

**MEDIA  
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NOVEMBER 2009

# Fertility & Pregnancy

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## FERTILITY &amp; PREGNANCY



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## MEDIA PLANET

## FERTILITY &amp; PREGNANCY

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# Fertility Funding in Canada: What's the cost?

BY: LAURA MANN



**Marjorie E. Dixon MD, FRCS(C), FACOG**  
First Steps Fertility Clinic

**T**raditionally in Canada, Assisted Reproductive Technology (ART) has been poorly funded, with only Ontario and Quebec currently providing any funding at all. This means that access to treatments such as in vitro fertilization (IVF), intracytoplasmic sperm injection or embryo freezing is mostly limited to those who can pay for it.

But times may be changing. This year, Quebec announced that it would fund three courses of IVF treatments for all Quebecers. And in August of 2009, the Expert Panel on Infertility and Adoption released a report that provides detailed recommendations on increasing funding in Ontario for ART and associated therapies like counselling and acupuncture.

"Our biology hasn't changed," explains Dr. Marjorie Dixon, a reproductive endocrinologist and fertility specialist at Toronto's First Steps Fertility clinic, and member of the Expert Panel. "But our societal position

The controversy in Canada around public funding for fertility treatments often comes down to one question: Should creating a family be considered just a luxury, or a basic right?

has changed significantly."

Many people delay starting a family until they are in their 30s or 40s because of pursuing higher education, establishing a career, not having a partner or simply not being educated about the limits of their biology. Fertility declines with age, especially for women over 35, and sometimes when potential parents decide to start a family they encounter challenges.

"People are requiring more and more assistance," says Dr. Dixon. "And women are feeling cheated. They pay their taxes, but they're not taxing the system. And then in the one area they might benefit from government assistance, it's denied to them."

But patients aren't the only ones that could benefit from increased government funding for ART. When people can't afford IVF (treatments can cost well over \$10,000 per treatment cycle) they often opt for less precise, and cheaper, methods like taking medications to boost fertility or artificial insemination—methods that can sometimes result in multiple births.

According to the Expert Panel's report, cost is the number one reason people aren't taking advantage of new technologies in ART, and this has resulted in an unacceptably high rate of multiple births in Ontario. These multiple births threaten the health and well being of both mothers and children and result in high hospital and other health care costs that put a strain on the system itself.

Multiple children are 17 times more likely to be born pre-term, require a caesarian delivery or need expensive care at birth

and throughout their lives.

The Panel found that, over 10 years, funding advanced procedures like IVF could save the system itself a whopping 500 million dollars by cutting the multiple birth rate from nearly 30 percent to just 10 percent.

Dr. Dixon admits that increasing funding would cost the system initially, as clinics need to be set up to handle the inevitable influx of new patients. Although this may pose a challenge in the current economic climate, she insists that it would be much more costly to maintain the status quo.

"From a health economics perspective," she says. "Ontario cannot afford not to adopt these recommendations. 500 million dollars is a huge savings."

But money isn't the only concern. People often don't consider fertility until it's too late, because they simply don't know enough about their own biology. The Report strongly recommends that doctors and other health care professionals make fertility counselling routine for Canadians, beginning when patients are in their 20s. The Report also recommends educating the general public about risk factors for infertility, like sexually transmitted infections, obesity, anorexia and smoking. It also encourages Canadians, both male and female, to be more proactive in discussing fertility with their doctors.

Unfortunately, there is still a stigma associated with infertility. People experiencing difficulty can feel broken or ashamed and, as a result, don't speak out about what they need and what they're going through.

But Dr. Dixon and the rest of the Panel hope the 2009 Report will help change that. "People need to be able to access medical care because this is a medical issue," she says. "Not only should we socially revolt at the idea that only those that can afford it get therapy, but also economically it makes sense."

"And," she adds. "Everybody should have the right to a family."

"People need to be able to access medical care...Not only should we socially revolt at the idea that only those that can afford it get therapy, but also economically it makes sense...Everybody should have the right to a family."

# Could Egg Freezing Help Stop the Fertility Clock?

A cancer diagnosis can be devastating, but finding out you could be giving up your fertility with that life-saving chemotherapy treatment can make the blow much harder.

BY: MARY GAZZE

**W**omen don't have to let cancer, early menopause or diseases like Lupus or Multiple Sclerosis rob them of the chance to become a mother. Dr. Seang Lin Tan of the McGill University Health Centre (MUHC) in Montreal says hundreds of these women freeze their eggs every year in hopes of using them to conceive a child once they get healthy again.

But he says health problems aren't the only reasons women are freezing their eggs at his clinic. Lifestyle is becoming a major factor.

"Obviously the best method is to encourage women to have kids early but it's not that easy," says Dr. Tan.

"You want to build a career first, want to be successful, so by the time they meet the right person to have a child they are probably in their thirties," he says.

With fertility and egg quality dropping dramatically for women in that age group, many are taking precautions to secure a chance at conceiving in the future. Dr. Tan says freezing eggs gives women the option of preserving their fertility, basically stopping the clock on the aging of the frozen eggs.

"If you freeze your eggs in your late twenties and then get married and have a

husband at 39 you could find if you have problems getting pregnant, you can go back and use your twenty-something-year-old eggs," he says.

"Your risk of infertility, your risk of miscarriage and abnormal birth is as if you are 29."

Children have been born from 30 year old frozen sperm, and 10 year old frozen embryos, but the success rate of frozen eggs has been traditionally low, with eggs typically surviving a thaw only half the time. Dr. Tan says babies are then born from surviving eggs only between 10 to 20 per cent of the time.

MUHC is the largest egg freezing centre in the country and the only clinic in Canada pioneering a new egg freezing technique called vitrification, which appears to dramatically increase the survival rate of thawed eggs.

