Infertility in women

Infertility in women
Around 30 per cent of fertility problems originate in the woman. Female fertility problems include irregular ovulation, blockages in the fallopian tubes, and abnormalities of the uterus such as fibroids and endometriosis. Treatment options include surgery, hormone therapy and IVF.

New life begins when an egg from a woman is fertilised by sperm from a man. Ovulation occurs around 14 days before the start of the menstrual period, when an egg (ovum) is released from one of the ovaries. The egg is swept into the nearby fallopian tube and ushered towards the uterus (womb). If the egg is fertilised on its journey, it lodges in the womb lining (endometrium). Pregnancy then begins.

The odds of a young fertile couple conceiving by having sexual intercourse around the time of ovulation are approximately one in five every month. A couple isn’t considered to have fertility problems until they have tried and failed to conceive for one year.

Approximately 15 per cent of couples experience fertility difficulties. In most cases, the couple can be helped with assisted reproductive technologies.

Around 30 per cent of fertility problems in couples originate in the woman. Another 30 per cent originate in the man and 30 per cent is found in both partners. No cause is found in around one in 10 couples investigated for infertility. This is called ‘unexplained’ or ‘idiopathic’ infertility.

Because people have children later in life than they used to, age-related infertility affects an increasing number of women and men. Read more about age and reproductive outcomes on Your Fertility website.

Lifestyle factors also affect fertility. Read more on Weight and reproductive outcomes, and Effects of caffeine, alcohol and smoking on reproductive outcomes on Your Fertility website.

Causes of female infertility

Female infertility can be caused by:

- ovulation problems
- polycystic ovary syndrome
- problems with the fallopian tubes
- problems with the uterus
- endometriosis.

Ovulation problems causing female infertility

The menstrual cycle functions by several glands and their hormones working in harmony. For ovulation to occur, a part of the brain called the hypothalamus prompts the nearby pituitary gland to secrete hormones that trigger the ovaries to ripen eggs. Irregular or absent periods indicate that ovulation may be irregular or absent too.

The age of the woman is a significant fertility factor. The chance of pregnancy for a woman aged 40 years and over is only five per cent per menstrual cycle. Ageing eggs are thought to be the cause.

A woman is born with her entire egg supply and, as time passes, these eggs become less viable. Other difficulties for the older woman include increased risk of miscarriage and genetic abnormalities in the unborn baby.

Polycystic ovary syndrome causing female infertility

At ovulation, the ovaries produce small cysts or blisters called follicles. Typically, one follicle ripens to release an egg. In polycystic ovary syndrome, the follicles fail to ripen, forming little cysts at the periphery of the ovary and often releasing male sex hormones.

Read more on polycystic ovary syndrome on our website and on Your Fertility website.

Problems with the fallopian tubes causing female infertility

The sperm fertilises the egg on its journey down the fallopian tube. A blocked or scarred fallopian tube may impede the egg’s progress, preventing it from meeting up with sperm.

Problems with the uterus causing female infertility

The fertilised egg lodges (implants) in the lining of the uterus. Some uterine problems that can hamper implantation include:

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• fibroids – non-malignant tumours inside the womb
• polyps – overgrowths of the endometrium, which can be prompted by the presence of fibroids.

**Problems with the cervix causing female infertility**

At the top of the vagina is the neck or entrance to the uterus, called the cervix. Ejaculated sperm must travel through the cervix to reach the uterus and fallopian tubes. Cervical mucus around the time of ovulation is normally thin and watery so that sperm can swim through it. However, thick or poor quality cervical mucus can hinder the sperm.

**Endometriosis causing female infertility**

Endometriosis is a condition in which cells from the lining of the uterus (the endometrium) migrate to other parts of the pelvis. It can damage the fallopian tubes and the ovaries, and significantly alter the movement of the egg and sperm.

Even if the fallopian tubes and ovaries are not damaged, endometriosis can affect the movement of sperm, egg pick-up by the tube, egg fertilisation, embryo growth and implantation.

