

Alcohol and reproduction

Alcohol affects reproduction in both men and women in a number of ways.

Our reproductive systems are controlled by a variety of hormones, such as testosterone and oestrogen. Alcohol disrupts the production of these hormones, which means the finely balanced system doesn't work properly. Alcohol's effects on other parts of the body, such as the liver, can make the problem worse.

In men, alcohol affects testosterone levels, and may lead to lowered sperm counts and impotence. In women, alcohol disrupts the menstrual cycle and can stop a woman from ovulating.

In the short term, drinking can lower the chances of conception. Long-term alcohol abuse has been linked to infertility and sexual dysfunction.⁽¹⁾

The Chief Medical Officer advises that “**Pregnant women or women trying to conceive should avoid drinking alcohol.**” Studies have shown that drinking even small amounts of alcohol can reduce a woman's likelihood of conceiving.⁽²⁾

Although alcohol can inhibit fertility, it is certainly not a form of contraception: **drunken one-night stands can and do lead to unwanted pregnancies. One recent study showed that women who binge drank were significantly more likely to become pregnant accidentally.**⁽³⁾

FACTS and FIGURES

Our reproductive system is controlled by a delicately balanced mechanism called the **hypothalamic-pituitary-gonadal axis**. The **hypothalamus**, which is part of the brain, the **anterior pituitary gland** and the **testes** in men or **ovaries** in women all produce hormones that we need for reproduction.

Alcohol can interfere with the working of all three areas, in both men and women. Alcohol also affects the liver, which helps regulate our sex hormones.

Alcohol and the male reproductive system

In men, **alcohol reduces testosterone levels**. One study showed that testosterone levels fell after just five days among normal healthy men who were given alcohol, and continued to fall throughout the four-week study period.⁽⁴⁾ A lack of testosterone leads to loss of libido and reductions in sperm quantity and quality.⁽⁵⁾

As well as affecting hormone levels, alcohol is directly toxic to the testes. This can harm sperm

production, stop them developing properly and reduce their motility (their ability to move towards an egg).

Alcohol also depresses the central nervous system, affecting sexual performance. Men may find it difficult to get and maintain an erection – otherwise known as **brewer's droop** – and control their ejaculation.

Alcohol may also affect the structure and movement of sperm by stopping the liver from properly metabolising vitamin A, which is necessary for sperm development.⁽⁶⁾

Alcohol and the female reproductive system

Alcohol causes imbalances in the hormonal system that controls female reproduction. Even moderate alcohol use can affect a woman's menstrual cycle and her ability to conceive.

Danish research has shown that drinking between one and five drinks a week can reduce your chances of conceiving. Heavy drinking (10 drinks or more) decreases the likelihood of conception further still.⁽⁷⁾

One American study found that women who consumed any alcohol during their menstrual cycle were more than 50% less likely to get pregnant.⁽⁹⁾

Regular drinking can disrupt a woman's menstrual cycle and ovulation. In one study, half of 'social' drinkers who drank three to four drinks a day over three weeks experienced abnormal menstrual cycles, including a lack of ovulation.⁽⁹⁾

PROGRESSION

Many of alcohol's effects on reproduction are temporary, and the reproductive system will return to normal if you stop drinking. However, long-term and heavy alcohol abuse can lead to serious and permanent problems in both men and women, including infertility.

Effects of alcohol abuse on male reproduction

Prolonged alcohol abuse in men can cause testosterone deficiency and shrinkage of the testicles (testicular atrophy). This can lead to impotence, sterility and 'feminisation' (a loss of male secondary sexual characteristics, with effects including breast enlargement, a loss of facial and body hair, and growth around the hips).⁽¹⁰⁾

Testicular atrophy is common in alcoholics, affecting up to three out of four alcoholics with liver disease. Among alcoholics who have not yet developed liver damage, around half have reduced sperm counts or poor sperm quality.⁽¹¹⁾

Effects of alcohol abuse on female reproduction

Chronic heavy drinking contributes to many female reproductive disorders. Women may have irregular periods or fail to ovulate. They may also find menstruation stops or they have an early menopause. Heavy drinkers who do become pregnant are more likely to have a miscarriage.⁽¹²⁾

Heavy drinking in your late teens and early twenties may affect fertility later in life. A recent study of more than 7,000 Australian identical twins showed that those who were alcohol dependent had children later than their twin sisters who did not drink heavily.⁽¹³⁾

ADVICE and GETTING HELP

If you are trying to get pregnant, both you and your partner should avoid drinking alcohol. If you do drink, limit it to one or two units once or twice a week.

If you are concerned about the effects of alcohol on your fertility and sexual health, you can talk confidentially to Drinkline on 0800 917 8282. Your GP will also be able to offer more information and advice.

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