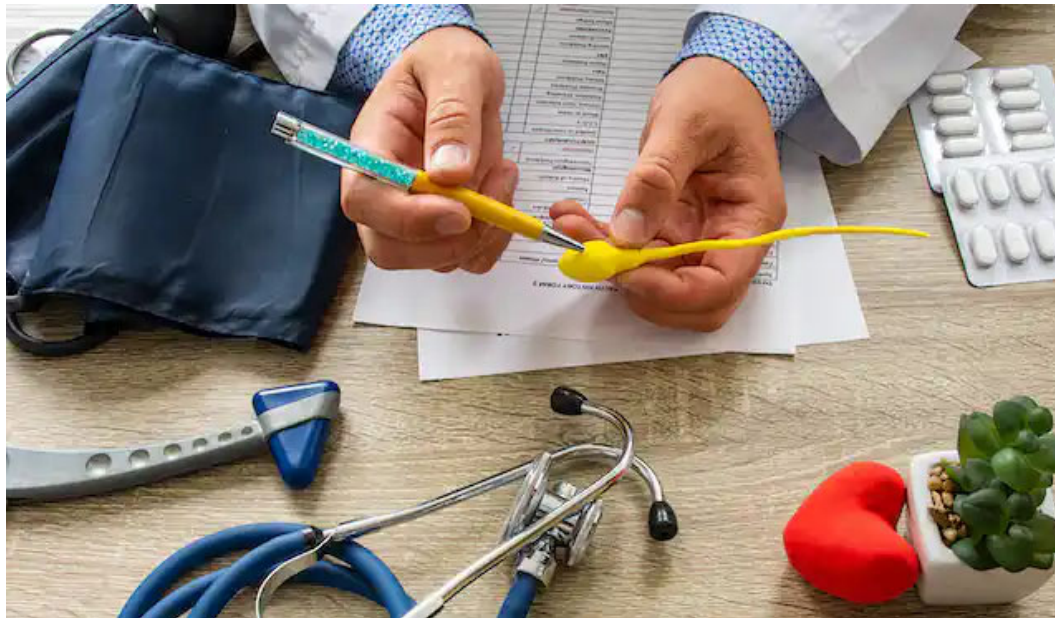


## THE CONVERSATION

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### Problems conceiving are not just about women. Male infertility is behind 1 in 3 IVF cycles

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For the first time, IVF clinics in Australia and New Zealand have reported data about the scale and range of male fertility problems in couples who have IVF. New data released by the Australia and New Zealand Assisted Reproduction Database (ANZARD) today reveal about one-third of all IVF cycles performed in 2020 included a diagnosis of male infertility.

Although most male fertility problems can't be prevented, there are things men can do to improve sperm quality and the chance of natural conception.

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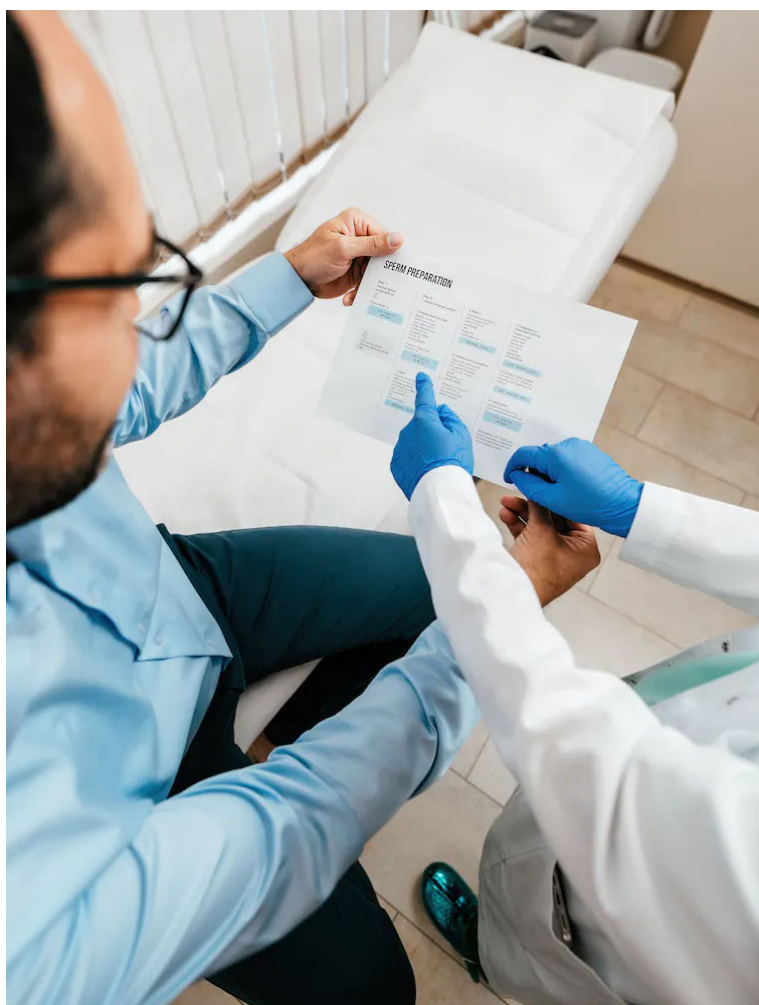
***Read more: Fertility miracle or fake news? Understanding which IVF 'add-ons' really work***

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## What causes male infertility?

