



Issue 7, December 2008

Best wishes for 2009

Welcome to our final newsletter for 2008 – and what a pleasure it is to reflect on a successful year for The Nurture Foundation.

We've had plenty of sporting action during the year with Pip King and Brian Clough raising more than \$1,400 for Nurture at the Auckland Marathon, and the successful launch of our annual Mother's Day Run 4 Mums. In this issue you'll find Brian's personal account of the challenges he faced running the marathon –and in starting a family.

Now we look forward to supporter Tim Appleton raising both awareness and funds for Nurture in next year's London Marathon. To support Tim's campaign please visit www.teamkiwi.org.nz Many Nurture supporters have successfully used Fundraise Online to raise funds for us – and remember it can be used for any event – it's not just for the sporty!

If you're still looking for some Christmas inspiration, we have some great suggestions that not only make lovely gifts, but also benefit Nurture. We have something for everyone from tickets to Rock n Rally (where Dancing With the Stars' Nerida Lister will be co-driving for Nurture) to Bella Mama t-shirts, Nurture baby t-shirts or professional photography by Poppet Photograpy. You'll find more details about these gift ideas in the newsletter.

We wish you all a safe and happy festive season and look forward to being in touch again in the New Year.

Cindy Farquhar
Nurture Foundation Trustee

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The Nurture Foundation
PO Box 109-167
Newmarket
Auckland

Ph: 09 373 7599 ext 89493

Email: admin@nurture.org.nz

Research: Fallopian Sperm Perfusion trial

Researchers at the University of Auckland are leading a study that compares intrauterine insemination (IUI) with fallopian sperm perfusion (FSP). Intrauterine insemination is a simple, non-invasive, cost-effective technique used for couples with unexplained infertility.

IUI is usually combined with fertility drugs such as clomiphene citrate that help women to produce more than one egg per cycle, increasing the chance of pregnancy. The aim of IUI is to inject a small amount of prepared semen (usually from the male partner) directly into the uterus via a catheter. The procedure enables sperm to bypass the cervix which can contain dense mucous that blocks the semen from moving into the uterus. Sperm are then able to swim up to meet the egg in the fallopian tube, where fertilisation occurs in natural conception.

The aim of Fallopian Sperm Perfusion is to get sperm into the fallopian tubes rather than just into the uterus. To achieve this, FSP uses more sperm (4mls compared with 0.5mls in IUI) and a catheter with a balloon preventing back flow of the semen. With FSP sperm actually reaches the fallopian tube and fertilization is able to take place in the tube, which is what happens with spontaneous conceptions.

Most IVF clinics in Australia and New Zealand currently use the standard IUI technique of placing 0.5ml of sperm suspension inside the uterus. From previous studies, the

pregnancy rate per cycle in women with unexplained infertility treated with standard IUI ranges from 6% to 18%, while studies with FSP suggest pregnancy rates of 25%. Based on pregnancy rates achieved, the FSP trial aims to determine whether FSP should replace IUI as the standard insemination method in New Zealand.



Professor Cindy Farquhar is leading this randomised controlled trial at the University of Auckland and is being assisted by Dr Bruno Radesic and Dr Ginny Griffiths. Women who provide consent are randomly allocated to either IUI or FSP. At this stage more than 100 women have been recruited into the study.

This study is a first for the Department of Obstetrics & Gynaecology which is working with three New Zealand fertility clinics, two Australian fertility clinics and one clinic in the United Arab Emirates. The three New Zealand clinics are Fertility Plus, Repromed NZ (Auckland) and Fertility Associates (Auckland). The researchers are aiming to recruit 400+ women in the next year.

If you are interested in taking part in this study please contact Cindy Farquhar:

Ph: 021 995 414

Email: c.farquhar@auckland.ac.nz

Researcher: Cindy Farquhar

Cindy is the Postgraduate Professor of Obstetrics and Gynaecology in the Department of Obstetrics and Gynaecology at the University of Auckland and coordinating editor of the Cochrane Menstrual Disorders and Subfertility Group, which was established in 1996. Her research interests include clinical trials within subfertility and menstrual disorders, systematic reviews and clinical practice guidelines. In 2000, Cindy was a Harkness Fellow for the Commonwealth Fund and spent one year at the Agency for Healthcare Research and Quality in Maryland, USA. Her clinical interests are polycystic ovarian syndrome, pelvic pain, endometriosis and the management of abnormal uterine bleeding.



Cindy has lead guideline development groups on heavy menstrual bleeding, uterine fibroids, the management of women with breech presentation and vaginal birth after caesarean section, as well as assisting with training in guideline development workshops in NZ. She is the incoming chair of the board of the NZ Guidelines Group and Chair of the newly established Perinatal and Maternal Mortality Review Committee and a very active and passionate Trustee of The Nurture Foundation.

