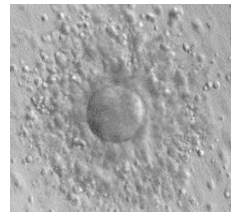


Experience of oocyte donation and surrogacy treatment in Finland

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Väestöliitto

History..

First IVF baby born in 1978



**First baby born with
donated oocytes
(ovum donatio)
in 1984**

letters to nature

Nature 307, 174 - 175 (12 January 1984); doi:10.1038/307174a0

The establishment and maintenance of pregnancy using *in vitro* fertilization and embryo donation in a patient with primary ovarian failure

PETER LUTJEN, ALAN TROUNSON, JOHN LEETON, JOCK FINDLAY*, CARL WOOD & PETER RENO

Department of Obstetrics and Gynaecology, Monash University, Queen Victoria Medical Centre and *Medical Research Centre, Prince Henry's Hospital, Melbourne, Australia 3000

Donated oocytes in the treatment of infertility

Indications:

**I Women without
eggs**

**II Women with
poor quality eggs**

↓

**Genetic reasons
Ovaries removed
Ovarian failure after cancer-
treatment**

↓

**"Poor response"
Oocyte abnormality
Endometriosis
Hereditary disease**

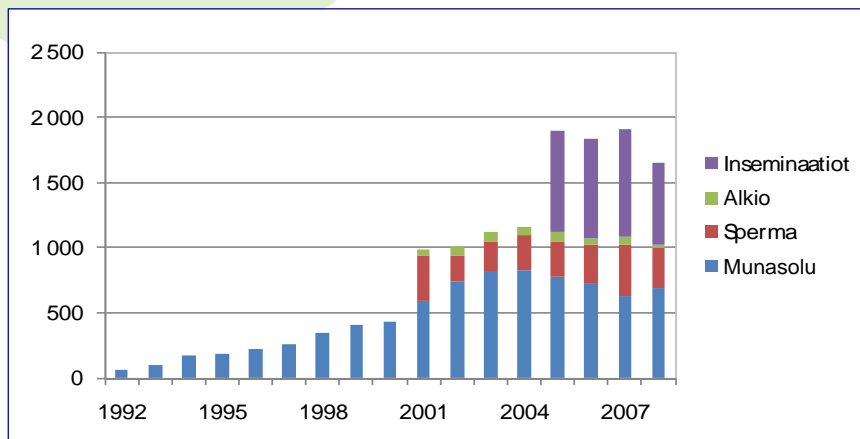
Oocyte donors

1. "Occasional" altruistic donors
 2. Related donors (arranged by the couple)
 3. IVF patient donors
- } in Finland

- IVF patients may give away part of their collected oocytes for the treatment of another woman

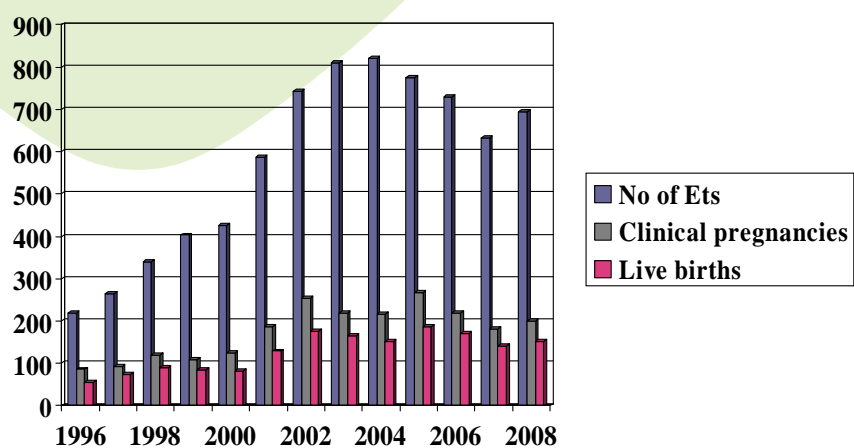
Treatment with donated gametes in Finland

National Institute for Health and Welfare (M. Gissler, 2010)



