

Fertility at 40

Are you pushing 40 and considering conception? Here's how to beat the biological clock, with strategies for boosting fertility and your chances of getting pregnant.

By Charmaine Noronha

Maternity at midlife



The first time Marie Pearson saw her seven-week-old baby's heart beat, rising and falling on the ultrasound monitor, she couldn't stop sobbing. It's an exciting moment for any expectant mother, but for Marie, the new life represented the successful culmination of a three-year struggle.

After several attempts with intrauterine insemination and in vitro fertilization injections, expensive trips to reproductive specialists in the U.S., and trying Chinese herbal medicine and acupuncture, 41-year-old Marie was finally pregnant with her second child.

"There's truly nothing like discovering you've conceived after so many disappointments and lost dreams. We're so blessed for our little miracle," says Marie, who lives in Calgary with her husband, Brian Bertsch, 41.

Marie, who decided to try to conceive again at the age of 38, is one of a growing number of women whose desire to have a baby later in life is challenged by a body that isn't as cooperative as it would have been in her 20s and early 30s. According to Health Canada, while 91 per cent of women are able to conceive at 30, the proportion drops to 77 per cent by 35 and to 53 per cent by age 40.

Increased risks after 40

If a woman 40 or older does conceive, she faces a greater chance of miscarriage. Dr. Karen Trewinnard, author of *Fertility and Conception* (Firefly, \$24.95), says that one in five pregnancies end in miscarriage in women over 35. For women over 40, that figure rises to about one in two.

The decline in pregnancy for women over 40 has everything to do with eggs, says Dr. Clifford Librach, a Toronto-based infertility specialist and director and founder of the CReATe Fertility Centre, affiliated with the University of Toronto and Women's College Hospital. Women are born with about 400,000 ova, or eggs. During your fertile years, ovulation occurs monthly, as one of these eggs ripens in one of your ovaries and is then released into a Fallopian tube.

How it works (in case you missed sex ed class)

Just before you menstruate, increased amounts of estrogen stimulate the lining of the uterus to thicken to receive that released egg, should it be fertilized. Follicle-stimulating hormone (FSH) from the pituitary gland begins to reach the ovaries in increasing amounts, stimulating ovarian follicles to grow. After a few days, one follicle begins to dominate and grows into a fluid-filled sac containing the ovum. The ovum is then swept into the Fallopian tube, where it circulates in surrounding fluid, waiting to be fertilized. The ovum can survive in this fluid for 24 to 36 hours. If the egg isn't fertilized, the ovum dies and is shed during menstruation — each year hundreds are lost.

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The effects of aging bodies and fitness levels

By age 37, a woman's egg supply has dropped to about 25,000. Since the hormones among our egg reserves maintain our ovarian function, the dwindling supply decreases the chances of conception as we age.

Along with quantity, the quality of eggs diminishes as well. Eggs are produced in the ovaries through cell division, and as a woman ages, there's a greater chance of mistakes occurring during the division process — some eggs end up with an abnormal number of chromosomes. These chromosomal abnormalities can mean



a higher risk of an embryo not being implanted in the uterus, of having a baby with Down syndrome, or of having a miscarriage.

According to Librach, the risk of having a baby with Down syndrome is one in 350 at age 35, one in 100 at age 40, and one in 35 at age 45 — a significant rise. In spite of the odds, there are some things you can do to increase your chances of conceiving.

How your fitness level affects fertility

Being over- or underweight can hinder ovulation, and obesity has been linked to an increased risk of miscarriage and less success with fertility treatments. Since extra pounds can drive up your estrogen levels, reducing the secretion of FSH, which suppresses ovulation, losing five to 10 pounds can improve ovulation by lowering your estrogen hormone levels, says Librach.

However, he cautions against an overly rigorous workout regimen. "You don't want to be doing excessive amounts of exercise, such as marathon running, since it can affect the hypothalamic function of the brain, which can affect your hormones," notes Librach.

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Causes of infertility



Cigarettes can lead to infertility

In some studies, the ever-evil cigarette has been shown to nearly double the risk of infertility. Women who smoke may also experience menopause one to four years earlier than those who don't, even through secondhand smoke, possibly because cigarette smoke affects chemicals in the oocytes (a woman's unripe egg cells).

Tobacco has also been shown to increase the rate at which women's eggs are depleted, more rapidly decreasing ovarian reserve. Aside from butting out, Dr. Ken Cadesky, a reproductive gynecologist and director of Toronto's LifeQuest Centre for Reproductive Medicine, recommends limiting yourself to two alcoholic drinks per week if you're trying to get pregnant.