**Diagnosis of female infertility**

Investigating suspected infertility requires tests for both the woman and her partner. Tests for the woman may include:

- physical examination – including medical history
- blood tests – to check for the presence of ovulation hormones
- laparoscopy – a ‘keyhole’ surgical procedure in which an instrument is inserted through a small incision in the abdomen so that the reproductive organs can be examined
- ultrasound scans – to check for the presence of fibroids.

Her male partner's semen may also be analysed to make sure that he is fertile.

**Treatment for female infertility**

Treatment options for female infertility depend on the cause, but may include:

- surgery
- ovulation induction (using hormone therapy)
- assisted reproductive technologies (ART) including in vitro fertilisation (IVF).

**Surgery for female infertility**

Female infertility can be caused by obstructions within the reproductive organs. Some of the problems that can be addressed by surgery include:

- fibroids – non-malignant tumours growing inside the uterus
- polyps – overgrowths of the uterine lining (endometrium)
- endometriosis – the growth of endometrial tissue outside the uterus, which can block the fallopian tubes
- abnormalities of the uterus – such as a uterine septum
- ovarian cysts – which can be drained or removed.

These days, most reproductive surgery is performed by ‘keyhole surgery’ using an operative laparoscope (through the abdomen) or an operative hysteroscope (through the cervix and into the uterus). Occasionally, this may not be possible for a variety of reasons and open surgery (a surgical incision in the abdomen) may be necessary.

**Ovulation induction for female infertility**

Irregular or absent periods may indicate that ovulation is also irregular or absent. However, even women with regular periods may skip ovulation every now and then.

Ovulation can be induced with a range of medications in tablet or injectable forms. Oral medications such as clomiphene citrate (Clomid, Serophene) can dull the response of receptors in the brain to naturally occurring oestrogens in the body. This leads to an increase in the release of hormones from the brain which stimulate ovulation.

Injectable forms of synthetic gonadotrophins, the hormones released by the pituitary gland in the brain that prompt the ovaries to release an egg, can also be used to stimulate ovulation. The response to these medications can be unpredictable and close monitoring of the women is necessary while on them.

Sometimes, the response to synthesised gonadotrophins may be excessive, leading to a condition known as ovarian hyperstimulation syndrome (OHSS). The symptoms include oedema (fluid retention), abdominal pain and bloating. Regular blood tests are used to help fine-tune the dosage and minimise the risk of OHSS and multiple pregnancy occurring.

**Assisted reproductive technologies (ART) including in vitro fertilisation (IVF)**

Assisted reproductive technologies (ART) is the term used for procedures that involve retrieval of eggs from the ovaries and includes. It includes vitro fertilisation (IVF) and intracytoplasmic sperm injection (ICSI), which is used when there is a male cause of infertility. ART involves hormone stimulation to make the ovaries produce 10-15 eggs rather than the one which normally matures every month. When the eggs are ‘ready’ they are retrieved in an ultrasound-guided procedure.

In the case of IVF the collected eggs are then mixed with sperm from the male partner or a donor, and in the case of ICSI each egg is injected with a single sperm. Two to five days later an embryo is transferred to the woman’s uterus using a thin tube that is inserted through the cervix. If there are more embryos than needed, these can be frozen for future use.
Read more on assisted reproductive technologies (ART).

**Risks of assisted reproductive technologies**

Health problems associated with the use of assisted reproductive technologies include:

- ovarian hyperstimulation syndrome (OHSS)
- an increased incidence of multiple pregnancies
- an increased risk of premature labour and low birth weight
- an increased risk of caesarean delivery.

Read more on possible health effects of IVF.

**Pregnancy isn’t always possible**

Despite the sophistication of assisted reproductive technologies, they cannot guarantee pregnancy. Success depends on a range of factors, including the reasons for the woman's infertility, her age and the type of technology used.

**Where to get help**

- Your doctor
- Family planning clinic
- Fertility clinic
- Public hospital

**References**


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Please note that we cannot answer personal medical queries.
If you are looking for health or medical advice we recommend that you:

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- ring NURSE-ON-CALL Tel. 1300 60 60 24.