Under the older method, the egg was frozen slowly. Ice would form inside it, which often damaged the eggs, making them unusable.

The new vitrification method at McGill essentially flash freezes the egg.

"The temperature drop of the egg is instantaneous, so there is no time for ice crystals to form," says Dr. Tan. McGill has found the survival rate of eggs frozen by

vitrification to be between 80 to 90 per cent.

The process costs about \$5,000 a cycle or \$10,000 for three cycles, and there is a maintenance fee of \$200 a year to keep the eggs frozen until a woman is ready to use them.

The MUHC, which has used vitrification since 2004, was the first clinic in Canada to announce a successful birth resulting from frozen eggs. The baby boy was born in Montreal in 2005. Dr. Tan says some American clinics see promise in the process and are now copying the system.

In the original clinical trials, egg freezing was offered to 36 couples having In vitro fertilization. The eggs were thawed a month after they were frozen, and then were fertilized through In vitro. The live birth rate jumped from the usual 10 to 20 percent to 45 per cent under vitrification.

Since the clinic started doing vitrification, almost 30 healthy babies have been born from eggs frozen for less than five years.

However, the process is so new that research still needs to be done on the babies born from frozen eggs to determine whether there are any long-term effects, according to doctors who have written recent papers on the subject.

"The MUHC, which has used vitrification since 2004, was the first clinic in Canada to announce a successful birth resulting from frozen eggs. The baby boy was born in Montreal in 2005."

Dr. Tan says the MUHC has not yet attempted any pregnancies in former cancer patients because they need to be cancer free for three to four years before attempting to use their eggs and vitrification has only been around at the clinic for five years.

He is convinced through that the length of time an egg is frozen likely won't affect the egg's survival during thawing.

"I am sure that 10, 20, 30 years makes no difference at all," he says.

Any doctors who are interested in learning more can attend a workshop in Montreal by Dr. Tan in November. For more information visit [www.mcgillsymposium.com](http://www.mcgillsymposium.com).



# Laying the Foundation for a Healthy Pregnancy

BY: MARY GAZZE

With half of all pregnancies ending in the first six weeks, doctors say it is important to lay the foundation before the pregnancy even begins in order for it to take a healthy shape.

**W**omen looking to get pregnant should first go for a check up with their doctor to check for any health problems, like high blood pressure or cysts in the ovaries. During the visit they should ask their doctor whether any supplements they are already taking can have adverse health effects on a pregnancy.

Once given the all clear, Health Canada suggests women start taking folic acid and iron supplements right away.

Folic Acid can prevent some birth defects of the spine by helping it, the brain and skull develop properly.

These all develop during the first four weeks of pregnancy, before many even realize they are pregnant, so it is important to take the vitamins as soon as a couple begins trying to conceive.

First Steps Fertility Clinic in Toronto as well as Health Canada suggest pregnant women refer to Canada's Food Guide for special guidelines on eating well for their foetus. It recommends vegetables, milk and whole grains. One of the more important highlights in the guide is eating at least 150g of fish every week in order to consume omega-3 fatty acids, which can be crucial for the development of the child's brain.

Research on toddlers has found those born to mothers who consumed more omega-3s have advanced attention spans over their counterparts.

Couples turning to In vitro fertilization (IVF) should also follow the Food Guide, because eating healthily will help maximize the chances of a successful procedure.

First Steps Fertility suggests patients preparing for IVF treatments quit smoking cigarettes or marijuana which are linked to infertility, and should cut down on alcohol and caffeine. Moderate exercise, getting enough sleep, and reducing stress through massages, meditation, yoga or acupuncture can lay the groundwork for a winning IVF treatment.

Men should follow the same eating and lifestyle guidelines and also avoid heat near their groin and should abstain from sex for a few days before the procedure, but not more than five days.

Many couples often rush to the pharmacy to buy a home pregnancy test before booking time off work to visit the doctor. In the last few years, Health Canada has warned the public against using two particular brands of home pregnancy tests on the market because they were either not approved for use in Canada or provided false positives.

Couples should look for a test approved by Health Canada that measures Cho-

ronic Gonadotropin, often called hCG, a hormone that is only present during pregnancy.

Different pregnancy tests on the market claim to be able to detect pregnancies anywhere within a few days before a missed menstrual period, to a week after. When a couple finds a positive result at home, a doctor can do blood tests to confirm the results.

When a couple has successfully conceived, they should turn to Health Canada's "Sensible Guide to Healthy Pregnancy" which gives advice on exercise and foods to avoid while pregnant, including raw fish or meat and unpasteurized drinks.



# Provincial Governments Cannot Afford NOT to Fund Assisted Reproduction Services

## It Costs More To Pay For Multiples Than It Does To Prevent Them!

Infertility is a reproductive health disease that affects over half a million Canadian men and women. The results are falling birth rates and a shrinking population, but also terrible emotional anguish for those experiencing infertility. This issue touches on areas of concern to all. The Infertility Awareness Association of Canada (IAAC) is the only national organization that exists today to answer the needs of those considering or undergoing treatment, and to raise awareness across the board of the many issues created by the fact that reproductive illness has only recently been considered eligible for coverage under government healthcare.

IAAC spearheaded the initiative that resulted in Quebec's decision to fully fund three (3) IVF treatments, to be implemented in the first quarter of 2010; this is an all-time first, not only for Canada, but for all North America. IAAC was also instrumental in the Government of Ontario's decision to establish an Expert Panel on Infertility and Adoption. The Panel was composed of women and men chosen for their expertise as well as their personal experience with the issue. After long and thorough deliberation, the Panel has recommended healthcare coverage for IVF in Ontario as well, and it is to be hoped that the Hon. Laurel Broten, Ontario Minister of Children and Youth Services, will respond in kind.

