

The **eReview** provides analysis on public policy relating to Canadian families and marriage. Below please find the final article in a three-part series on assisted human reproductive technologies in Canada. To read past articles, click on the links below:

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Life in the Balance: the ethics of assisted human reproduction.

By Kate Fraher, Researcher, Institute of Marriage and Family Canada

Technology is rapidly changing the way we handle (literally) and therefore conceptualize life at its earliest stages. Thanks to assisted human reproductive technologies (ARTs), conception now occurs in different ways such as in-vitro fertilization and in different places like inside a test tube. Pope John Paul II coined the phrase a 'culture of life,' meaning that life should be respected from conception to its natural end. How do Canadians ensure that despite these changes, respect for human life is maintained?

ARTs and multiple pregnancies

Since ARTs became widespread roughly thirty years ago, women in the western world have been conceiving twins, triplets, and higher-order multiples at a rate never before seen. [1] Multiple pregnancies can result when ovulation induction drugs cause a woman's ovaries to release more than one egg for fertilization or when more than one embryo is implanted in a woman's uterus. Because of the high financial cost of procedures like embryo transfer, couples try to maximize their chances of a successful pregnancy by transferring more than one embryo at a time. Problems arise when these procedures prove 'too successful' and couples find themselves pregnant with more babies than they intended. Such was the case with a B.C. couple who recently gave birth to sextuplets.

Stuck between a rock and a hard place

Pregnancies with multiples are indisputably more complicated for mother and babies and doctors oftentimes encourage couples to selectively abort one or more of the fetuses. [2] This can be an emotional process for couples who have to part with one or more of the babies they tried so hard for. [3] The most common method of 'reducing' the number of multiples in a pregnancy is known as



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transabdominal fetal reduction. This involves inserting a needle through the mother's abdomen to the heart of the fetus and then injecting it with potassium chloride, stopping the fetus' heart. The fetus either shrinks back into the mother's uterus and disappears or is delivered dead alongside the other babies at full term. [4]

Couples typically wait until 10-13 weeks of pregnancy to decide which fetuses to eliminate. Before 10 weeks, some couples hope that the number will decrease naturally. Waiting this long also allows doctors to more accurately predict the sex of the fetus as well as identify any genetic defects that may influence parents' decisions about which ones they would like to keep. A columnist for the L.A. Times recently wrote about the decision he and his wife made to reduce their quadruplets to twins; he says they chose to keep two girl fetuses and eliminate two boy fetuses because of studies showing a link between advanced paternal age (the father in this case is 47) and autism which is four times more likely to occur in boys. The columnist admits, "...my wife and I have always been pro-choice, but we never expected to actually confront the Choice." [5]

Possible Solutions


Closer monitoring of both the dosage and the effect of ovulation stimulation drugs could reduce the likelihood of patients conceiving multiples. And multiple pregnancies resulting from embryo transfer procedures would disappear entirely if embryos were transferred to the uterus one at a time, a procedure known as 'single-embryo transfer' or 'SET'. Countries like the Netherlands, Sweden and Finland have made SET policy and Britain is now thinking of following suit. [6]

The rule of 'one-at-a-time' could also be applied to practice of creating embryos in-vitro. This would eliminate the problems that fertility clinics and patients currently face which is – what do we do with all these 'leftover' embryos? The United States began asking this question in 2003 after a survey revealed there were approximately 400,000 embryos frozen in fertility clinics across the country. [7] Some couples, satisfied with the size of their family, but unhappy with the idea of their embryo offspring being brusquely tossed in the garbage (or donated to science) are offering their embryos up for 'embryo adoption.' [8] Germany, on the other hand, has eliminated the problem altogether by banning the freezing of embryos. [9]

The situation at home

The fact that embryos in IVF clinics are routinely disposed of without afterthought indicates that Canadians have already become desensitized to the mass destruction of life at its earliest stages. Canadians are becoming more accustomed to ARTs but as the technology becomes routine we risk becoming disengaged from that which is truly sacred – the miracle of human life.

