals
- 80,783 transfers
- 35,840 pregnancies
- 29,307 live-birth deliveries
Reasons ART Cycles Using Fresh Nondonor Eggs or Embryos Were Canceled, *† 2012

- No or inadequate egg production: 80.3%
- Patient withdrawal for other reasons: 14.9%
- Too-high response to ovarian stimulation medication: 3.8%
- Concurrent illness: 1.1%

* Based on 9,917 ART cycles.
† Total does not equal 100% due to rounding.

- Pregnancies: 36.0%
- Live births: 29.4%
- Singleton live births: 21.4%

The chart shows the percentages for cycles and transfers for each category.
Outcomes of ART Cycles Using Fresh Nondonor Eggs or Embryos, 2012

- No pregnancy: 63.4%
- Ectopic pregnancy: 0.7%
- Not able to determine number of fetuses: 2.3%
- Clinical pregnancy: 35.9%
  - Single-fetus pregnancy: 23.3%
  - Multiple-fetus pregnancy: 10.3%
Outcomes of Pregnancies That Resulted from ART Cycles Using Fresh Nondonor Eggs or Embryos,* 2012

Singleton birth 59.4%
Multiple-infant birth 22.4%
Miscarriage 15.9%
Stillbirth 0.6%
Induced abortion 1.0%
Unknown 0.7%

Total live births 81.8%

* Maternal deaths prior to birth are not displayed due to small number (n = 4).
Distribution of Multiple-Fetus Pregnancies and Multiple-Infant Live Births Among ART Cycles Using Fresh Nondonor Eggs or Embryos, 2012

A. 35,840 Pregnancies
- Singletons: 64.8%
- Twins: 26.7%
- Triplets or more: 2.0%
- Not able to determine number of fetuses: 6.5%

B. 29,307 Live births
- Singletons: 72.6%
- Twins: 26.4%
- Triplets or more: 1.0%
Percentages of Births That Were Preterm or Infants with Low Birth Weight from ART Cycles Using Fresh Nondonor Eggs or Embryos, by Number of Infants Born, 2012

- Singletons from single-fetus pregnancies: 11.1% Preterm births, 8.6% Low birth weight infants
- Singletons from multiple-fetus pregnancies: 17.4% Preterm births, 15.6% Low birth weight infants
- Twins: 57.8% Preterm births, 56.1% Low birth weight infants
- Triplets or more: 95.3% Preterm births, 92.3% Low birth weight infants

National Center for Chronic Disease Prevention and Health Promotion
Division of Reproductive Health
Age Distribution of Women Who Had ART Cycles Using Fresh Nondonor Eggs or Embryos, 2012

* For consistency, all percentages are based on cycles started.
Percentages of ART Cycles Using Fresh Nondonor Eggs or Embryos That Resulted in Pregnancies, Live Births, and Singleton Live Births Among Women Aged 40 or Older,* 2012

* For consistency, all percentages are based on cycles started.
Percentages of ART Cycles Using Fresh Nondonor Eggs or Embryos That Resulted in Miscarriage, by Age of Woman, 2012
Outcomes of ART Cycles Using Fresh Nondonor Eggs or Embryos, by Stage and Age Group, 2012

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Retrieval</th>
<th>Transfer</th>
<th>Pregnancy</th>
<th>Live birth</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;35</td>
<td>94</td>
<td>86</td>
<td>47</td>
<td>40</td>
</tr>
<tr>
<td>35–37</td>
<td>91</td>
<td>83</td>
<td>38</td>
<td>31</td>
</tr>
<tr>
<td>38–40</td>
<td>88</td>
<td>78</td>
<td>30</td>
<td>22</td>
</tr>
<tr>
<td>41–42</td>
<td>85</td>
<td>72</td>
<td>20</td>
<td>12</td>
</tr>
<tr>
<td>43–44</td>
<td>80</td>
<td>66</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>&gt;44</td>
<td>78</td>
<td>59</td>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>
Percentages of ART Cycles Using Fresh Nondonor Eggs or Embryos, by Infertility Diagnosis,* 2012

Diagnosis

- Tubal factor: 14.7%
- Ovulatory dysfunction: 13.4%
- Diminished ovarian reserve: 27.5%
- Endometriosis: 10.0%
- Uterine factor: 5.3%
- Male factor: 36.1%
- Other factor: 13.5%
- Unknown factor: 13.8%
- Multiple factors, female only: 10.8%
- Multiple factors, female + male: 17.9%

* Total percentages are greater than 100% because more than one diagnosis can be reported for each cycle.