Väestöliitto

Oocyte donation in Finland since 1991

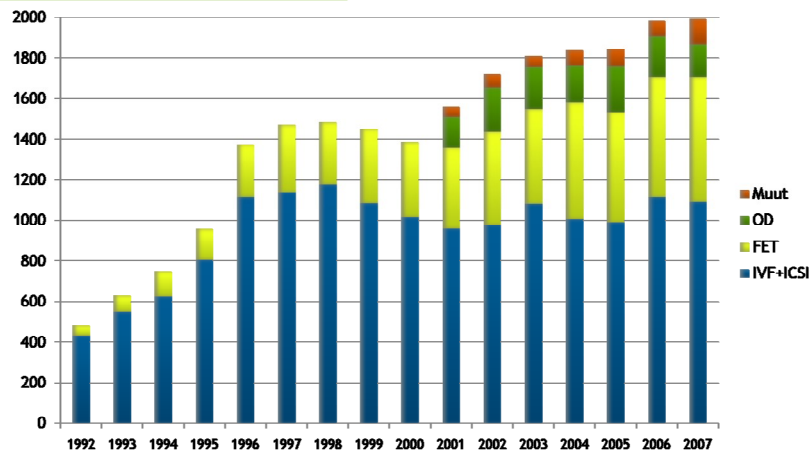


National Institute for Health and Welfare (M. Gissler, 2009)

Väestöliitto

The number of children born after ART in Finland

- 2007:
- IVF 1100
- FET 650
- Ovum donation 140



National Institute for Health and Welfare (M. Gissler, 2009)



Oocyte donation started 1991 in Finland

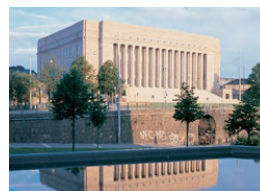
• 1991-8/2007

ART without legislation

• 9/2007 onwards

according to

Act on assisted fertility treatments 1237/2006



Act on assisted fertility treatments 1237/2006

Ministry of Justice, Finland

- **No age limits for treatment**
- **No restrictions regarding treatment methods except for surrogacy treatment which was prohibited**
- **Treatment of single women and lesbian couples allowed**
- **Open-identity donors**
- **The child has the right to obtain information of the identity of the donor at the age of 18**



Act on assisted fertility treatments 1237/2006

Ministry of Justice, Finland

Chapter 3

Donation and transfer of gametes and embryos

Section 13

Donor

Gametes may be donated by persons over the age of 18 who pass a physical examination ensuring that:

- 1) the donation of gametes does not pose a health hazard to them, and
- 2) they do not have any serious inherited disease or any communicable disease that may cause a serious illness to the woman receiving assisted fertility treatment or to the child who may be born as a result of assisted fertility treatment.

Oocyte donation in Finland

- Performed in private clinics only
- Waiting time to get donated oocytes 4-24 months
- The donor can be anonymous or known to the recipient couple
- The couple can bring their own donor and the clinic arranges an interchange between the donors
- The donors must have altruistic motivations
- Not necessary to have children of their own
- Upper age limit of an anonymous oocyte donor 35 years
- Compensation for inconvenience 250 euros



Oocyte recipient

- Psychological counselling
- Synchronization of menstrual bleedings between the donor and the recipient
- Preparation of endometrium with estradiol och progesterone during 2-3 weeks before the planned embryo transfer
- Hormone substitution until 10 -12 weeks of gestation



Foetus 6 weeks



Oocyte donation at Väestöliitto Fertility Clinic, Helsinki

- One donor → two recipients, if more than 10 eggs per oocyte collection
- Information to recipients about donor's ethnic background, age, height, eye and hair colour
- The donor is informed about the pregnancy test result



Resultat från överföring av ett embryo vid äggdonation på Väestöliitto

Söderström-Anttila & Vilka, RBMOnline 2007

- **Paren får i genomsnitt 8 äggceller**
- **Bildas 5-6 embryon/par**
- **Ett embryo överförs och 3-4 nedfryses**
- **32 % föder efter överföringen av det färska embryot**
- **Cirka 50 % föder minst ett barn efter överföring av ytterligare frysförvarade embryon**



Pregnancy outcome and the age of the recipient

- **The success rate is not dependent on the age of the recipient, but on the age of the donor (Cohen *et al.*, 1999)**
- **Similar outcome in different groups of recipients (different indication for treatment)**