One of the most persuasive arguments for IVF coverage is the matter of cost: IAAC submitted an extensively researched cost-benefit analysis to each province, showing clearly that our governments' non-coverage of IVF under provincial healthcare actually incurs more in total costs to healthcare than coverage would. Full coverage of IVF will mean, over the first five years, a child for about 3200 Canadian couples, while the full annual expense of funding IVF will be completely offset by a reduction in the multiple births

that are so costly to healthcare, in terms of hospitalization, post-natal care, and long-term disability costs. By presenting these facts to government, both at the local, national and international level, IAAC has made a clear case for IVF funding that is anticipated to go far. We hope that before long, Canadians will have realistic and equal access to treatment.

Frontline assistance for those experiencing infertility is another key part of the IAAC mission. IAAC offers a bilingual, toll-free help line that is open during the week to answer questions and provide practical information and referrals to clinics or support groups (1 800 263-2929). Our national network of support groups is voluntary and patient-driven, and can provide an important step in healing and the strength to continue. Advice or assistance to anyone who would like to start a new support group branch in their region is provided through the IAAC help line.

Over the past few decades, choosing an awareness week for worthwhile causes has become a popular means of breaking down stereotypes, bringing stigmatized issues into the open air, and rallying hope and support. In 2007, IAAC powered up the first annual CIAW. Since then, CIAW has motivated local community events across Canada. In Victoria, BC, CIAW now marks the annual Infertility Awareness Walk. The second walk took place this year, on May 23rd. Participants were given t-shirts printed with the CIAW slogan, "Conceive the Dream," and the walk sported helium balloons for the kids, IAAC stickers, and IAAC posters carried as signs. In Toronto, the Pram Push for IVF Funding went from Nathan Philips Square to Queen's Park on Mother's Day this year and IAAC's President, Jocelyn Smith, was a speaker at this event. Again in 2010, we're looking forward to the many beautiful expressions of community that our awareness week brings about.

Finally, IAAC publishes Creating Families magazine, a must-have resource for anyone experiencing infertility, and also for their friends, family members, and healthcare professionals who want to stay abreast of new developments. The magazine started out as a newsletter called Infertility Awareness. In 2000, as IAAC's reach widened, the humble newsletter evolved into magazine form, as The Canadian Journal of Infertility Awareness. In 2003, the magazine burst into full colour with improved editorial standards, and Creating Families (CF) was born. Aiming to provide a sound base of information to those experiencing infertility, from medical treatments to therapeutic alternatives, and featuring the popular patients' perspectives, where personal stories are shared, CF provides patients with insight into the mystifying and difficult world of medical interventions and alternative treatments, and it provides physicians with insight into patients' concerns. CF is available through clinics, individual subscriptions and in selected Chapter/Indigo bookstores.

The IAAC website ([www.iaac.com](http://www.iaac.com)) is another popular way for patients to keep up with the issues at hand, and to access information and support. This year our site welcomed thousands of visitors. It's wonderful to know that people are researching their options and seeking help. We're proud to be able to provide this service to those who can use it.

From its early beginnings as the Infertility Self Support Group, a grassroots network of caring and concern, to its current approach to infertility awareness, the Infertility Awareness Association of Canada is proud to offer its services to those on the journey. As an organization, we work constantly to improve every aspect of our mission, and we mean to do so as long as Canadians need us. To make a contribution or a suggestion, to ask a question, to

subscribe to Creating Families, to get a referral or for help finding or setting a support group, please call, email, or visit our website. We're here and we care.



**BEVERLY HANCK, Executive Director**  
[www.iaac.ca](http://www.iaac.ca) • [info@iaac.ca](mailto:info@iaac.ca)

## Infertility Awareness Association of Canada (IAAC)

### Call for Action from the Government of Ontario: Implement Recommendations of the Ontario Expert Panel on Infertility and Adoption.

The Infertility Awareness Association of Canada (IAAC) is calling on Ontario Premier Dalton McGuinty and Minister of Children and Youth Services Laurel Broten to move quickly to implement the Ontario Expert Panel on Infertility and Adoption's recommendations on in vitro fertilization (IVF) funding and improved adoption services.

During the 2007 election, the Ontario Liberal Government promised to help Ontarians start their families. Now two years later, the McGuinty Government has the opportunity to honour that commitment by acting on the recommendations of its own Expert Panel to publicly fund safe, evidence-based IVF and facilitate adoption processes.

Infertility is a serious condition and if medical treatment and/or procedures are necessary, they are not a luxury. The Government's own Expert Panel's report states that public funding of IVF will reduce the number of multiple births, which will reduce healthcare and social costs by as much as \$550 million over the next 10 years, as well as improve the health of mothers and babies across the province.

**It costs more to pay for multiples than it does to prevent them. Ontario cannot afford NOT to fund assisted reproduction services.**

**IAAC is calling on all Ontarians to lend their voices to the call for action from the Ontario Government by faxing in the attached letter.**

### **Ontarians Call for Government Action: Implement the Recommendations of the Ontario Expert Panel on Infertility**

Dear Premier McGuinty & Minister Broten:

I expect the Ontario Government to follow through on the promise to make safe, high quality assisted reproduction services accessible and affordable to those who desperately need them by implementing the in vitro fertilization (IVF) funding recommendations of the Ontario Expert Panel on Infertility and Adoption.

I also expect the Ontario Government to follow through to improve adoption services.

Sincerely,

Your Name: \_\_\_\_\_

Your Address: \_\_\_\_\_

Your Phone Number: \_\_\_\_\_ Your Email: \_\_\_\_\_

Fax to: Premier Dalton McGuinty: 416-325-9895 Minister Laurel Broten: 416-259-3704

# Extra Ultrasounds in Early Pregnancy Could Prevent Multiple Miscarriages

For couples who yearn for a child, infertility is a heartbreaking battle, but it can feel worse if they finally conceive a child, only to lose it in a miscarriage.