National Center for Chronic Disease Prevention and Health Promotion
Division of Reproductive Health
Percentages of ART Cycles Using Fresh Nondonor Eggs or Embryos That Resulted in Live Births, by Infertility Diagnosis, 2012
Percentages of ART Cycles Using Fresh Nondonor Eggs or Embryos That Resulted in Live Births, by Age Group and Number of Previous Live Births, 2012

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>No previous live births</th>
<th>1 previous live birth</th>
<th>2 or more previous live births</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;35</td>
<td>40%</td>
<td>43%</td>
<td>42%</td>
</tr>
<tr>
<td>35–37</td>
<td>30%</td>
<td>34%</td>
<td>30%</td>
</tr>
<tr>
<td>38–40</td>
<td>21%</td>
<td>24%</td>
<td>24%</td>
</tr>
<tr>
<td>41–42</td>
<td>11%</td>
<td>14%</td>
<td>13%</td>
</tr>
<tr>
<td>43–44</td>
<td>4%</td>
<td>6%</td>
<td>4%</td>
</tr>
<tr>
<td>&gt;44</td>
<td>2%</td>
<td>3%</td>
<td>1%</td>
</tr>
</tbody>
</table>
Percentages of ART Cycles Using Fresh Nondonor Eggs or Embryos That Resulted in Live Births, by Age Group and History of Miscarriage, Among Women with No Previous Births, * 2012

* Women reporting only previous ectopic pregnancies or pregnancies that ended in induced abortion are not included.
Percentages of ART Cycles Using Fresh Nondonor Eggs or Embryos That Resulted in Live Births, by Age Group and Number of Previous ART Cycles, Among Women with No Previous Live Births, 2012
Percentages of Retrievals That Resulted in Live Births Among Patients with or Without Diagnosed Male Factor Infertility by Age Group and Use ICSI,* 2012

* Cycles using donor sperm and cycles using GIFT or ZIFT are excluded.
Numbers of Embryos Transferred Among All Transfers Using Fresh Nondonor Eggs or Embryos, * 2012

- Two: 55.0%
- Three: 17.7%
- Four: 5.3%
- Five: 1.9%
- Six: 0.4%
- Seven or more: 0.2%
- Unknown: <0.1%
- One: 19.5%

* Total does not equal 100% due to rounding.
Percentages of Embryos Transferred That Resulted in Implantation for Transfers Using Fresh Nondonor Eggs or Embryos, by Age Group, 2012

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;35</td>
<td>37.1</td>
</tr>
<tr>
<td>35–37</td>
<td>27.5</td>
</tr>
<tr>
<td>38–40</td>
<td>18.3</td>
</tr>
<tr>
<td>41–42</td>
<td>9.7</td>
</tr>
<tr>
<td>43–44</td>
<td>4.1</td>
</tr>
<tr>
<td>&gt;44</td>
<td>2.2</td>
</tr>
</tbody>
</table>
Percentages of Transfers Using Fresh Nondonor Eggs or Embryos That Resulted in a Good Perinatal Outcome, by Number of Embryos Transferred, 2012

- 1 embryo transferred: 25.8%
- 2 embryos transferred: 23.5%
- 3 embryos transferred: 17.6%
- 4+ embryos transferred: 13.2%
Percentages of Transfers Using Fresh Nondonor Eggs or Embryos That Resulted in Live Births and Distribution of Number of Infants Born, by Number of Embryos Transferred,* 2012

* Percentages of live births that were singletons, twins, and triplets or more are in parentheses.
Note: In rare cases a single embryo may divide and thus produce multiple-infant births. For this reason, small percentages of twins and triplets or more resulted from a single embryo transfer, and a small percentage of triplets or more resulted when two embryos were transferred.
† Total does not equal 100% due to rounding.
Percentages of Transfers Using Fresh Nondonor Eggs or Embryos That Resulted in Live Births and Distribution of Number of Infants Born Among Women Younger Than Age 35 Who Set Aside Extra Embryos for Future Use, by Number of Embryos Transferred, * 2012

Percentages of live births that were singletons, twins, and triplets or more are in parentheses. Note: In rare cases a single embryo may divide and thus produce multiple-infant births. For this reason, small percentages of twins and triplets or more resulted from a single embryo transfer, and a small percentage of triplets or more resulted when two embryos were transferred.

