



FERTILE TIMES

The Newsletter of Barbados Fertility Centre

HEAD OFFICE

Seaston House, Hastings
Christ Church, Barbados
Tel: + (246) 435-7467
Fax: + (246) 436-7467

TRINIDAD SATELLITE OFFICE

St. Augustine Private Hospital
4 Austin Street
St. Augustine, Trinidad
Tel: + (868) 222-7771

ANTIGUA SATELLITE OFFICE

Mansoor Medical Clinic
Tanner Street & Corn Alley
St. John's
Antigua

ST. MAARTEN SATELLITE OFFICE

Women's Health Services NV
AJC Brouwers Road #4
Unit 2D, Cay Hill
St. Maarten

Growing Together.

2010 is here! Over the last year continued progress has been made at Barbados Fertility Centre. Most importantly we have proudly assisted even more couples to achieve their dream of having a baby!

Within the Caribbean as a region Barbados Fertility Centre has sought to improve care by partnering with Gynaecologists to create satellite centres in Antigua and St. Maarten, and in the case of Trinidad have opened another unit with a full time IVF Case Manager. This makes a tremendous difference to our many Caribbean couples and reinforces our goal of making assisted reproduction treatment as accessible as possible to the people of the Caribbean.

Internationally, Barbados Fertility Centre continues to grow with many couples now choosing our centre in preference to units in their own countries - such as USA and UK. Within the international media we

continue to be featured in many articles and publications on "patients having treatment abroad", "cross border health-care" and "medical tourism". In fact Dr Juliet Skinner, Medical Director, recently was a guest speaker at the World Congress on Medical Tourism held in Los Angeles in October 2009. Through this we look forward to even further expansion and predict significant increase in our international patients in 2010.

Scientifically there continues to be improvements in technology and we share two amazing new technologies with you in articles below on Pre-Implantation Diagnosis and Fertility Preservation by Egg Vitrification. Both of which will have hugely important roles to play in improving success rates of assisted reproduction treatments in select patients, both now and in the future.



Lastly we would like to thank our many many couples who have trusted us to provide the best care scientifically possible and so many of whom have sent photos or visited in person to share their little bundle or bundles of joy. For all of the team this makes us remember exactly how special it really is what we do!

From all the team at
Barbados Fertility Centre



Fertility Preservation by Egg Vitrification

For many years we have been aware of the decline in fertility with increasing female age. (*See graph 1*). The key to understanding lies around the basic fact that unlike men who make sperm throughout life, women are born with all of their eggs. This number reduces throughout life and consequently a woman's chance of being able to conceive decreases as her age increases, especially after the age of 35.

While we know that in previous generations this age decline and likely development of infertility was avoided by childbearing early. Today for many reasons a woman/couple

may choose to delay childbearing for their careers or until they find the chosen ideal partner. While the advent of in-vitro fertilisation (IVF) certainly will assist tremendously in improving chances of pregnancy, this too can be limited by age and egg quality, with sometimes the only option being consideration of the use of donor eggs.

Scientific attempts to successfully freeze eggs were limited by old freeze technology. While conventional cryopreservation techniques provided options for sperm freezing – the only way to preserve the egg was after fertilisation as an embryo.

Fertility Preservation by Egg Vitrification *continued*

However, the hold grail has finally been achieved! With the recent scientific advance of fast freeze technology called vitrification it is now possible to preserve an unfertilized egg through vitrification.

So how can this break through be applied... A woman may opt to avail of egg freezing for two primary reasons:

1. Medical – for example, if a patient is diagnosed with cancer, she is likely to require chemotherapy or radiotherapy. These treatments will often result in infertility. If she has frozen her eggs prior to her treatment she has a chance to use these in the future. Whereas in cases without egg storage prior to e.g. chemotherapy the chances of conception is greatly reduced or in many cases these treatments will lead to complete ovarian failure offering no chance of a child.