"I think it is just as devastating," says Dr. Sony Sierra, who specializes in reproductive endocrinology at First Steps Fertility clinic in Toronto. "It's almost worse because they can see a glimpse of it and then they have a loss."

Academic research has shown that for five per cent of couples, repeated miscarriages, also called recurrent pregnancy loss, are a cruel reality.

"One miscarriage is normal. It is part of Mother Nature. Just try again even though it's heart wrenching," says Dr. Sierra.

But couples suffering from recurrent pregnancy loss can see two or three pregnancies suddenly end—and often times it appears to be for no reason.

"People who come to me are young, healthy, highly successful and they can't figure out how this problem is happening," she says.

"Miscarriages are the most common complications...almost half of all pregnancies spontaneously miscarry," says Dr.

Sierra, explaining that those pregnancies usually end at the six week point, when some women might not even know they are pregnant.

She says couples often blame themselves, but most of those pregnancies fail due to a random genetic error, when the body recognizes on its own that the embryo is not viable, and decides to not carry on with the pregnancy.

"There's nothing they did to cause this. There's nothing different they could've done to prevent it," she says. "It's not that they exercise too much, sneeze too hard, or went on an airplane. It's just random bad luck."

When frustrated and disappointed couples go visit Dr. Sierra, she checks for malformations of the uterus and conducts blood tests to check their genetic backgrounds for problems they might pass on to the child. She also measures hormone levels and their effect on egg quality, and checks for any infections or possible

blood clots that can harm a pregnancy.

Depending on the problem, treatments can include hormone pills, and even aspirin, but in her research she has found that something as simple as frequent ultrasounds during the first few weeks of pregnancy can be the solution that leads to the birth of a healthy baby.

In research published in 2006 by Dr. Sierra and lead researcher Mary Stephenson of the University of British Columbia and University of Chicago, almost 2,000 couples who had suffered at least two miscarriages in British Columbia were studied.

Going into the study, the couples' birth rates were only 15 per cent.

Patients were given ultrasounds at the 6 and 10 week stage, and were offered to book an ultrasound as often as once a week if they were concerned about bleeding or cramping.

The birth rate shot up to 71 per cent, all without the help of any reproductive

BY: MARY GAZZE

technology like In vitro fertilization (IVF).

Dr. Sierra says the extra monitoring might work because it "provides assurance things are going well. They relax and they feel stress is validated and they can do the most they can do."

"That kind of TLC around that 10 week gestational stage is really crucial," she says.

"You really want to try your best for these couples."

She said other studies are being done worldwide looking at genetics, and differences of proteins in the lining of the uterus of women with recurrent miscarriages or unsuccessful IVF procedures. She says samples are only starting to be collected, but she suspects "we're going to find similarities in lining between women with recurrent miscarriages and IVF failures."

"In time we'll have more answers," she says.

In the meantime, couples in Ontario can rest assured that any extra monitoring by their doctor won't hit their pocketbook. The care is entirely covered by the prov-



**Dr. Marjorie E. Dixon MD, FRCS(C), FACOG, Dr. Fay Weisberg, MD, FRCS(C) and Dr. Sony Sierra, MD, MSc, FRCS(C) First Steps Fertility Clinic**

ince. Couples in other provinces should check with their doctor for details on coverage.

“...almost half of all pregnancies spontaneously miscarry.”

## Preconception Checklist

Your mind and your partner may be ready for pregnancy, but what about your body? Doctors at the Mayo Clinic suggests taking this honest quiz and discussing the answers with your doctor as part of your preconception checklist.

- 1) What type of birth control have you been using?
- 2) Are your vaccines current?
- 3) Do you have any chronic medical conditions?
- 4) Are you taking any medications or supplements?
- 5) Are you at risk of a sexually transmitted disease?
- 6) Do you have a family history of any specific medical conditions?
- 7) How old are you?
- 8) Have you been pregnant before?
- 9) Would your current lifestyle support a healthy pregnancy?
- 10) What about your partner's lifestyle?

## Take Action! Improve Pregnancy Chances

### WEIGHT:

Being overweight or underweight can raise the risk of ovulation disorders. Use moderate exercise and a healthy, balanced diet to regulate body weight.

### TOBACCO:

Usage of tobacco has negative effects on fertility and overall health. If you smoke and are considering pregnancy, **quit now**.

### STRESS:

Reduce stress factors before trying to become pregnant.

### CAFFEINE:

Reduce intake to less than six cups of coffee each day.



## What Affects Sperm Count?

There are many factors that can affect a man's sperm count, which can in turn have an impact of the success of conceiving.

### Factors that might contribute to a reduction in sperm count include:

- Tight underwear
- Extreme exercise
- Drug and/or tobacco use
- Exposure to high temperatures (i.e. sitting for prolonged periods in a hot tub) is said to be "detrimental"



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- Laser Assisted hatching
- In Vitro Maturation
- PGD (Pre-implantation Genetic Diagnosis)
- Egg and sperm donation
- Gestational Surrogacy
- Urologic procedures for male infertility

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**Dr. Cliff Librach, MD, FRCS(C), FACOG(REI)**  
Medical Director

**Dr. Ari Y. Baratz, BSc, MD, FRCS(C)**  
**Dr. Prati Sharma, M.D., FACOG**  
**Dr. Karen Glass, M.D., FRCS(C), FACOG**



**CReATe Fertility Centre**

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# Fertility is on The Cutting Edge

Fertility is a hot issue these days. You can't turn on the television or read the newspaper without hearing about 40-something celebrities having children or multiple births in families. It seems as though there's no limit to what science can do. In reality, stars over 40 are likely not using their own eggs to get pregnant, and multiple pregnancy poses a higher risk of problems for both mother and children.