† Total does not equal 100% due to rounding.
Day of Embryo Transfer* Among All ART Transfers Using Fresh Nondonor Eggs or Embryos,†‡ 2012

- Day 1: 0.1%
- Day 2: 4.5%
- Day 3: 45.9%
- Day 4: 2.3%
- Day 5: 44.5%
- Day 6: 2.8%

---

* Number of days following egg retrieval.
† Cycles using GIFT or ZIFT are excluded. Missing or implausible values for day of embryo transfer (i.e., 0 or >6) are not included.
‡ Total does not equal 100% due to rounding.
Percentages of Day 3 and Day 5 Embryo Transfers Using Fresh Nondonor Eggs or Embryos That Resulted in Live Births, by Age Group,* 2012

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Day 3</th>
<th>Day 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;35</td>
<td>39.7</td>
<td>52.4</td>
</tr>
<tr>
<td>35–37</td>
<td>32.5</td>
<td>44.6</td>
</tr>
<tr>
<td>38–40</td>
<td>24.0</td>
<td>37.2</td>
</tr>
<tr>
<td>41–42</td>
<td>14.1</td>
<td>23.3</td>
</tr>
<tr>
<td>43–44</td>
<td>5.7</td>
<td>12.0</td>
</tr>
<tr>
<td>&gt;44</td>
<td>2.3</td>
<td>6.3</td>
</tr>
</tbody>
</table>

* Cycles using GIFT or ZIFT are excluded. Embryo transfers performed on days 1, 2, 4, and 6 are not included because each of these accounted for a small proportion of procedures.
Numbers of Embryos Transferred on Day 3 or Day 5 Among All Transfers Using Fresh Nondonor Eggs or Embryos,* 2012

Day 3†

- One: 13.6%
- Two: 47.6%
- Three: 25.4%
- Four or more: 13.3%

Day 5†

- One: 23.8%
- Two: 64.3%
- Three: 9.9%
- Four or more: 2.1%

* Cycles using GIFT or ZIFT are excluded. Embryo transfers performed on days 1, 2, 4, and 6 are not included because each of these accounted for a small proportion of procedures.
† Totals do not equal 100% due to rounding.
Distribution of Number of Infants Born Among Day 3 and Day 5 Embryo Transfers Using Fresh Nondonor Eggs or Embryos That Resulted in Live Births,* 2012

Day 3
- A. 10,547 Live births
  - Singletons 76.9%
  - Twins 22.2%
  - Triplets or more 0.9%

Day 5
- B. 16,585 Live births
  - Singletons 69.6%
  - Twins 29.4%
  - Triplets or more 1.0%

* Cycles using GIFT or ZIFT are excluded. Embryo transfers performed on days 1, 2, 4, and 6 are not included because each of these accounted for a small proportion of procedures.
Percentages of Day 5 Transfers Using Fresh Nondonor Eggs or Embryos That Resulted in Live Births and Distribution of Number of Infants Born Among Women Younger Than Age 35 Who Set Aside Extra Embryos for Future Use, by Number of Embryos Transferred, * 2012

* Percentages of live births that were singletons, twins, and triplets or more are in parentheses. Cycles using GIFT or ZIFT are excluded.

Note: In rare cases a single embryo may divide and thus produce twins. For this reason, a small percentage of twins resulted from a single embryo transfer, and a small percentage of triplets or more resulted when two embryos were transferred.

† Total does not equal 100% due to rounding.

National Center for Chronic Disease Prevention and Health Promotion
Division of Reproductive Health
Comparison of Percentages of Transfers Using Fresh Nondonor Eggs or Embryos That Resulted in Live Births Between ART Cycles That Used Gestational Carriers and Those That Did Not, by Age Group, * 2012

- Age categories reflect the age of the ART patient, not the age of the gestational carrier.