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Reproductive system - female

The following content is displayed as Tabs. Once you have activated a link navigate to the end of the list to view its associated content. The activated link is defined as Active Tab

- Female reproductive system explained
- Menstruation and ovulation
- Menopause
- Fertility, pregnancy and childbirth
- Breast
- Fallopian tubes and ovaries
- Uterus and cervix
- Pelvis, vagina and vulva
- Reproductive and contraception

Female reproductive system explained

- Androgen deficiency in women

Androgen deficiency in women and its treatment is controversial, and more research is needed.

- DES daughters

If your mother took DES while she was pregnant with you, then you are a DES daughter or DES son.

- Health checks for women

A woman at high risk of a particular disease should be checked more frequently and/or at an earlier age.

- Pelvic floor

Pelvic floor exercises are designed to improve muscle tone and prevent the need for corrective surgery.

- Pregnancy stages and changes

It’s helpful to have an idea of how your body may react to the different stages of pregnancy. It also helps to know how pregnancy may affect your emotions and feelings.

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Puberty
Adjusting to the many changes that happen around puberty can be difficult for both parents and young people...

Reproductive system
New life begins when a male sex cell (sperm) fertilises a female egg (ovum) within the female reproductive system...

Sexually transmitted infections (STIs)
It is not difficult to avoid catching sexually transmitted infections (STIs).

Transvaginal mesh
Transvaginal mesh has been used for more than 20 years to manage problems for women such as prolapse and incontinence. While this treatment is successful for many women, some unfortunately have...

Menstruation and ovulation

Menstrual cycle
The menstrual cycle is complex and is controlled by many different glands and the hormones that these glands produce...

Menstruation - abnormal bleeding
Heavy or abnormal periods may be an indication of other health problems...

Menstruation – amenorrhoea
Some women are more at risk of amenorrhoea (the absence of periods) because of emotional stress or changes in weight...

Menstruation - athletic amenorrhoea
Women who are athletes or who exercise a lot on a regular basis are at risk of developing athletic amenorrhoea, which is the absence of periods...

Menstruation - pain (dysmenorrhoea)
Women of any age can experience painful periods and some women find periods are no longer painful after pregnancy and childbirth...

Ovulation
The female body shows several signs of ovulation and you may experience some or all of these signs...

Ovulation pain
Ovulation pain is usually harmless, but can sometimes indicate various medical conditions such as endometriosis...

Premenstrual syndrome (PMS)
Most menstruating women have some form of premenstrual syndrome (PMS).

Toxic shock syndrome (TSS)
If you think you could have toxic shock syndrome, stop using tampons immediately and go to the emergency department of your nearest hospital...

Menopause

Hormone replacement therapy (HRT) and menopause
Hormone replacement therapy (HRT) can reduce menopausal symptoms, but the benefits and risks need to be considered carefully...

Menopause
Menopause is a natural occurrence and marks the end of a woman's reproductive years...

Menopause and complementary therapies
The use of complementary therapies to manage menopausal symptoms is popular, but the sources of information available to consumers are of variable quality and reliability...

Menopause and osteoporosis
Regular weight-bearing exercise and maintaining a diet rich in calcium from childhood will help reduce bone loss at menopause...

Menopause and sexual issues
Menopause, the final menstrual period, is a natural event that marks the end of a woman's reproductive years...

Menopause and weight gain
Weight gain at menopause can be managed using healthy eating and exercise; HRT may also be beneficial...
Premature and early menopause
The symptoms of premature or early menopause are the same as for menopause at any age.

Fertility, pregnancy and childbirth

Abortion
All women should have access to accurate information about abortion so they can make their own informed decisions.

About pregnancy and birth services in Victoria (video)
Victoria’s pregnancy, birth and maternal services, help from planning a pregnancy through to giving birth and caring for a newborn.

Age and fertility
Age affects the fertility of both men and women, and is the single biggest factor affecting a woman’s chance to conceive and have a healthy baby.

Assisted reproductive technology – IVF and ICSI
IVF (in-vitro-fertilization) and ICSI (intracytoplasmic sperm injection) are assisted reproductive treatment (ART) procedures in which fertilisation of an egg occurs outside the body.