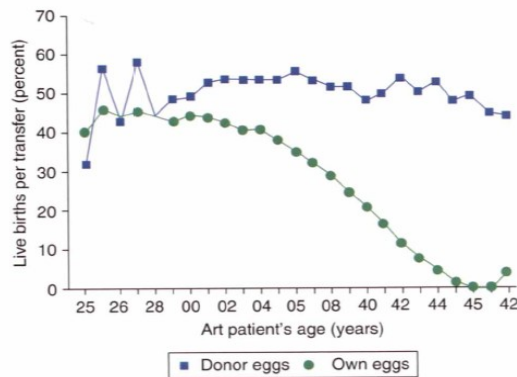


Figure 60.1 Live births per transfer for ART cycles using fresh embryos from own and donor eggs, by ART patient's age, 2004.⁹

CDC/SART data 2004

from Textbook of ART 2008



Obstetric and perinatal outcome in OD pregnancies

- **Mostly favourable, but to remember**
 - First trimester bleeding 12 – 53 %
 - PIH/pre-eclampsia 20 – 33 %
 - Cesarean section 50 -80 %
- **OBSTETRICALLY HIGH RISK PATIENTS**
- **Birth weight of the children within normal ranges**
- **Multiple pregnancies should be avoided**



Follow-up of donors, recipients, OD families in Finland

Follow-up study of Finnish volunteer oocyte donors

Söderström-Anttila V, Hum Reprod 1995

- **Questionnaire study 12-18 months after donation**
- **Nobody regretted donation**
- **No medical problems after the donation**
- **78 % would do it again**
- **67 % would have liked to know if pregnancy was achieved in the recipient**

Oocyte recipients in Finland (2000 – 2002, 10 clinics)

	All
Recipients	942
Recipients from abroad	386
Average age of the recipients	37 yrs
Age range	24 – 48 yrs

Recipients from abroad: Sweden, Norway, Denmark, Germany, Switzerland, France, the United Kingdom, Ireland, Turkey, Syria, India, USA



Oocyte Donors in Finland

(2000 – 2002, 10 clinics)

	All
No of donors	877
Anonymous	766
Known to the recipient	101 (11.5 %)
Donors from abroad	50 (6 %)
Mean age of the donors	30 yrs
Age range	18 – 39 yrs

Donors from abroad: Sweden, Norway, Switzerland, Russia, Belorussia, India



Follow-up of recipients, OD families in Finland



Health and development of oocyte donation children

Söderström-Anttila et al., 1998

- **Questionnaire study to 49 OD parents with 59 OD infants**
 - Control group 126 IVF children
- **Age of the children: ½- 4 years**
- **Growth and health of the OD children were normal**
- **Developmental achievements normal both for OD- and IVF-children**
 - Age at walking: 12.2 ± 1.8 months (OD) vs 12.1 ± 1.8 months (IVF)
 - Speaking more than 20 words at age 2 years: 77 % (OD) vs 56 % (IVF)
- **38 % of the OD parents planned to inform the child of its conception**



**A questionnaire study to couples with an OD child born
1992-2006 Väestöliitto Fertility Clinic, Helsinki**

- **The investigation approved by the Ethics committee of Helsinki University Central Hospital**
- **Questions separately to mothers and fathers about attitudes regarding secrecy issues, satisfaction with the treatment, counselling aso**
- **Questionnaire sent to 170 mothers and 167 fathers living in Finland and Sweden**
- **The response rate was 67.7 % among the mothers and 61.4 % among the fathers**



Summery

- **Oocyte donation is well accepted in Finland**
- **Higher success rate than in any other mode of assisted reproduction treatment**
- **Mostly one embryo at a time should be transferred to avoid multiple pregnancies**
- **Health of the children normal**



"The absence of a genetic link between parents and their child does not have a negative impact on parent-child relationships or the psychological well-being of the children".

