

# FEWER DONORS UNDER THE ASSISTED HUMAN REPRODUCTION ACT

The first Canadian  
study profiles potential  
semen donors

Original study by Dr. Alfonso del Valle,  
Tamer Said and Leanne Bradley,  
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adapted for *Creating Families*  
by Naomi Louder.



In April 2004, the Assisted Human Reproduction (AHR) Act came into effect in Canada.<sup>1</sup> The Act relates to many ethical aspects of AHR, but an area of great concern is its treatment of the issue of gamete donor reimbursement. The Canadian government now prohibits the purchase of donor sperm or eggs, and continues to restrict the types of reimbursement that may be provided to donors. Many studies in the past have shown that without payment incentives, donor recruitment becomes much more difficult, especially considering the stringent selection process prospective donors must undergo. However, up until now, no studies existed on Canadian donors specifically, and their willingness to donate in spite of a poor reimbursement policy. A previous review of studies from eight countries, conducted between 1980 and 2003, concluded that semen donors who are older, married, or who are already fathers are more likely to donate in spite of a lack of payment incentives.<sup>2</sup>

This first Canadian study, the results of which were published in a recent online article by Dr. Alfonso Del Valle, was a survey of 301 donor applicants, conducted by the Canadian Sperm Bank – ReproMed.<sup>2</sup> (p16) The study collected demographic data of participants in an anonymous semen donor program, assessing the age, marital status, paternity status and occupation of potential donors. It also assessed donor eligibility and willingness to donate without reimbursement. The demographic profile of donors willing to participate without reimbursement was not found to be consistent with findings of previous published studies in other countries. Many prospective donors responded positively to altruistic donation, but nonetheless, the Canadian study showed a recruitment rate of less than 1%.

It has always been difficult to recruit anonymous sperm donors.<sup>3,4,5,6</sup> Some reports indicate that financial incentive is crucial to the motivation of gamete donors.<sup>7</sup> Under the new law, payment of donors is prohibited, and reimbursement is only permitted for reasonable expenses. The current suggested regulations for Section 12 of the AHR Act (under development) do not include reimbursement for loss of earnings.

The ReproMed study was performed at a single Canadian facility, following the imposition of the AHR Act restrictions, with the objective of assessing the realistic possibility of finding altruistic donors, collecting their demographic data, and comparing these data with findings from other countries. Data were collected between January and October 2005.

Two different advertisements calling for participants were placed in a variety of publications. Students were not targeted. The first advertisement simply announced the gamete donor program, and gave the contact information for the study. This ad was run weekly in two community events and entertainment magazines. The second ad communicated the need for donors to help infertile couples, and was run in free weekly newspaper distributed to public transport users.

### PHASE 1: WILLINGNESS OF ALTRUISTIC DONORS

In Phase 1 of the study, men who responded to these ads were first surveyed by telephone or via the Internet. The survey contained questions on the applicants' demographic data – their age, marital status, paternity status, occupation – as well as their eligibility, motives and willingness to donate without reimbursement. The study offered reimbursement of reasonable receipted expenses. Applicants were asked, however, if they would be willing to participate if no reimbursement were offered. Of the 301 men who contacted ReproMed, 246 donor applicants replied to the survey questions.

**Age.** Only donors between 21 and 40 years are eligible to participate. However, all applicants were surveyed in Phase 1, even those who did not fit into this category. Of the 232 applicants who gave their age, within the range of 18 to 56 years, the mean age was 30.9 years. A greater percentage of donors in the 20-29 age group were willing to donate without reimbursement (45.6%). However, the other age groups surveyed were not far behind.

The proportion willing to participate without reimbursement for all the groups together was 37.5%. Without reimbursement, 103 participants (44.4%) were unwilling to participate, and a further 42 men (18.1%) were unsure (see Table 1).

	<20 years	20–29 years	30–39 years	40–49 years	50–59 years	Total
Applicant (n)	14	90	95	31	2	232
Yes (%)	5 (35.7)	41 (45.6)	34 (35.8)	7 (22.6)	0	87 (37.5)
No (%)	5 (35.7)	37 (41.1)	42 (44.2)	17 (54.8)	2 (100)	103 (44.4)
Unsure (%)	4 (28.6)	12 (13.3)	19 (20.0)	7 (22.6)	0	42 (18.1)

Table 1. Number and percentage of donor applicants willing to participate without reimbursement versus age group.