Contraception after an abortion
Whether you have a surgical or medical abortion you can become fertile again very soon after the abortion, so it's important to start using contraception immediately if you wish to prevent any...

Contraception - choices
The method of contraception you choose will depend on your general health, lifestyle and relationships.

Ectopic pregnancy
Ectopic pregnancy is caused by a fertilised egg not being able to move through the fallopian tube.

Endometriosis - know the facts (video)
Learn some facts about endometriosis. We debunk some myths and explore symptoms, diagnosis and treatment options for women.

Infertility in women
The odds of a young fertile couple conceiving by having sexual intercourse around the time of ovulation are approximately one in five every month.

Miscarriage
A range of feelings is normal after a miscarriage, and they often linger for some time.

Molar pregnancy
Most molar pregnancies are diagnosed when bleeding early in pregnancy prompts an ultrasound scan.

Placental abruption
Placental abruption means the placenta has detached from the wall of the uterus, starving the baby of oxygen and nutrients.

Placenta previa
Placenta previa means the placenta has implanted at the bottom of the uterus, over the cervix or close by.

Pregnancy - obstetric emergencies
An obstetric emergency may arise when a woman is pregnant, or during her delivery. In this case, extra care is needed. A woman may need a lot of tests and treatments, and extended hospital stays. She...

Pregnancy - pre-eclampsia
There is no evidence that pre-eclampsia is caused by emotional stress, working too hard or not getting enough rest.

Pregnancy stages and changes
It’s helpful to have an idea of how your body may react to the different stages of pregnancy. It also helps to know how pregnancy may affect your emotions and feelings.

Pregnancy testing
Sometimes, a home pregnancy test may be positive when a woman isn’t pregnant.

Twins - identical and fraternal
Multiple births are more common due to the advancing average age of mothers and the rise in assisted reproductive techniques.
Weight, fertility and pregnancy health

Compared with women in the healthy weight range, women who are carrying extra weight are less likely to conceive.

Breast

Breast awareness
Women should become familiar with the normal look, feel and shape of their breasts, so they will notice any abnormal changes.

Breast cancer
Breast cancer is the most common cancer in Australian women.

Breast cancer and oestrogen
There are different types of breast cancer, and around 70 per cent are sensitive to the female sex hormone oestrogen.

Breast conditions other than breast cancer
The vast majority of breast changes are not breast cancer, but you should always see your doctor if you notice changes in your breasts.

Breastfeeding
Breastfeeding positioning and attachment come naturally to some babies and mothers, but many need time and practice to get it right.

Breast implants and mammograms
Most women who have breast implants will be able to have regular screening mammograms.

Breast implants and your health
Complications can occur with all types of breast implants, but recent improvements have made breast implants safer.

Breast implants (augmentation)
Breast implants are inserted under the skin to create larger breasts.

Breast reduction for women
Breast reduction surgery removes excess breast fat, glandular tissue and skin to achieve a breast size in proportion with your body.

Fallopian tubes and ovaries

Ectopic pregnancy
Ectopic pregnancy is caused by a fertilised egg not being able to move through the fallopian tube.

Endometriosis - know the facts (video)
Learn some facts about endometriosis. We debunk some myths and explore symptoms, diagnosis and treatment options for women.

Fallopian tube cancer
Fallopian tube cancer is one of the rarest gynaecological cancers.

Ovarian cancer
Many women with early stage ovarian cancer may not have any symptoms.

Pregnancy - obstetric emergencies
An obstetric emergency may arise when a woman is pregnant, or during her delivery. In this case, extra care is needed. A woman may need a lot of tests and treatments, and extended hospital stays. She...

Pregnancy stages and changes
It’s helpful to have an idea of how your body may react to the different stages of pregnancy. It also helps to know how pregnancy may affect your emotions and feelings.

Salpingitis
Salpingitis is one of the most common causes of female infertility and may permanently damage the fallopian tubes.

Uterus and cervix

Cervical cancer
All women aged between 25 and 74 are advised to have Cervical Screening Tests every 5 years, new tests help identify HPV or cervical cancer.

Cervical screening tests
The cervical screening test protects up to 30 per cent more women than the Pap test.