"New technologies to improve pregnancy rates and to reduce multiple births—that's where the fertility field is heading in terms of its priorities," says Dr. Clifford Librach, Director of Toronto's renowned CREAtE (Canadian Reproductive Assisted Technology) fertility centre. "Things are becoming more sophisticated."

New technologies to increase fertility for both men and women are being researched daily. Conception and pregnancy involve a symphony of factors, and all play just the right part to achieve the birth of a healthy baby.

For people experiencing fertility issues, one important area of research is discovering the source of the problem in the first place. Fertility treatments can be expensive and age is a crucial factor, so finding out what's going on and targeting the most effective treatment quickly can be the keys to a successful pregnancy for many.

The anti-Mullarian hormone (AMH) test is one important new tool doctors can use to get information about a woman's ovarian function or how many eggs she has left. Unlike more traditional tests, the AMH test (which is just a simple blood

test) can be done at any time during the menstrual cycle. This test is useful for telling if a woman's ovaries are aging prematurely or if she may be hypersensitive to fertility drugs.

"I find it's a great screening test," says Dr. Librach. "It tells us things that we may not even have suspected before."

For men, the sperm DNA fragmentation assay is a new test that allows physicians to assess the genetic quality of a man's sperm or the level of harmful DNA fragmentation in a sperm sample. Abnormal sperm cells are unable to produce babies. Fragmentation can be caused by infection, smoking, recreational drugs, age or other factors, and it can be treated with high levels of antioxidants. Sometimes when a man has a normal sperm count, DNA fragmentation may explain why he and his partner are unable to conceive.

Other advances are occurring in the field of in vitro fertilization, or IVF. IVF involves fertilizing an egg outside the body and implanting the resulting embryo into a patient's uterus. New technology in assessing and selecting individual gametes (sperm or egg cells) can help achieve healthy pregnancy while lowering the risk of multiples.

One technique is known as pre-implantation genetic screening. Eggs, sperm and embryos can all be screened for the known genetic abnormalities that lead to miscarriage or birth defects. This way, only the most viable embryos are created and implanted. The CREAtE clinic is spearheading research to make these tests more accurate and less invasive to embryos.

"There is new technology that looks at all the chromosomes," says Dr. Librach. "It used to be that we could only look at specific ones."

He also explains that another revolutionary technique is to measure substances that embryos release as they grow in the laboratory. These substances can give clues as to how healthy an embryo is. This helps doctors choose embryos that are more likely to result in a pregnancy.

For patients who want to get pregnant, but don't want to risk the effects of fertility drugs, there's also natural-cycle IVF, a new "green" treatment that harvests the one egg produced naturally during a woman's menstrual cycle instead of relying on drugs to stimulate the ovaries to produce extra eggs. Natural-cycle IVF and other treatments that create fewer,

BY: LAURA MANN

healthier embryos reduce a woman's risk of getting pregnant with multiples.

"Before, sometimes we'd just have to put our hands up and say, 'We don't know what's wrong. You're not getting pregnant,'" says Dr. Librach. "Now, we have more advanced technology, and we're able to look at subtle things that we weren't able to test for before. And treat them appropriately."



Dr. Clifford Librach  
CREAtE Fertility Centre

He also explains that another revolutionary technique is to measure substances that embryos release as they grow in the laboratory. These substances can give clues as to how healthy an embryo is. This helps doctors choose embryos that are more likely to result in a pregnancy.

## Nutrition: Before and After Conception

Diet is a crucial factor in healthy conception and pregnancy. Many problems such as birth defects, low birth weight or failure to conceive can be affected by the diet of one, or both, potential parents.

To maximize fertility, both men and women should be sure to reach a healthy weight. Being either over- or underweight can lower fertility in both men and women. Sperm count, quality or motility can be enhanced with good nutrition, specifically with getting enough calcium, folic acid, zinc, selenium and vitamin C and other antioxidants. Cutting back on alcohol is also important to keep sperm strong and healthy. Even in men without fertility problems, a diet rich in these factors and light on alcohol can help give a baby the best start.

Women hoping to conceive should plan ahead to prepare the body for pregnancy. Experts recommend eating a healthy, balanced pre-pregnancy diet while taking the proper supplements for at least three months before trying to get pregnant. Women can start by cutting out alcohol and washing all produce to remove pesticides and other chemicals.

Certain nutrients can help set the stage for a healthy pregnancy. One of the B vitamins, folic acid, is critical. Folic acid is important in the first few weeks a fetus is developing, often before a woman even knows she is pregnant. Right from conception, folic acid can help prevent serious

birth defects in the baby's brain and spine. In pregnancy, iron is also important for brain development, and babies deficient in iron can have more illnesses or learning problems. Women are often deficient in iron, so checking these levels before pregnancy can help. Vitamin D and calcium work together to build strong bones and teeth in the developing fetus, and both are sometimes depleted in pregnancy. Also, omega-3 fats, which include docosahexanoic acid (or DHA), are known to be fundamental for the healthy development of a baby's brain, eyes and nervous system, and for the mother's health during pregnancy as well. They can also help reduce a woman's chances of going into pre-term labour or developing post-partum depression.