	Married/long term relationship	Single	Total
Applicant(n)	106	124	230
Yes (%)	38 (35.8)	51 (41.1)	89 (38.7)
No (%)	46 (43.4)	52 (41.9)	98 (42.6)
Unsure (%)	22 (20.8)	21 (16.9)	43 (18.7)

Table 2. Number and percentage of donor applicants willing to participate without reimbursement versus marital status.

**Paternity Status.** Men with children were not found to be more amenable to uncompensated donation. Of the donor applicants who had children of their own, 37% were willing to participate regardless of reimbursement, compared to 39.8% of applicants who did not have children (see Table 3).

	Children	No children	Total
Applicant (n)	100	128	228
Yes (%)	37 (37.0)	51 (39.8)	88 (38.6)
No (%)	42 (42.0)	55 (43.0)	97 (42.5)
Unsure (%)	21 (21.0)	22 (17.2)	43 (18.9)

Table 3. Number and percentage of donor applicants willing to participate without reimbursement versus paternity status.

## The ReproMed study was performed at a single Canadian facility, following the imposition of the AHR Act restrictions, with the objective of assessing the realistic possibility of finding altruistic donors

**Occupation.** Among study participants, 231 applicants were willing to state their occupation. The first category of 92 participants included those with professional, technical, administrative and managerial occupations. The second category was comprised of 43 applicants who were all students from post-secondary schools, including universities and colleges. The third category consisted of 96 applicants, and included clerical workers, the self-employed, those in a trade and the unemployed. The results showed no significant difference in the applicants' willingness to participate without reimbursement in categories one, two and three (39.1%, 37.2%, 39.6%, respectively – see Table 4).

	Category 1a	Category 2a	Category 3a	Total
Total donor applicant	92	43	96	231
Yes (%)	36 (39.1)	16 (37.2)	38 (39.6)	90 (39.0)
No (%)	34 (37.0)	22 (51.2)	42 (43.8)	98 (42.4)
Unsure (%)	22 (23.9)	5 (11.6)	16 (16.7)	43 (18.6)

Table 4. Number and percentage of donor applicants willing to participate without reimbursement versus current occupation (n = 231).

At the time of the initial survey, a total of 90 out of 246 donor applicants, or 36.6% of all applicants, responded favorably when asked if they would participate without reimbursement.

### PHASE 2: ELIGIBILITY OF DONORS

Canada now has the most stringent selection criteria worldwide for accepting donors.<sup>2(p18)</sup> The results of this study were encouraging with respect to the potential number of altruistic donors on completion of Phase 1. However, about half of these 90 willing donors were immediately found to be ineligible.

In the second phase of the study, participants went through a screening process in accordance with ReproMed's standard operating procedure and in compliance with Health Canada's Technical Directive and Guidance Document.<sup>8,9</sup> A total of 41 applicants were excluded for the following reasons: high-risk lifestyles such as drug use and same-sex relationships (14%), medical history (8%), age (13%) and other reasons (10%).

Screening of the final 49 applicants who met basic eligibility criteria and were willing to donate without reimbursement resulted in only one donor being accepted into the donor program. The remaining applicants were classed in the following categories: withdrawn applications (37/49, or 76%), poor semen quality (12%, or 6/49), infectious and genetic screening (6% or 3 /49), medical and genetic history (2% or 1/49) and Health Canada exclusion criteria (2%, or 1/49).

### CONCLUSION

There are many factors to be considered when legislating gamete donation. On January 5, 2004, one of the largest studies of its kind found that men's sperm counts have fallen by almost a third since 1989.



These findings add to the evidence that suggests a growing number of men may have problems fathering children. Researchers in Aberdeen said their findings, based on 16,000 semen samples taken from 7,500 men, cause concern. They claim that the average "normal" sperm count had fallen from 87 million sperm per milliliter in 1989 to

62 million in 2002 - a 29% drop. The findings of the study, involving men attending the Aberdeen Fertility Centre, were presented at a British Fertility Society meeting in Liverpool in January of 2004. With the average sperm count falling, it is likely that the demand for donor sperm will be on the rise at the very moment of growing

donor sperm shortages that are a direct result of legislation.