Assisted Human Reproduction Canada would do well to limit practices which create life with no intention of supporting it. Recognition of the



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embryo as a person under Canadian law would protect these fetuses/embryos, but would include sweeping changes for everything from abortion procedures to stem cell research. For now, Parliamentarians and Assisted Human Reproduction Canada could adopt legislation that permits single-embryo transfer only.

Increased information on the practice of ARTs will naturally cause people to pause and think about some its many mind-bending ethical implications. It's important that Assisted Human Reproduction Canada dig down to the depths of these issues- a shallow debate that pretends these practices are somehow distanced from human life will not do - life is in the balance.

[1] In Canada, twin births increased by 35% and triplet births increased 250% between the years 1974 and 1990 (Multiples Births: Trends and Patterns in Canada 1974-1990 Health Reports, Millar WJ, Wadhwa S, Nimrod C.). Preliminary figures from the Canadian Fertility and Andrology Society for the year 2005 indicate that 32% of pregnancies from IVF/ICSI were pregnancies with more than one baby- usually twins (Retrieved from the CFAS website: http://www.cfas.ca/2006_Press_Release.pdf). According to the U.K.'s Human Fertilisation and Embryology Authority, twins occur naturally in just over 1% of all pregnancies, well below the 32% mark (Retrieved from HFEA's website: <http://www.hfea.gov.uk/en/1510.html>).

[2] Johnson, K. (2000, May 15) Tough choices on fetal reduction, genetic testing. *OB/GYN News*. Retrieved May 22nd from http://findarticles.com/p/articles/mi_m0CYD/is_10_35/ai_62827610

[3] For a journalist's in-depth look at the process of fetal reduction, read Liza Mundy's article 'Too Much to Carry?' published in the Washington Post May 20, 2007. Retrieved May 22nd from <http://www.washingtonpost.com/wp-dyn/content/article/2007/05/15/AR2007051501730.html?hpid=smartliving>

[4] Ibid.

[5] Neil, D. (2007, May 6) The abortion debate brought home: He and his wife have always been pro-choice; recently, they were forced to make the Choice. *Los Angeles Times*. Retrieved May 22nd from <http://www.latimes.com/news/opinion/la-op-neil6may06.0.2723837.story?coll=la-opinion-righttrail>

[6] Martin, N. (2007, April 2) Plans to restrict IVF treatment. *The Daily Telegraph*. Retrieved May 22nd from <http://www.telegraph.co.uk/news/main.jhtml?xml=/news/2007/04/01/nivf101.xml> Britain's Human Fertilisation and Embryology Authority published a report in October 2006 entitled "One child at a time: reducing multiple births after IVF." To read a copy of the report, click here: http://www.hfea.gov.uk/docs/MBSET_report_Final_Dec_06.pdf

[7] Weiss, R. (2003, May 8) 400,000 Human embryos frozen in U.S.: Number at fertility clinics is far greater than previous estimates, survey finds. *Washington Post*. Retrieved May 22nd from <http://www.washingtonpost.com/ac2/wp-dyn?pagename=article&contentId=A27495-2003May7>

[8] The [National Embryo Donation Center](http://www.embryodonation.org) in the United States works with couples who wish to donate embryos and infertile couples who wish to become pregnant with adopted. The centre was part of a group who received \$309,000 in grant money from the U.S. Department of Health and Human Services to run an Embryo Adoption Awareness Campaign. Retrieved May 22nd from <http://www.embryodonation.org/news/federalgranthelps.html>

[9] Gerris, J.M.R. (2005). Single embryo transfer and IVF/ICSI outcome: a balanced appraisal. *Human Reproduction Update*, 11(2), 109. Retrieved May 22, 2007 from <http://humupd.oxfordjournals.org/cgi/reprint/11/2/105>