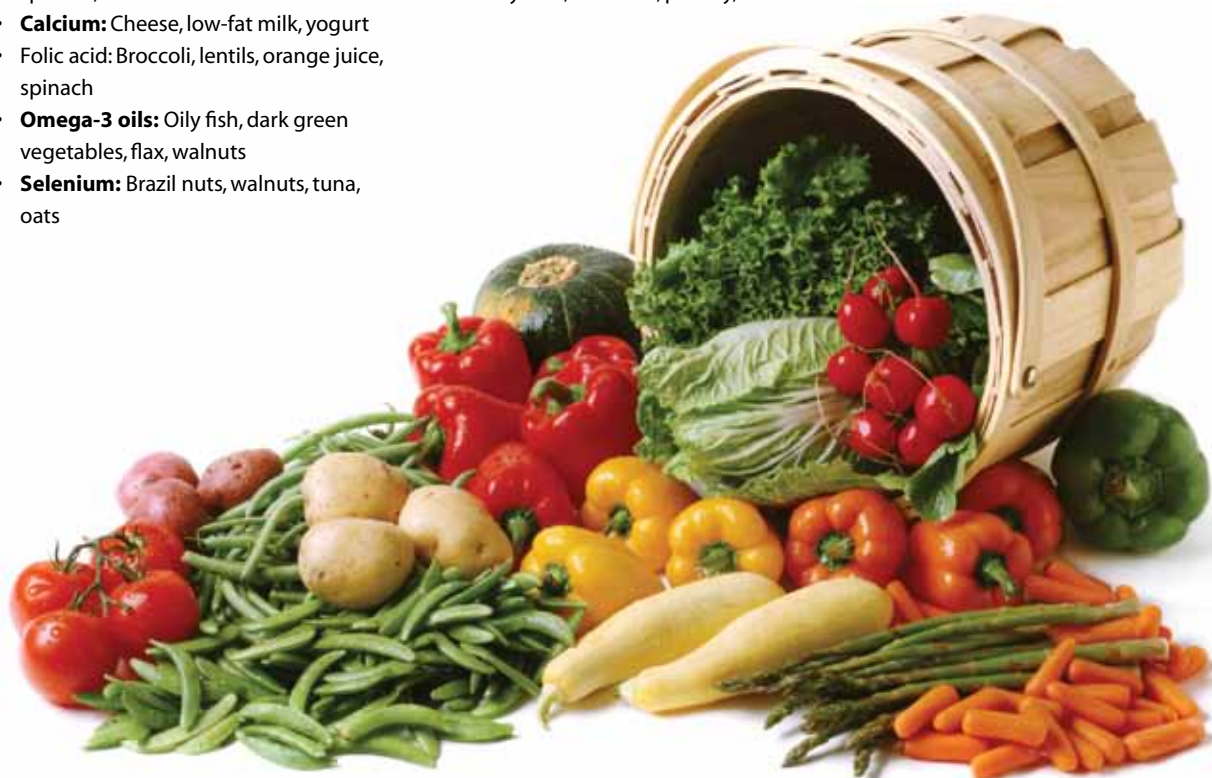
To get all the nutrients needed for healthy conception and pregnancy, couples should eat a diet rich in fruits, vegetables, lean meats and healthy grains and oils and also take the proper supplements. Discussing nutritional needs with a doctor and/or nutritionist before and during pregnancy will help parents lay a strong foundation for creating a healthy family.

### FERTILITY AND YOUR FOOD

These foods contain the nutrients important for fertility and pregnancy in men and women.

- **Antioxidants:** Berries, broccoli, garlic, spinach, tomatoes
- **Calcium:** Cheese, low-fat milk, yogurt
- **Folic acid:** Broccoli, lentils, orange juice, spinach
- **Omega-3 oils:** Oily fish, dark green vegetables, flax, walnuts
- **Selenium:** Brazil nuts, walnuts, tuna, oats

BY: LAURA MANN



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# Studies Show Acupuncture Can Help Couples Conceive

BY: MARY GAZZE

Can sticking needles in your face or body help you get pregnant?

**D**r. Jinglan Li of the Positive Chinese Medicine Inc. in Markham, Ont., and some medical studies say, yes.

Dr. Li treats up to 200 couples a month at her clinic in Markham, Ont. who have had no luck in conceiving naturally or through In Vitro fertilization (IVF), and hope Chinese medicine may be the answer.

"People need to know there is alternative," says Dr. Li, who has studied both western and traditional Chinese medicine (TCM). "Acupuncture and herbs can assist IVF and IUI (Intrauterine Insemination). You can avoid IVF or IUI in the first place by doing acupuncture."



A series of studies published last year by the University of Maryland School of Medicine found acupuncture can increase the chances of conceiving from 35 per cent to 45 per cent if it is done the day before or after an IVF treatment. A small German study six years earlier had similar results.

In acupuncture, patients are poked with hair-thin needles that are left in the skin for about an hour. Needles are inserted only a few millimetres under the skin so the process is normally painless. It has been used to treat health problems like headaches, nausea, and chronic pain.

Dr. Li specializes in fertility and treats patients with a combination of acupuncture and up to 20 traditional Chinese herbs which can be taken in a tea. People in North America are generally not familiar with the names of the herbs, but she says they are safe to use.

"Acupuncture and TCM, we have been using this for so long so it's not something we have to combine with IVF," she says. She explained the therapies can be so effective that in her over 20 years of practice, she has seen a number of couples who

have struggled to get pregnant suddenly conceive naturally after as little as two months of treatments.

Dr. Li explains that TCM doctors believe electrical energy, or "Chi," flows through the body like a train route and needles are inserted into different spots, which are like a train station.

Despite the fact that infertility occurs in the abdominal area, needles are inserted in different parts of the body because of these spots.

The goal of TCM is to restore balance to the body, making it stronger by boosting the "Chi" so it can better fight health problems.

"We do prepare the soil before you plant your seed," she said.

Studies done by western doctors' show that acupuncture eases stress, relieves indigestion, and improves blood circulation which could help create a successful pregnancy. They have also found that TCM treatments can regulate hormones naturally, prevent ectopic pregnancies, miscarriages and improve egg quality.

The doctor who led the Maryland study

suggested acupuncture helps because it increases blood flow to the uterus, making it easier for the embryo to take hold in the womb.

Dr. Li says TCM avoids hormone treatments, which is another advantage, considering their long-term effects are not yet known.

Anyone who is seeking to use TCM in combination with IVF should start getting TCM treatments 2-3 months in advance and the benefits start immediately.