Research Findings: The PCOSMIC study

Polycystic Ovarian Syndrome (PCOS) is a hormonal disorder that affects 10% of all women of childbearing age, and a leading cause of infertility. The ovaries of women with PCOS do not produce all the hormones necessary for ovulation to occur – making pregnancy impossible. This hormone imbalance may be caused by an inability to process insulin effectively.

This research is yet to be fully peer reviewed, but was presented by Neil Johnson at the Fertility Society of Australia's annual scientific meeting in Brisbane in October 2008. The PCOSMIC study found that Metformin, a diabetes medication that helps to process insulin, was just as effective as Clomiphene in improving ovulation. There was no benefit in using a combination of metformin and clomiphene rather than just one of these drugs as a first line treatment for PCOS.

171 women with PCOS took part in the New Zealand study and were given Clomiphene and/or Metformin or placebo. Metformin and Clomiphene had similar rates of pregnancy success (about 40%) but Metformin has the added benefit of not increasing the incidence of multiple births.

The study also found that women with a healthy body weight were much more successful at getting pregnant compared to those who were overweight. As a first line treatment for PCOS, Metformin could also be prescribed by GPs, so women do not immediately have to seek treatment from a fertility clinic.

The findings of the PCOSMIC Study contradict an earlier American study, and further international research into the role of Metformin is likely.

Gorgeous t-shirts from Bella Mama

Bella Mama® is a massage company specialising in supporting women through pregnancy, birth and motherhood. Whether you are expecting a baby, recovering from birth or just in need of some balance and relaxation in your busy life, Bella Mama can help. Their massage treatments provide a wonderful way to look after yourself as you care for your baby.



Bella Mama now also has a range of t-shirts for mums. They come in sizes 10 - 16 and are cut extra long to encompass growing bumps. With a high lycra content for a comfortable stretchy fit they are suitable for both pregnant and non-pregnant mums. You can choose between pink (short sleeved) or olive green (3/4 length sleeves).

Bella Mama is generously donating \$5 from the sale of each t-shirt to The Nurture Foundation to support reproductive research. To find out more about Bella Mama's specialist massage treatments or to purchase a Bella Mama t-shirt please visit www.bellamama.co.nz

You can also buy Nurture baby tees in the Bella Mama online shop.



Women's Health seminar for GPs

Close to 90 GPs and nurses from around the North Island attended the "Update in Women's Health" seminar on November 1st, presented by The University of Auckland and The Nurture Foundation. Topics including Polycystic Ovarian Syndrome, Menopause, HPV Vaccine, Sexual Health, Infertility and Prenatal Screening were presented by leading researchers and experts associated with the University of Auckland and Nurture. The seminar was a resounding success and may become an annual event. There may also be an opportunity for specific topics such as Menopause, HPV Vaccine and Sexual Health to be presented to the general public in the future.

Thanks to Cindy Farquhar for convening this seminar.

Catch the action as Nerida Lister rallies for Nurture

'Rock n Rally', a charity event presented by Andrew Simms Mitsubishi, hits top gear at Western Springs Speedway on Saturday March 21st 2009. Featuring New Zealand's two top rally drivers – Chris West and Haydon Paddon – Rock n Rally gives ten celebrity co-drivers the chance to race for their chosen charity.

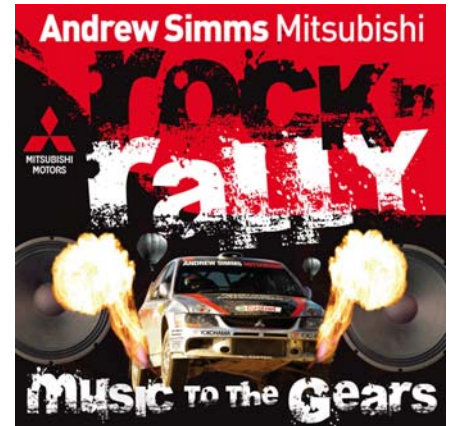


Nerida Lister, of 'Dancing with the Stars fame', is racing for Nurture and will donate \$5,000 if she wins and \$1000 if she's runner-up. Top New Zealand rock bands Op Shop, Shihad and Maskara will perform between races making it an exciting evening of entertainment for everyone.

Rock n Rally tickets would make a great Christmas present for family members, staff or clients. Standard tickets are just \$49 each; premium tickets are \$59 each and also include an entry to win a Mitsubishi Lancer Evo 9 valued at \$40,000. This will be drawn and given away on the night. All proceeds from the event itself go to Camp Quality, for children living with cancer.