- **Contraception - vaginal ring**
  The vaginal ring works in a similar way to the oral contraceptive pill to prevent pregnancy.

- **Endometriosis**
  Endometriosis is a painful condition that may be treated with medications or surgery.

- **Endometriosis - know the facts (video)**
  Learn some facts about endometriosis. We debunk some myths and explore symptoms, diagnosis and treatment options for women.

- **Fibroids**
  Often, fibroids do not cause any problems, but they are occasionally associated with infertility, miscarriage and premature labour.

- **Prolapsed uterus**
  The pelvic floor and associated supporting ligaments can be weakened or damaged in many ways, causing uterine prolapse.

- **Retroverted uterus**
  Painful sex may be caused by a retroverted uterus.

- **Uterine cancer**
  Uterine cancer is one of the most common gynaecological cancers.

- **Uterine inversion**
  Uterine inversion means the placenta fails to detach from the uterine wall, and pulls the uterus inside-out as it exits.

**Pelvis, vagina and vulva**

- **Bacterial vaginosis**
  Bacterial vaginosis (BV) is caused by an imbalance of the bacteria normally present in the vagina.

- **Bladder prolapse**
  Bladder prolapse is when the bladder bulges into the vagina.

- **Cosmetic genital surgery - labiaplasty and phalloplasty**
  Cosmetic genital surgery involves reshaping the labia, vulva or penis to alter their size or shape.

- **Cysts**
  Cysts may be as small as a blister or large enough to hold litres of fluid.

- **Female genital cutting or circumcision (FGC)**
  Female genital cutting or circumcision (FGC) involves the cutting or altering of the external female genital organs.

- **Labial adhesions**
  Labial adhesions are more common during the nappy years, but poor hygiene may be a cause in older girls.

- **Pelvic inflammatory disease (PID)**
  Pelvic inflammatory disease (PID) occurs when an infection spreads from the vagina to the cervix and fallopian tubes.

- **Rectocele**
  A rectocele is when the rectum protrudes into the vagina.

- **Vaginal bleeding - irregular**
  If you suffer from ongoing vaginal bleeding problems, see your doctor.

- **Vaginal cancer**
  Some vaginal cancers have no symptoms in their early stages, and only cause symptoms once they have invaded other parts of the body.

**Reproductive and contraception**

- **Assisted reproductive technology – IVF and ICSI**
  IVF (in-vitro-fertilization) and ICSI (intracytoplasmic sperm injection) are assisted reproductive treatment (ART) procedures in which fertilisation of an egg...
Caesarean section
A caesarean section is usually performed when it is safer for the mother or the baby than a vaginal birth.

Contraception - tubal ligation
Sterilisation is a permanent method of contraception that a woman can choose if she is sure that she does not want children in the future.

Dilatation and curettage (D&C)
A dilatation and curettage (D&C) is an operation performed on women to lightly scrape away the womb lining.

Endometriosis - know the facts (video)
Learn some facts about endometriosis. We debunk some myths and explore symptoms, diagnosis and treatment options for women.

Hysterectomy
The conditions that prompt a hysterectomy can often be treated by other means, and hysterectomy should only be a last resort.

Related Information

- Age and fertility
  Age affects the fertility of both men and women, and is the single biggest factor affecting a woman's chance to conceive and have a healthy baby.

- Weight, fertility and pregnancy/health
  Compared with women in the healthy weight range, women who are carrying extra weight are less likely to conceive.

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  The female body shows several signs of ovulation and you may experience some or all of these signs.

- Pelvic inflammatory disease (PID)
  Pelvic inflammatory disease (PID) occurs when an infection spreads from the vagina to the cervix and fallopian tubes.

Related information on other websites

- Westmead Fertility Centre
- Women's Health Queensland Wide – Emotional aspects of infertility

Support Groups

- AccessAustralia
- Melbourne IVF Patient Support Groups

Content Partner

This page has been produced in consultation with and approved by: Victorian Assisted Reproductive Treatment Authority

Last updated: September 2017

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Multilingual resources on infertility in women
- Help for infertile couples - multiple languages

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