- **Pregnancies**
  - Frozen nondonor: 47.3%
  - Fresh nondonor: 44.4%

- **Live births**
  - Frozen nondonor: 37.5%
  - Fresh nondonor: 36.3%

- **Singleton live births**
  - Frozen nondonor: 29.2%
  - Fresh nondonor: 26.3%
Distribution of Multiple-Fetus Pregnancies and Multiple-Infant Live Births Among ART Cycles Using Frozen Nondonor Embryos, 2012

A. 16,783 Pregnancies
- Singletons: 68.4%
- Twins: 21.2%
- Triplets or more: 1.4%
- Not able to determine number of fetuses: 9.0%

B. 13,312 Live births
- Singletons: 77.9%
- Twins: 21.4%
- Triplets or more: 0.7%
Percentages of ART Cycles Using Donor Eggs, by Age of Woman, 2012
Percentages of Transfers Using Fresh Embryos from Donor or Nondonor Eggs That Resulted in Live Births, by Age of Woman, 2012

- Donor eggs
- Nondonor eggs
Percentages of Transfers Using Fresh Embryos from Donor Eggs That Resulted in Live Births and Singleton Live Births, by Age of Woman, 2012

![Graph showing percentages of transfers using fresh embryos from donor eggs that resulted in live births and singleton live births, by age of woman, 2012. The graph includes data for different age groups and shows the proportion of live births and singleton live births across these age categories.](image-url)
Distribution of Multiple-Fetus Pregnancies and Multiple-Infant Live Births Among ART Cycles Using Fresh Embryos from Donor Eggs, 2012

A. 6,561 Pregnancies
- Singletons: 58.9%
- Twins: 34.3%
-Triplets or more: 1.6%
-Not able to determine number of fetuses: 5.2%

B. 5,607 Live births
- Singletons: 65.9%
- Twins: 33.4%
- Triplets or more: 0.7%
Percentages of Transfers Using Frozen or Fresh Donor Embryos That Resulted in Pregnancies, Live Births, and Singleton Live Births, 2012

- Frozen donor
- Fresh donor

<table>
<thead>
<tr>
<th>Category</th>
<th>Frozen donor</th>
<th>Fresh donor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnancies</td>
<td>46.7%</td>
<td>66.0%</td>
</tr>
<tr>
<td>Live births</td>
<td>37.0%</td>
<td>56.4%</td>
</tr>
<tr>
<td>Singleton live births</td>
<td>28.6%</td>
<td>37.2%</td>
</tr>
</tbody>
</table>

ART cycles
Live-birth deliveries
Infants born
Numbers of ART Cycles Performed for Banking All Fresh Nondonor Eggs or Embryos, 2003–2012

- Number of ART cycles per year from 2003 to 2012.
- The number of ART cycles increased significantly from 2003 to 2012.
Numbers of ART Cycles Using Donor Eggs or Embryos, 2003–2012
Numbers of ICSI Procedures Performed, by Type of ART Cycle, 2003–2012

- Fresh nondonor with ICSI
- Frozen nondonor
- Fresh donor with ICSI
- Frozen donor

Number: 0, 10,000, 20,000, 30,000, 40,000, 50,000, 60,000, 70,000
Percentages of Transfers That Resulted in Live Births, by Type of ART Cycle and ICSI, 2003–2012

![Graph showing percentages of transfers that resulted in live births by type of ART cycle and ICSI from 2003 to 2012.](image-url)
Percentages of Transfers Using Fresh Nondonor Eggs or Embryos That Resulted in Live Births, by Age Group, 2003–2012

* 2006 was the last year in which data were reported together for women older than age 42.
† 2007 was the first year in which data for women older than age 42 were subdivided into ages 43–44 and >44.
Percentages of Transfers Using Fresh Nondonor Eggs or Embryos That Resulted in Singleton Live Births, by Age Group, 2003–2012

* 2006 was the last year in which data were reported together for women older than age 42.
† 2007 was the first year in which data for women older than age 42 were subdivided into ages 43–44 and >44.
Percentages of Fresh Nondonor Transfers of One, Two, Three, or Four or More Embryos, 2003–2012