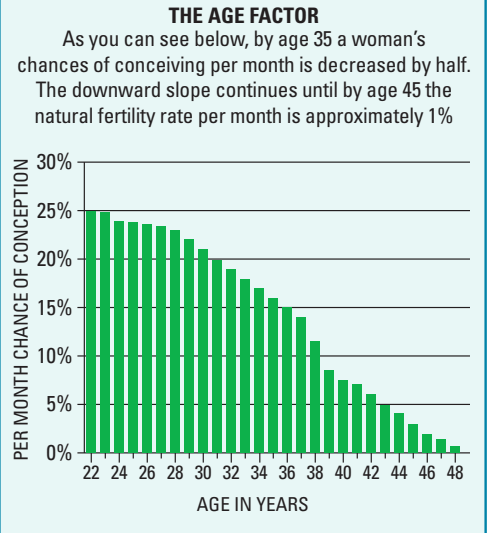
2. Social – this refers to where a woman elects to preserve her fertility by opting to freeze eggs when she is young for use later in the event she cannot conceive if / when she tries to have a baby.

Previously most attempts at egg freezing were for medical reasons. However, with

new successful technique it is likely that social egg freezing will become by far the most common reasons as an insurance against later infertility.

The egg freezing technique involves collecting eggs from the patient in the same way as if she was undergoing a cycle of IVF. The mature eggs are then frozen the same day. When pregnancy is desired, the eggs are thawed and fertilised via IntraCyttoplasmic Sperm Injection (ICSI). Resulting embryos are then transferred to the uterus.

Egg freezing has been more of a challenge scientifically than the freezing of embryos because the egg is the largest cell in the human body and contains a lot of water. During the freezing process, this water may turn to ice crystals, which could destroy the egg. Until vitrification (*a rapid freeze technique*) was developed recently previous attempts at egg freezing were not very successful. However, latest published data on the new technique suggests that 99% of eggs preserved by vitrification survive and 92% fertilise successfully¹. Implantation rates and pregnancy rates are in keeping with women having IVF treatments at under 35 years of age. While this breakthrough is new and studies are small it offers



GRAPH 1

a major advance for fertility preservation for women either for medical or social reasons. So far around 1000 babies have been born worldwide using frozen and thawed eggs. The rate of chromosomal and birth defects of these babies has been no higher than in babies born from ICSI with fresh eggs².

Barbados Fertility Centre is proud to be the first IVF centre in the Caribbean to offer egg freezing by vitrification to our patients.

¹Antinori et al 2007 Reprod. Med Online 14:72-79.

²Chiang et al. 2008 Reprod. Med Online 16:608-610.

Pre-Implantation Genetic Diagnosis

Genetic testing can be now performed on an embryo prior to it being implanted in the uterus, when IVF treatment is used. Pre-Implantation Genetic Diagnosis or Screening (aka PGD or PGS) involves the removal of as little as one cell which can be genetically tested for a variety of genetic conditions. The results of which allow the selection of only genetically normal embryos.

While PGS is not required for all patients for some patients this will add significantly

to their chance of success in treatment.

PGS can detect:

- 1) Numerical Chromosomal abnormalities e.g. Down's syndrome or
- 2) Structural Chromosomal abnormalities e.g. known parental translocations or
- 3) Single gene defects - for families with a known familial disease - which through PGD can be avoided by pre-selecting embryos without the specific disease gene.

Latest Success Rates

Statistics January to June 2009

- Females age < 35 years: Clinical Pregnancy Rate (CPR) of 51.2% per embryo transfer (ET)
- CPR for all ages with Day 4 or 5 ET: 63.3%
- CPR for all ages with IVF: 60.0% per ET



BARBADOS
FERTILITY CENTRE

CONTACT US

Tel: + (246) 435-7467

Fax: + (246) 436-7467

email: info@barbadosivf.org

www.barbadosivf.org



Organization Accredited
by Joint Commission International