For more information or to book your tickets to join the action at Western Springs Speedway visit www.ticketmaster.co.nz

We look forward to seeing you at the Speedway in March to support Nerida as she co-drives for Nurture!



Plush Toys and OHbaby! promote Nurture

Plush Toys has teamed up with OHbaby! magazine to help build awareness of The Nurture Foundation. OHbaby! readers who subscribe to Nurture's newsletter between December 15th



Gift hamper of Noonoo products from Plush Toys

And 13th April will go into a weekly draw to win a gorgeous Noonoo snugly baby blanket. A gift hamper of assorted Noonoo products will be drawn at the end of the promotion.

Babies and small children often develop an attachment to something they are able to snuggle up to for comfort and security. The beautiful 'Counting Sheep' snugly blanket is handmade of felted lambswool, embroidered with cute sheep characters and has one loose sheep attached by a felted rope. A 'Counting Sheep' Noonoo will be given away every week during the promotion.

A stunning gift hamper from the Noonoo range will be given away at the end of the promotion and includes a cream silk welcome blanket, large bamboo cotton blanket, felted Woodbug snugly blanket, set of 3 unbleached and organic cottonbug squares, slugbug baby snugly blanket, baby eye pod and a newly released creepy crawly cube.

OHbaby! magazine goes on sale on December 22nd with full details of the promotion – or you can visit www.ohbaby.co.nz to find out more. To view the complete Noonoo collection please visit www.plush toys.co.nz

Our thanks to OHbaby! and Plush Toys for their support.

Poppet Photography Christmas gift



Poppet Photography is a studio that specialises in pregnancy, baby and family portraits. Steph Cawte and Fiona Tomlinson are passionate about capturing the love within a family and creating bespoke works of art. This Christmas Poppet Photography is offering a 20% saving on gift certificates purchased before December 23rd, for photo sittings completed by the end of March 2009. Sittings start at \$275 and Poppet Photography donates \$25 of every sitting fee to Nurture.

If you're looking for a very special Christmas present for a friend or family member, a gift certificate from Poppet Photography will give them a beautiful work of art to treasure forever. To order your gift certificate please contact Steph Cawte on 09 845 5165 or visit www.poppet.co.nz



Brian Clough's Auckland Marathon challenge

When my partner Mandy and I decided to have kids together we never thought it'd be a problem. We tried for about 18 months on our own before getting some help. Another year of IUI, IVF and frozen embryos – and still no joy.

During that time Mandy told me about Nurture, and how they struggled to raise funds compared with the bigger charities. I guess I tucked the information away until late last year when I decided that I'd run the Auckland Marathon in November 08. Once I'd made that rash decision the conversation came back to me, and I thought it'd be a great idea to use it as a way to raise some money for the cause.

I met up with Laura Carr and she told me about www.fundraiseonline.co.nz.

I was blown away with how easy it was to set up my page. I think it took me less than half an hour! Not bad to have a professional, e-commerce enabled fundraising site that linked the event to the charity. So far we've raised over \$700 and I'm not stopping there. In fact feel free to have a look and chip in if you like www.fundraiseonline.co.nz/brianclough



Anyway, I managed to drag my 46 year old, 90 odd kg ex-front-row-forward body around 26 miles 385 yards in 4 hours and 58 minutes. It was incredibly hard, exhausting and an absolutely brilliant experience that I'd highly recommend to anyone who wants a tough physical and mental challenge – particularly if

you're convinced you could never do it. As someone said once, you're a lot better than you think you are. If you're looking for inspiration to take it on read up on the lady who started running them when she was 70 and now in her 90s has done about 30 marathons – or the guy who ran 50 marathons in 50 straight days!

So thanks to Nurture for giving me inspiration to keep training for all those months and to keep moving forward on the day. As I

tell people now, a marathon is hard work but it's nothing compared to the pain of wanting your own family and not being able to make it happen. Mandy and I have been incredibly lucky. After 32 months, including 3 IUI cycles and 2 IVF cycles, she is 20 weeks pregnant with one very precious IVF baby.

Team Kiwi takes on the London Marathon

A team of seasoned and enthusiastic marathon runners is heading to the UK to take part in the London Marathon on April 26th 2009. Each member of Team Kiwi has chosen a charity to raise funds for, and the aim is to raise \$100,000 in total. Tim Appleton has elected to raise funds for Nurture. You can support Tim's marathon event by visiting www.teamkiwi.org.nz and making a donation pledge. We're delighted that Tim has chosen to run for Nurture, and wish him all the best for a fun and successful London Marathon.