<table>
<thead>
<tr>
<th>Year</th>
<th>One</th>
<th>Two</th>
<th>Three</th>
<th>Four or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>24</td>
<td>36</td>
<td>33</td>
<td>7</td>
</tr>
<tr>
<td>2004</td>
<td>21</td>
<td>39</td>
<td>32</td>
<td>8</td>
</tr>
<tr>
<td>2005*</td>
<td>18</td>
<td>43</td>
<td>29</td>
<td>9</td>
</tr>
<tr>
<td>2006*</td>
<td>16</td>
<td>46</td>
<td>28</td>
<td>11</td>
</tr>
<tr>
<td>2007</td>
<td>14</td>
<td>48</td>
<td>26</td>
<td>12</td>
</tr>
<tr>
<td>2008*</td>
<td>14</td>
<td>50</td>
<td>25</td>
<td>12</td>
</tr>
<tr>
<td>2009*</td>
<td>12</td>
<td>52</td>
<td>23</td>
<td>14</td>
</tr>
<tr>
<td>2010*</td>
<td>10</td>
<td>53</td>
<td>21</td>
<td>15</td>
</tr>
<tr>
<td>2011</td>
<td>9</td>
<td>54</td>
<td>20</td>
<td>17</td>
</tr>
<tr>
<td>2012*</td>
<td>8</td>
<td>55</td>
<td>18</td>
<td>20</td>
</tr>
</tbody>
</table>

* Totals do not equal 100% due to rounding.
### Percentages of Fresh Nondonor Transfers of One, Two, Three, or Four or More Embryos Among Women Younger Than Age 35 Who Set Aside Extra Embryos for Future Use, 2003–2012

<table>
<thead>
<tr>
<th>Year</th>
<th>One</th>
<th>Two</th>
<th>Three</th>
<th>Four or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>7%</td>
<td>29%</td>
<td>62%</td>
<td>2%</td>
</tr>
<tr>
<td>2004*</td>
<td>5%</td>
<td>25%</td>
<td>68%</td>
<td>3%</td>
</tr>
<tr>
<td>2005</td>
<td>4%</td>
<td>20%</td>
<td>72%</td>
<td>2%</td>
</tr>
<tr>
<td>2006*</td>
<td>3%</td>
<td>16%</td>
<td>75%</td>
<td>2%</td>
</tr>
<tr>
<td>2007</td>
<td>2%</td>
<td>13%</td>
<td>76%</td>
<td>2%</td>
</tr>
<tr>
<td>2008</td>
<td>2%</td>
<td>11%</td>
<td>77%</td>
<td>1%</td>
</tr>
<tr>
<td>2009</td>
<td>1%</td>
<td>8%</td>
<td>77%</td>
<td>1%</td>
</tr>
<tr>
<td>2010*</td>
<td>1%</td>
<td>6%</td>
<td>75%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>2011*</td>
<td>&lt;1%</td>
<td>5%</td>
<td>73%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>2012*</td>
<td>&lt;1%</td>
<td>4%</td>
<td>70%</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

*Totals do not equal 100% due to rounding.

### Notes
- * indicates years with survey sample sizes below 120.
- Percentages may not add to 100 due to rounding.

---

**Source:** National Center for Chronic Disease Prevention and Health Promotion

**Division of Reproductive Health**
Percentages of Elective Single Embryo Transfer (eSET) Among All Transfers Using Fresh Nondonor Eggs or Embryos, by Age Group, * 2003–2012

* All ages >40 years are reported together due to the small number of transfers performed with eSET.
Percentages of Transfers Using Fresh Nondonor Eggs or Embryos That Resulted in Live Births, by Number of Embryos Transferred, 2003–2012

- One
- Two
- Three
- Four of more

Year
Percent
50 40 30 20 10 0
Number of Embryos Transferred
One Two Three Four of more

National Center for Chronic Disease Prevention and Health Promotion
Division of Reproductive Health
Percentages of Transfers Using Fresh Nondonor Eggs or Embryos That Resulted in Multiple-Infant Live Births, by Number of Embryos Transferred, 2003–2012

Number of Embryos Transferred
- One
- Two
- Three
- Four of more
Percentages of Live Births Using Fresh Nondonor Eggs or Embryos That Resulted in Multiple Infants Born, by Age Group, 2003–2012

* 2006 was the last year in which data were reported together for women older than age 42.
† 2007 was the first year in which data for women older than age 42 were subdivided into ages 43–44 and >44.
Percentages of Transfers Using Fresh Nondonor Eggs or Embryos That Resulted in Live Births and Distribution of Number of Infants Born,* 2003–2012

* Percentages of live births that were singletons, twins, and triplets or more are in parentheses.
† Total does not equal 100% due to rounding.