The donation process is lengthy and can be emotionally and physically stressful. Canadian donors should not be expected to use their vacation or sick leave to attend the medical appointments necessary to the donation screening process and the donation itself. In the UK, The Human Fertilisation and Embryology Authority (HFEA) has specified that donation should be "expense neutral" for donors – that donors may be compensated for loss of earnings for each cycle of sperm or egg donation.<sup>10</sup> The Ethics Committee of The American Society of Reproductive Medicine acknowledged that further monetary compensation should reflect time, inconvenience, and physical and emotional demands associated with oocyte donation.<sup>11</sup>

Canada's legislation now permits only altruistic donation. According to this study, many Canadian men, regardless of their demographic, are willing to give generously, at least in theory. However, many of those surveyed withdrew their applications, and of those who did not, almost all were disqualified for a variety of reasons. This shows that however many donors may respond with good intentions, the screening process is such that only a fraction of them will ever be approved as gamete donors. In order for a significant number of donors to be recruited, an enormous number of applicants would have to be found – according to this study, roughly 250 times more applicants than the number of donors needed. If donor programs are unable to offer compensation, it seems very unlikely that altruism alone will answer the sperm deficit.

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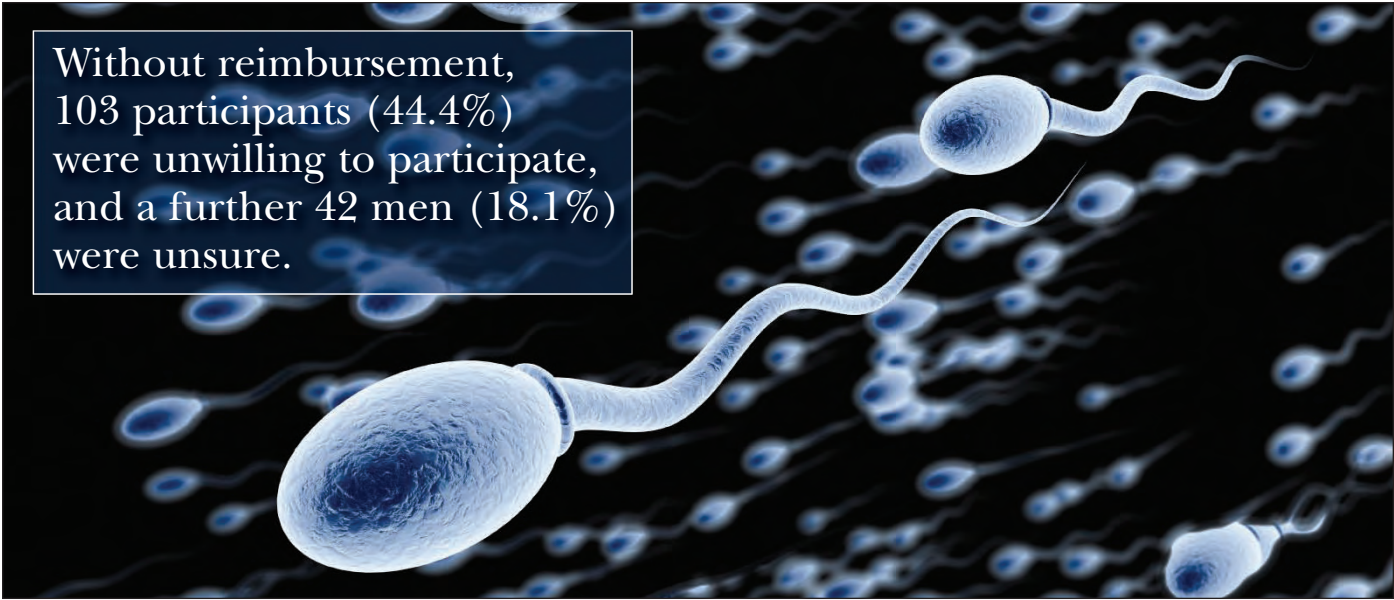
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### About the Author

**Dr. Alfonso Del Valle** became board certified in obstetrics and gynecology in 1985 at the University of Toronto. He did post-graduate training in reproductive endocrinology and infertility at Yale University, USA. Dr. Del Valle has been the author of numerous scientific publications and has presented his data nationally and internationally. His main interests are in the area of in-vitro fertilization, gamete donation and cryopreservation, as well as aspects related to male infertility.

**Naomi Louder** is a writer and translator from Montreal. She has edited *Creating Families* on a contractual basis since February 2008, and her publication credits include the *Montreal Gazette* and several national magazines. She has translated post-doctoral research in such domains as international private law, economics, and sociology, as well as documents dealing with management theory, finance, medicine and technology. She anticipates completing her certification in bilingual translation from McGill University in spring of 2009.

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