International research round-up

Screening embryos before IVF improves success rate

The first trial of a procedure which selects IVF embryos with the best chance of developing into healthy babies was presented at a fertility conference in San Francisco in November. Researchers at Oxford University screened embryos for 23 women before embryo transfer and this showed a much improved success rate. 18 of the 23 women have either already given birth or are past the stage of pregnancy where miscarriage usually occurs. All the women taking part in the trial had previous unsuccessful IVF cycles and an average age of 37 years.

The new test uses a technique called comparative genomic hybridisation (CGH) which enables embryos' chromosomes to be screened more fully for abnormalities. There are other tests available but this one screens embryos at a later stage – when the embryo is five days old and has more than 100 cells. This means every chromosome pair in the embryo can be examined, and because more cells can be analysed the results are more accurate.

Following CGH screening, the implantation rate for each individual embryo is 62% - the normal rate is 28%. The pregnancy rates from this small trial are surprisingly high – double the normal pregnancy rate for IVF - and suggest that CGH may offer a much better chance of pregnancy for couples choosing single embryo transfer. The researchers are now ready to begin a much larger scale trial in the UK.

Hyaluronan-enriched transfer medium increases pregnancy rate

Researchers at the Assisted Reproduction Unit in Turkey recently studied the effect of hyaluronan-enriched transfer medium (HETM) on implantation and pregnancy rates. Hyaluronan is a molecule present at the implantation site that appears to help embryos “stick”, and the medium used for embryo transfer is often enriched with hyaluronan to increase the chance of the embryo implanting in the uterus.

A total of 1,282 fresh embryo transfer cycles (825 day 3 embryos and 457 day 5 embryos) were randomly assigned into two groups. 639 women had their embryo replacement using HETM while 643 used a conventional transfer medium. The clinical pregnancy rate for HETM was significantly higher at 54.6% compared with 48.5% for conventional transfer medium. The implantation rate for HETM was 32% compared with 25% for conventional transfer medium.

This study showed that the enrichment of transfer medium with hyaluronan increases the clinical pregnancy rate and implantation rate for both day 3 and day 5 embryos transfers. The beneficial effect was most evident in women aged over 35 years, in women who had only poor-quality embryos available for transfer, and in women who had previous implantation failure.

Two infertility treatments found to be no better than nature

Researchers in Aberdeen have found that two common fertility treatments are no more effective than trying to conceive naturally for couples with unexplained infertility. The study looked at the effectiveness of taking the drug Clomiphene Citrate or having intra-uterine insemination (IUI), compared with no treatment. *Importantly – the women in this study undergoing IUI did NOT also take fertility drugs such as Clomiphene to stimulate ovulation.* 580 women who had experienced unexplained infertility for more than two years took part in the study and were randomly assigned into three groups: one group was encouraged to try to conceive naturally and had no medical interventions. The second group took oral Clomiphene which is meant to correct subtle ovulation problems, and the third group had IUI, where sperm is placed directly into the uterus (but was not combined with fertility drugs). All treatments were followed for six months.

At the end of the study there were 101 live births: 17% of the group with no treatment, 14% of those taking clomiphene and 23% of those undergoing IUI. The researchers concluded that neither Clomiphene nor IUI (without fertility drugs significantly altered the chances of having a live birth compared with having no treatment.

Male age and semen quality

Fertility researchers in Israel examined the relationship between male age and semen quality in an egg donation programme. Donor eggs are usually of high quality and this enabled researchers to better analyse the effect of age on the sperm.

484 male partners (aged 20 – 60) of patients undergoing egg donation in IVF took part, and were grouped according to whether pregnancy was achieved. The men involved in the pregnant group were found to be significantly younger (43.2 +/- 8.1 yrs) compared with the non-pregnant group (46.81 +/- 7.8 yrs).

Analysis of sperm morphology revealed a significant prevalence of abnormally shaped sperm in the non-pregnant group (29% vs 11%). In addition, the results showed that the percentage of 'healthy' embryos on day 3 of embryo culture was lower in the non-pregnant group than the pregnant group.

The research showed that sperm parameters are not diminished until men reach the age of 40, but between 40-50 years deterioration occurs. This study confirms that sperm quality reduces with age and suggests that this age-dependent effect could be a reason for failure for in IVF cycles even for couples in egg donation programmes.

Heparin may help women with recurrent miscarriage

A study by Egyptian researchers investigated the effectiveness of low molecular weight heparin (LMWH) in women with a history of recurrent first trimester miscarriage that had no identifiable cause. 340 women with unexplained spontaneous recurrent miscarriage took part; Group A were prescribed LMWH from the time the pregnancy was confirmed by ultrasound until 34 weeks gestation and folic acid tablets daily until 13 weeks gestation. Group B were given only folic acid tablet until 13 weeks gestation.