Most male infertility is due to the testes failing to make any or enough normal sperm to allow conception. A low sperm count, sperm not moving normally, or a high proportion of abnormally shaped sperm reduce capacity to fertilise eggs.

In most cases, the cause of male infertility is unexplained. A specific cause can only be pinpointed in about 40% of infertile men. They include genetic abnormalities, past infection, trauma to the testicles, and damage to sperm production – for example from cancer treatment. Some men have no sperm in their ejaculate (a condition called azoospermia). This can be due to blocked sperm tubes, which may be a birth defect, or follow vasectomy or other damage.



In most cases the cause of male infertility is unexplained. Shutterstock

In a minority of cases, infrequent or poorly timed intercourse, or sexual problems such as erectile dysfunction or ejaculation failure cause the infertility.

The least common problem is deficiency of hormonal signals from the pituitary gland (a gland on the brain which makes, stores and releases hormones). This can be genetic or follow issues such as a pituitary tumour. Treatment with hormone injections aims to restore natural fertility.

Chronic diseases such as obesity or diabetes, environmental exposures (such as chemicals in the workplace) and lifestyle factors (such as smoking and recreational drug use) can contribute to or exacerbate poor sperm quality.

### **Male infertility and chance of IVF success**

For couples with male factor infertility, intracytoplasmic sperm injection (ICSI) is needed to fertilise the eggs and give them a chance of having a baby. ICSI follows the same process as IVF, except ICSI involves the direct injection of a single sperm into each egg using technically advanced equipment, as opposed to IVF, where thousands of sperm are added to each egg in the hope one will fertilise it.

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***Read more: Standard IVF is fine for most people. So why are so many offered an expensive sperm injection they don't need?***

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The just released ANZARD report shows the chance of a baby for men with male infertility is comparable with other infertility diagnoses. However, studies show that for couples who don't have male factor infertility, ICSI offers no advantage over IVF in terms of the chance of having a baby.

### **Five tips for sperm health**

Although most male infertility is not preventable, there are some things men can do to keep their sperm healthy. It takes about three months for sperm to mature, so making healthy changes at least three months before trying for a baby gives the best chance of conception and having a healthy baby. Here are five things you can do to look after your sperm.

#### **1. Quit smoking**

Cigarette smoke contains thousands of harmful chemicals that cause damage to all parts of the body, including sperm. Heavy smokers make fewer sperm than non-smokers. Smoking can increase the number of abnormally shaped sperm and affect the sperm's swimming ability, making it harder for sperm to reach and fertilise the egg.

Smoking also damages the DNA in sperm, which is transferred to the baby. This can increase the risk of miscarriage and birth defects in a child. One study found heavy smoking (more than 20 cigarettes a day) by fathers at the time of conception increases the child's risk of childhood leukemia.



Smoking affects sperm quantity, shape and motility. ravi sharma/unsplash, CC BY

There is no safe limit for smoking – the only way to protect yourself and your unborn baby from harm is to quit. The good news is the effects of smoking on sperm and fertility are reversible, and quitting will increase the chance of conceiving and having a healthy baby.

## **2. Try to be a healthy weight**

On average, men who are overweight or obese have lower sperm quality than men who are a healthy weight. Carrying too much weight can also reduce your interest in sex and lead to erection problems.

The good news is, even losing a few kilos can improve sperm quality. Getting support, setting realistic goals and giving yourself enough time to achieve them, learning about nutrition and healthy eating, and exercising regularly increase your chance of losing weight and keeping it off.

## **3. Back off drugs and alcohol**

Taking androgenic steroids for bodybuilding or competitive sports causes testes to shrink and affects sperm production. And it can have a lasting impact. It takes about two years for sperm to return to normal after stopping steroids.

A man's fertility can also be harmed by other drugs like cannabis, cocaine and heroin, as they reduce testosterone levels and sex drive (libido).

Alcohol is OK in small amounts, but heavy drinking and binge drinking can reduce sperm count and quality.

#### **4. Don't leave it too late**

We've all heard about men in their 80s and 90s fathering children, but this is rare and risky.

Although men continue to produce sperm throughout life, which means they can potentially reproduce into old age, men under 40 have a better chance of conceiving than older men.

It takes longer for partners of older men to conceive, and sperm quality declines with age and this increases the risk of miscarriage and health problems for the baby.

So, if you have a choice about when to try for a baby, sooner is better than later.

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***Read more: Do you really need IVF? A new online tool can help you weigh up your options***

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#### **5. Be aware of sexually transmitted infections**

Sexually transmitted infections (STIs), especially untreated gonorrhoea and chlamydia, can reduce sperm quality and cause blockages in the sperm tubes. This means sperm can't move on from the testicles (where they are produced) into the semen to then be ejaculated.

Practising safe sex by using condoms is the only thing that can stop STIs from being passed to or from a partner. Using condoms hugely reduces your risk of tube blockages and damage to your fertility. If you think you have an STI, see a doctor and get treatment straight away. The quicker you get treatment, the lower the risk of fertility problems in the future.