Golombok et al., 1999, 2004, 2005, 2006

Furthermore



- **A donor is a donor, she is not the mother of the child**
- **The mother is the woman, who gives birth to the child**
- **Motherhood/parenthood is much more than a sum of genes, it is living with the child, taking care of the child, sharing joys and sorrows...**

IVF surrogacy in Finland

1. IVF surrogacy, ”full surrogacy”

- **Barnet får sin början av parets egna könsceller**
- Den genetiska modern går igenom hormonstimulering och utplockning av äggen, som befruktas med makens spermier. Embryot överföres till surrogatmammans livmoder och surrogatmamman går igenom graviditeten, föder barnet och överläter barnet åt de genetiska föräldrarna.
- Behandlingar sedan 1985

2. Traditionell eller partiell surrogatbehandling

- Barnet får sin början från surrogatmammans ägg



Indikationer för behandling med surrogatmamma

- 1. Medfödd avsaknad av livmoder**
- 2. Livmodern bortopererad pga akut komplikation under en graviditet eller förlossning (ruptur, blödning)**
- 3. Livmodern bortopererad pga gynekologisk sjukdom (t.ex cancer)**
- 4. Grav missbildning i livmodern**
- 5. Allvarlig medicinsk sjukdom, som hindrar genomgången av graviditet**



Surrogatmamman bör

- delta av egen vilja och för att hjälpa
- vara högst 45 år
- ha åtminstone ett eget barn och ingen önskan om flere egna barn
- vara frisk och psykiskt stabil
- ha normala tidigare graviditeter och ingen postpartum depression
- mottaga endast rimlig kostnadsersättning för besväret



IVF surrogacy in Finland 1991 – 2001

Söderström-Anttila V. *et al* 2002

- 12 couples treated in Väestöliitto
 - 3 in Felicitas Clinic
 - 2 in Eira Hospital
 - 1 in Kuopio University Hospital
- } 18 couples
- Two Swedish couples, one Norwegian and one Danish couple
 - Mean age of commissioning mother 33 yrs (20 – 40 yrs)



Indications for IVF surrogacy in Finland 1991 - 2001

	No of women
Congenital absence of uterus and vagina	6
Ruptured uterus during pregnancy or delivery; hysterectomy	3
Postpartum bleeding; hysterectomy	2
Hysterectomy due to sarcoma, cervical cancer, adenomyosis	3
Uterine factors (uterus duplex, st. p. resectionem myomae, recurrent abortion)	3
Severe LED	1



IVF surrogate mothers in Finland

V. Söderström-Anttila *et al.*, 2002

- **Mother** 3
- **Sister** 6
- **Husband's sister** 1
- **Cousin** 1
- **Friend** 4
- **Other** 3

Mean age 36 yrs (29 – 52 yrs)

All had children of their own



Counselling and preparation

- Medical examination and screening to exclude contraindication for ovarian stimulation
- Careful evaluation of the surrogate mother candidate (medically and psychologically)
- Psychological counselling by an independent psychologist/psychiatrist
- Information, preparation, counselling about the steps of the procedure, relationships, responsibilities, expectations
- Adoption guidance by adoption authorities



Outcome of IVF surrogacy 1991 – 2001

Söderström-Anttila *et al.*, 2002

No. of commissioning couples	17
No. of oocytes per retrieval	13.2 (1 – 30)
No. of surrogate mothers	18
Clinical pregnancy/fresh ET	50.0 % (8/16)
Clinical pregnancy/frozen-thawed ET	15.8 % (3/19)
Live birth rate /genetic couple	58.8 % (10/17)



IVF surrogacy in Finland – results

- **Favourable obstetric outcome**
 - Complications: PIH (1), placental insufficiency (1), disturbance of glucose metabolism (2)
 - Caesarean section 70 % (7/10)
- **11 infants born**
 - Birth weight of singleton infants 3498 g (2270 – 4650 g), twins 2900 g and 2400 g
- **Problems noted:**
 - the commissioning mother wanted to take part in every pregnancy check up in the hospital and the surrogacy mother would have wanted some more privacy
 - some disagreement between two sisters after delivery
- **Two surrogate mothers suffered from mild and moderate postpartum depression**



Comments:

- IVF surrogacy treatment in Finland has worked well
- The choice of surrogate mother extremely important
- All possible problems related to the treatment should be discussed with couples as part of the counselling process before treatment
- Enough time to think it over
- All risks can never be completely excluded
- Risk of postpartum depression?
- **Better to take care of your couples in your own country than forcing them to travel abroad**



TACK!