There was a significant difference in the incidence of both early (4.1% vs 8.8%) and late miscarriages (1.1 vs 2.3%) in Group A than in Group B respectively. There were no differences between the groups in terms of the occurrence of pre-eclampsia, placental abruption, caesarean delivery or intra partum bleeding. However, the average birth weight was significantly higher in Group A.

The researchers concluded that low molecular weight heparin seems to be a safe drug and effective in reducing the incidence of unexplained recurrent miscarriage when given in the first trimester and continued throughout pregnancy.

High body mass index is a risk factor for miscarriage

A new study by scientists at Stanford University in California suggests that women who are overweight are at a greater risk of miscarrying a healthy baby in the early stages of pregnancy than women with a normal body weight. Approximately one in four pregnancies ends in miscarriage – usually in the first 12 weeks of pregnancy. The cause is often unknown, but it is thought that between 50 and 70% occur as result of chromosomal abnormalities (genetic defects) in the fetus.

The researchers tested DNA from 204 fetuses miscarried in the first eight weeks of pregnancy, and compared the rate of chromosomal abnormalities in the fetuses from women with a normal body mass index (BMI) with the rate of abnormalities in fetuses of women with a BMI that classed them as overweight or obese. The study found that 53% of babies lost by overweight mothers had no chromosomal abnormalities compared with 37% of babies lost by mothers with a healthy BMI. The findings indicate that being overweight or obese may predispose women to miscarry healthy babies. The reason for this is not yet understood, but could be due to altered hormone levels in overweight women.

In a separate study, a systematic review was undertaken at the University of Sheffield to investigate the association between obesity and miscarriage. Sixteen studies were included in the meta-analysis. Women with a BMI greater than 25 - who are classed as overweight - had significantly higher odds of miscarriage, regardless of whether they conceived naturally or through assisted reproduction. Sub-group analysis from a limited number of studies suggested that overweight women may also have significantly higher odds of miscarriage after egg donation and ovulation induction. There was no evidence of increased risk of miscarriage after IVF or ICSI. These two studies highlight the importance of body weight for reproductive health.

Continuous use of metformin during pregnancy for women with PCOS

Polycystic Ovarian Syndrome (PCOS) is a common problem in women of reproductive age and is associated with insulin resistance which is further aggravated during pregnancy. This can lead to the development of complications during pregnancy. Metformin, which helps to process insulin, has been evaluated in many research studies to determine its role in helping women with PCOS to ovulate and become pregnant. However, it is not clear whether Metformin is safe for long-term use and during pregnancy.

Researchers in the Department of O&G at Aga Kahn University in Pakistan conducted a study to evaluate pregnancy outcomes in women with PCOS who conceived while on Metformin treatment, and continued the medication for a variable length of time during pregnancy. The case-control study included 137 infertile women with PCOS; of these 105 conceived while taking Metformin (cases), while 32 conceived spontaneously without Metformin (controls).

The women were divided into three groups, depending on how long they continued to take Metformin. Group A, 40 women who stopped taking Metformin between 4-16 weeks of pregnancy; Group B, 20 women who received Metformin up until 32 weeks; and Group C, 45 women who continued Metformin throughout pregnancy. All the groups were matched by age, height and weight.

The study compared early and late pregnancy complications, intrauterine growth restriction and live birth rates. In Groups A, B and C the rate of pre-eclampsia was 43.7%, 33% and 13.9% respectively. Rates of gestational diabetes requiring insulin treatment in groups A and B were 18.7% and 33.3% compared to 2.5% in Group C. The rate of intrauterine growth restriction was also significantly lower in Group C at 2.5% compared with 19.2% and 16.6% for Groups A and B. Frequency of preterm labour and live birth rate was significantly better in Group C compared with Groups A and B; the overall rate of miscarriage was 7.8%.

The researchers concluded that in women with PCOS, continuous use of Metformin during pregnancy significantly reduced the rate of miscarriage, gestational diabetes requiring insulin treatment and fetal growth restriction. No congenital anomaly, intrauterine death or stillbirth was reported in this study.

Run 4 Mums 2009

Our inaugural Run 4 Mums event was such a success we're going to do it all again! Planning is underway for the second annual New Idea Run 4 Mums – a family fun run on Mother's Day at Cornwall Park in Auckland. Mother's Day is Sunday May 10th next year, so mark this in your diary now and we'll let you know as soon as registrations are open.

If you're interested in helping with this event please contact Laura Carr on 021 666 141 or email laura@nurture.org.nz



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