"People can feel it right away," she says. "You have more energy, you can sleep better, periods become less painful, cramps are gone, headaches are gone, and PMS is gone."

Acupuncture treatments in Ontario can run for between \$60 and \$80 each and are recommended twice a week. Herbs cost between \$200 and \$300.

Canadian provincial health plans normally do not cover the costs but British Columbia will partially pay for acupuncture treatments for patients with certain health conditions.

Dr. Li suggests those who choose to



**Dr. Jinglan Li**  
Positive Chinese Medicine Inc.

go the TCM route should use a doctor who has a minimum of five years experience. She said patients should also check if a doctor is a member of a provincial acupuncture association, although that doesn't mean they are necessarily qualified to treat infertility. Some provinces are still in the process of putting regulations on acupuncture into place so couples should do their homework to find a qualified TCM doctor.

Dr. Li says quizzing a potential doctor on what kinds of hormones are often used in fertility treatments and whether they actually understand IVF procedures can be one way of making sure the doctor is capable in treating fertility problems.

## Male and Female Fertility Treatments:

### Finding the Right Solution

According to the 2009 report of Ontario's Expert Panel on Infertility and Adoption, 1 in 6 Ontario couples will struggle with infertility in their lifetime. Just as there are many different reasons a couple may not be getting pregnant naturally, there are a variety of ways to treat the different fertility problems they face.

**F**inding solutions for couples experiencing infertility (being unable to conceive and carry naturally, after one year of trying) depends on swiftly identifying the problem and matching it to the right treatment. Either the male partner or the female partner can be having fertility problems, but infertility can

also be due to a combination of male and female issues.

In order for successful fertilization, many things have to happen. On the male side of the equation, there must be a maintained erection, successful ejaculation, enough sperm, enough semen to carry the sperm to the egg and sperm have to move in

the right way and have the right shape. Treatments for male fertility problems can include correcting or addressing problems in any of these areas. What must occur in the woman is just as complicated. The ovaries must be able to release a healthy egg, the egg must make its way down the fallopian tube, the egg must be fertilized and

the fertilized egg must attach to the uterus (which must be receptive) and, finally, the embryo must grow and be nurtured by the woman's body.

The group of treatments for fertility problems at all points in the cycle is known as Assisted Reproductive Technology, or ART. Treatments include things like medication, artificial insemination, reproductive surgery to correct problems, cryopreservation (freezing of sperm or eggs), egg or sperm donation, surrogacy or in vitro fertilization (IVF). IVF (fertilization outside the body) can involve careful selection of healthy sperm and/or eggs, genetic test-

ing, targeted placement of embryos and other methods to increase the chances of a healthy pregnancy.

Diagnosing fertility problems and finding and exploring the right treatments can take time and money. There is limited public funding for ART in Canada, currently only Ontario and Quebec provide any coverage, but some treatments are covered under private medical plans. It's important not to waste time and money on the wrong treatments, or treatments that likely won't succeed. For couples experiencing infertility, success can depend on quick referral to a fertility specialist to target the right treatments, fast.



“For couples experiencing infertility, success can depend on quick referral to a fertility specialist to target the right treatments, fast.”

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# Male Infertility

## What You Need to Know

BY: LAURA MANN

Traditionally, fertility has been considered mainly a woman's issue, but it's becoming clearer and clearer that this idea is just plain wrong. Infertility affects men and women equally in Canada, and if a couple is having trouble getting pregnant naturally, male factors should be examined in detail along with female ones. Many things can affect a man's fertility. Diet, lifestyle and environment are important factors, as well as general health and genetics. The good news is that over 50 per cent of cases of male infertility can be successfully treated.

Statistics Canada reports that men, as well as women, are starting their families later and it's now known that a man's age affects his sperm quality. Recent studies have shown that men have a biological clock too; older men are at increased risk of having difficulty conceiving and of fathering children with genetic problems. Although the decline is not as sharp as that for women, a man's fertility gradually decreases after age 35. While men can't turn back the clock, and often delaying fatherhood is unavoidable, there are things they can do to safeguard fertility into the future.

Some causes of infertility are avoidable, like STDs, steroid use, recreational drug use or smoking. Some environmental toxins like plastics and pesticides can damage sperm production, and excessive drinking can affect fertility as well.

Another important factor is the temperature of a man's testes. The scrotum hangs outside a man's body for a reason: to keep the testes at a cooler temperature, which is optimal for the production of healthy sperm. For this reason, it is recommended that men avoid overheating the area, especially when trying to conceive. Things like taking hot baths, sitting in hot tubs or whirlpools or wearing tight underwear can reduce sperm production.

Male infertility can also be caused by less avoidable factors, like swollen veins,

cancer treatment, erectile dysfunction, certain medications or genetic disorders that may require specialized treatment. Sometimes, for fear of feeling less virile or manly, men can be more resistant than women to examining their fertility. However, properly identifying and treating male fertility problems can greatly increase a couple's likelihood of conceiving, and facing these issues can bring a couple closer emotionally, while also bringing them closer to their goal of creating a family.

### MALE INFERTILITY: Can you avoid it?

Steer clear of the following to keep your little swimmers performing at their best:

- **Smoking:** Smoking decreases sperm size and motility and damages sperm DNA
- **Excessive drinking:** Drinking can decrease production of sperm. Moderate drinking doesn't seem to affect fertility
- **Obesity:** Being overweight has been associated with male infertility
- **Stress:** Prolonged periods of emotional stress may decrease sperm production
- **Unhealthy diet:** Fertility may be negatively affected by a diet containing low levels of selenium, zinc, folic acid and vitamin C
- **Drugs:** Use of marijuana and cocaine decrease the number and quality of

sperm, and anabolic steroids actually shrink the testes and stop the hormone production needed to make sperm

“Some causes of infertility are avoidable, like STDs, steroid use, recreational drug use or smoking. Some environmental toxins like plastics and pesticides can damage sperm production, and excessive drinking can affect fertility as well.”