Other health risks affecting fertility

Fibroids and endometriosis, which can jeopardize fertility, develop in women of any age. Some of us can live our entire lives with either or both without any major health complication as a result. However, over time, there's a greater chance of problems occurring, making older women vulnerable.

Although uncommon, large subserosal fibroids, which develop outside the uterus, may compress the Fallopian tubes, blocking sperm and eggs from reaching them. Subserosal fibroids may also make it difficult for the Fallopian tube to capture an egg at the time of ovulation.

Submucosal fibroids, which develop underneath the lining of the uterus, act as "natural IUDs," says Cadesky, describing them as "foreign bodies that sit in the uterus and prevent conception."

Endometriosis is thought to adversely affect an egg's development, as well as sperm binding to the egg, fertilization and the ability of an embryo to implant in the uterus.

Sexually transmitted diseases such as chlamydia or gonorrhea can have serious complications that can affect fertility, like pelvic inflammatory disease, which can damage the Fallopian tubes, the uterus or the ovaries.

Lastly, Cadesky adds that almost any drug that targets the central nervous system, such as tranquilizers or seizure prevention medications, can affect the ability of the pituitary gland to promote ovulation. These drugs could also affect prolactin, the hormone that stimulates lactation; abnormally high levels of it can restrict ovulation. And taking too much or too little thyroid medication can affect a woman's ovulation hormones.

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Extra help: surgery and ovarian hyperstimulation

Extra help

There are a variety of methods you can try to help you conceive if good old-



fashioned lovemaking when you're ovulating doesn't seem to be working. While you and your doctor must decide which fertility methods work for you, you and your partner also have to decide what feels right.

Surgery

If you have damaged Fallopian tubes, your eggs will not be able to travel from the ovaries to the uterus, causing infertility. Microsurgery can sometimes be performed to unblock Fallopian tubes; success depends on the tubes' degree of damage. Surgery can also be performed on women who have fibroids or small congenital abnormalities that prevent an embryo from implanting in the uterus.

Cost: Covered by provincial health care.

Ovarian hyperstimulation

A reproductive specialist's first line of treatment is usually controlled ovarian hyperstimulation (COH), using medication that can be administered by tablet or injected, to stimulate ovum production or produce more than one egg at a time.

Following the medication, Librach says a woman can either have sex with her partner or increase her chance of conceiving by combining this procedure with intrauterine insemination (IUI). IUI involves having specially treated sperm inserted through the cervix into the uterus as close to the released eggs as possible to increase the likelihood of fertilization. This technique, performed around the time of ovulation, bypasses the need for the sperm to pass through your cervix, which can be beneficial if you have a lack of cervical mucus.

The physician will monitor your response to the drugs and count the number of eggs being produced to avoid multiple pregnancies and ovarian hyperstimulation – when an unusually large number of mature follicles release. This hyperstimulation can cause ovaries to become suddenly enlarged with fluid, causing pelvic pain, nausea, vomiting, weight gain and reduced urine production. In more severe cases, fluid may collect in the lungs, causing breathing difficulties. In rare cases, it can be life threatening.

Cost: Approximately \$150 to \$1,500 per month; with IUI, an additional \$200 to \$500 per month, depending on the medication you take. Note that it may take several months for you to successfully conceive.

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Extra help: in vitro fertilization and donor eggs



In vitro fertilization

If fertility shots do not lead to conception, a reproductive specialist may suggest that you try in vitro fertilization (IVF) treatments next.

IVF is the stimulation of several mature ova with fertility medication. The ova are then collected using a fine needle under ultrasound guidance and fertilized in vitro (i.e., outside the body), with your partner's or a donor's sperm. The resulting embryos are transferred through the cervix and released into the uterus, where they can attach and grow.

Unlike with COH, where the doctor can control the number of eggs produced, with IVF the doctor can control the number of eggs transferred back into the woman's uterus. Unfortunately, Cadesky says IVF isn't as successful in women over 40 due to poor ovarian reserves, which means that the chance of producing healthy eggs

is lower than that of younger women.

Cost: Varies from province to province, but approximately \$6,000 per treatment, plus \$3,000 for medication.

Donor Eggs

Donor eggs from a woman with normally functioning ovaries are fertilized in a laboratory setting (in vitro fertilization) with your partner's or a donor's sperm. The resulting embryos are then transferred to your uterus. If you become pregnant, you become the "gestational" mother.

The donor egg procedure has the highest success rate for women over 40, because their ovarian reserves are declining rapidly, says Librach, who adds that women can have egg donation treatment up to 20 years after experiencing menopause.

Cost: \$6,000 to \$7,000 per egg-donor cycle.

One of the most important decisions you can make this time is in [choosing a gynecologist](#), so search wisely!

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