# IVF Should be Funded by Ontario

BY: MARY GAZZE

Infertility is emotionally and physically draining; the years of uncertainty, the visits to the doctor, and if couples choose fertility treatments, the dozens of hormone injections that can leave their bodies feeling, as one woman put it, “like hamburger.”

What makes infertility even worse is how financially draining treatments like In vitro fertilization (IVF) can be. One treatment can go for as much as \$10,000, plus thousands more for fertility drugs, and maintenance fees to keep embryos, eggs, or sperm frozen. People have scraped by through borrowing money from their parents or even going as far as mortgaging their home to fund the process.

“Canada's (and Ontario's) record is shameful when compared to other countries where IVF is available as a publicly funded health service,” the Infertility Awareness Association of Canada wrote in a statement.

Finland, Belgium, and Sweden have successfully implemented programs that fund IVF treatments. In April, Quebec introduced legislation that will include provincial funding of up to three cycles, and pressure is mounting on the Ontario government to do the same.

On Mother's Day this year, hundreds of Ontario couples who struggle with infertility rallied at the provincial legislature pushing empty strollers, demanding the provincial government fund their expensive treatments.

As it stands now, Ontario covers up to three IVF treatments, but only for women with blocked fallopian tubes. Doctors and patients have criticized the lack of funding for the one in six couples in the province that have difficulty conceiving, but whose infertility may be caused by other health issues.

The province ordered a review of the system, and appointed the Ontario Expert Panel on Infertility and Adoption, which included fertility doctors, people who have struggled with infertility, and adoptive parents, their children, and people conceived through assisted reproductive technology.

Panel members suggested Ontario's provincial health care plan fund up to three IVF treatments for couples having trouble conceiving, saying it could actually save the province money in the long run over the current system.

Their report, which included a year of research, was released in August and said “bold” changes are needed to improve access to fertility services because people are often prevented from using them because of policies, laws, and high costs. It also found that same-sex couples and

singles face numerous social and legal barriers that can prevent them from getting access to treatments.

The report, called “Raising Expectations” said the staggering cost of IVF, is the biggest obstacle preventing access to many and it could cause complications for those who can afford it.

Because of the high cost associated with a single treatment, couples often implant more than one embryo in hopes of essentially putting all their eggs in one basket, trying to increase the chances that at least one will result in a healthy baby and avoid another costly treatment.

In 2006, that led to 27 per cent of all Ontario babies born through assisted reproductive technology to be part of a multiple birth –twins, triplets, or even more-- which put them at higher risk of premature birth and conditions like cerebral palsy and extra hospitalization. The report said that because of the extra care required to manage the health problems of these babies, multiple births can cost tax payers millions.

The report argued that funding costly fertility treatments would actually save the province money in the long run by encouraging single embryo transfers, thus reducing the multiple birth rate. It said this would save Ontario taxpayers up to \$500 million in the next 10 years.

There is research to back up the report's claim. A study released by the University of Oulu in Finland earlier this year found that implanting a single embryo is the cheapest and most effective way to have a healthier baby through IVF.

The study compared 1,500 women who had either two embryos transferred at the same time versus just one. The four-

year study found that the live birth rate was five per cent higher for the women who had only one embryo implanted at a time.

It also found that a baby born after a single embryo transfer was on average CAD \$33,000 cheaper on the Finnish healthcare system than a baby who was born from a multiple transfer.

The Ontario report suggested other sweeping changes of the system including:

- paying for up to three IVF cycles for women under 42, including lesbians and single women
- offering regular fertility monitoring and education to help people make more informed choices on whether assisted reproductive technology is right for them
- introducing a clinic accreditation process so patients can know where to go for the best treatments
- forcing IVF clinics to reduce the rate of multiple births from the current 27 per cent to 15 per cent in the first five years as a requirement of accreditation
- creating a province-wide donor sperm, egg, embryo bank and surrogate mother database to prevent these services from being driven underground because of cost and lack of enforcement of regulations

It also said the province should look at funding egg, sperm, and embryo freezing, but come up with guidelines so tax payers do not have to cover their storage indefinitely.

The province has not yet said whether it will implement the recommendations, but did say the system as it stands is unacceptable.

Many couples feel forced to go the IVF route because when they look into adoption, they feel stonewalled by the lengthy wait periods that delay the process. Some feel that trying IVF can actually be faster than long waiting lists to adopt.

The panel also suggested Ontario's adoption system get an overhaul to cut down on the seven to eight years of red tape that couples must wade through to take home a child, while children wait for years in foster homes to find permanent parents.

It found that many couples decide to adopt a child from overseas or through private adoptions, while only 800 out of almost 10,000 eligible Ontario children were adopted from the public system last year, and the system is the problem.

The panel said court-ordered access to the children for their birth families and the fact that children's aid societies cover so many other issues makes it difficult for them to focus on adoption, which keeps many children in foster care instead of being welcomed into the home of an adopted family.

The report said Ontario should:

- provide government subsidies to help parents who adopt children older than two-years-old, or children with special needs

• create a centralized adoption agency that helps manage public adoptions.

The report said that it would cost much less to fund families in the long run than keeping a child in the system until they are 18-years-old. It said these changes would save the \$32,000 a year it costs to fund a child in the system, plus would help prevent the social costs to children who grow up as Crown wards in foster homes.

It said former Crown wards are less likely to finish school, more likely to rely on social assistance and live in homeless shelters and getting them into permanent homes sooner can help them avoid these troubles later in life.

For more information and to read the full report visit: [www.ontario.ca/creatingfamilies](http://www.ontario.ca/creatingfamilies)





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