

Supporting Training Initiatives



the otc treatment clinic

Common conditions and their treatment options



This module has been endorsed with the NPA's Training Seal as suitable for use by medicines counter assistants as part of their ongoing learning. Complete the questions at the end to include in your self-development portfolio



Welcome to *TM's* OTC Treatment Clinic series. This handy, four-page section is specially designed so that you can detach it from the magazine and keep it for future reference.

Each month, *TM* covers a different OTC treatment area to help you keep up-to-date with the latest product developments. In this issue, we focus on ovulation and pregnancy testing. At the end of the module there are multiple choice questions for you to complete, so your progress can be monitored by your pharmacist.

You can find out more in the *Counter Intelligence Plus* training guide.

The last six topics we have covered are:

- Smoking cessation
- Oral care
- Daily fatigue and stress
- Coughs
- Sore throats
- Colds and flu

You can download previous modules from www.tm-modules.co.uk

module 204 ovulation and pregnancy testing

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for this module

OBJECTIVES: After studying this module, assistants will:

- Understand the different stages of the female monthly cycle
- Be aware of the statistics related to infertility
- Be aware of the importance of good pre-conception care and a healthy lifestyle
- Be able to advise on the use of ovulation tests
- Be familiar with the early signs and symptoms of pregnancy
- Have an understanding of home pregnancy tests and when they can be used.

It is much more common for women today to delay having a baby. Indeed, it has been reported that the number of babies born to women over the age of 50 has more than doubled in four years and the number of women over 40 having children has risen by 13 per cent – from 26,419 in 2008 to 29,994 in 2012 – with one in 25 births being to women over 40. And in 2012, nearly half of all babies were born to mothers aged 30 and over.

While many women in their mid-30s and older can expect to have healthy pregnancies, it is a fact that a woman's fertility decreases with age. The biggest decrease in fertility begins during the mid-30s and couples who opt to wait before starting their family may feel under pressure if they are not successful as soon as they had anticipated.

With recent advances in the technology of home

ovulation and pregnancy tests, concerned couples may visit the pharmacy to ask for advice and purchase a test to help pinpoint the best time during a woman's monthly cycle to try to conceive.

Failure to fall pregnant within a couple's own expected time frame can cause disappointment, so it's important to be sensitive when customers seek advice. It's also a good idea to display information leaflets – as some people may prefer to read the advice in the privacy of their own home.

It's also important to know when to refer to the pharmacist. This includes women who are not up to date with vaccinations; are taking medication; have diabetes, epilepsy, asthma or a thyroid condition, and couples who have a history of gene abnormalities or have previously had a pregnancy affected by neural tube defects.

reflective exercise

Emma, 31, tells you that she has been trying to conceive for the past three months. She has a daughter aged three who was conceived within a month of trying. Emma is interested in hearing about lifestyle advice and home ovulation tests that could help her get pregnant.

What would you recommend?

Suggest that Emma comes to a quiet area of the pharmacy or to the consulting room. Check whether she has any medical conditions, including any gynaecological issues such as irregular periods or endometriosis. If she hasn't, explain that although she conceived within the first month last time, this is very quick and for most couples it takes a little longer. Only 20 out of 100 couples will conceive within a month, but 85 per cent will conceive within a year. Reassure Emma and warn her that she may need to be patient.

Explain how ovulation tests work, talk Emma through the different types available and encourage her to read the instructions carefully.

What lifestyle advice would you give?

It is important that Emma and her partner have a healthy diet and lifestyle. Emma should be taking 400mcg of folic acid daily. Folic acid helps prevent neural tube defects and is beneficial in the very early stages of pregnancy, often before the woman even knows she is pregnant. Emphasise the

importance of eating plenty of fruit and vegetables, and limiting foods that are high in saturated fat, sugar and salt.

What if:

Emma tells you that her partner is a bodybuilder and he occasionally takes something to boost his training?

Ask Emma to find out exactly what he is taking. As a bodybuilder, he may be taking anabolic steroids, which can affect sperm count and mobility if used long-term.

What if:

Emma returns to the pharmacy after six months to say she has been using the kit but she has still not conceived.

Check that Emma is following the instructions properly and suggest she tries for another three months before going to see a GP.

What if:

A month later, Emma comes to the pharmacy again to ask for a pregnancy test. She tells you her period is due in three days, but she's feeling nauseous and tired.

All pregnancy tests detect the level of hCG in the urine. Levels of this hormone rise when a fertilised egg is implanted in the endometrium. Although it may be possible to detect hCG three days before Emma's period is due, if she waits another three to four days, any hCG will be more easily detected.

released from the ovary – occurs 10 to 16 days before the start of her next period. What varies is the time between the woman's last period and ovulation. This is why calculating the optimum time to conceive is not always straightforward.

Ovulation is triggered by a sudden rise in another hormone – luteinising hormone (LH). During ovulation, the ovary releases an egg which enters the fallopian tubes and travels towards the uterus (womb). At this time, the hormone progesterone prepares the lining of the uterus, so that it is spongy, thick and rich in nutrients.

If the egg is fertilised by sperm, it is implanted in the wall of the uterus and the pregnancy begins. At this time, another hormone is produced – human Chorionic Gonadotrophin (hCG). This is the hormone that is detected by pregnancy tests.

If the egg is not fertilised, it passes through

the uterus and out through the vagina. Hormone levels drop and the lining of the uterus is shed. The woman gets her period and the cycle begins again.

Occasionally, an egg may be fertilised and instead of implanting in the uterus, it implants in another area such as the fallopian tubes or even in the abdominal cavity. This is called an ectopic pregnancy and, unfortunately, because the embryo can't develop in this location, it is a pregnancy that can't proceed.

Sperm production

Sperm are produced inside the man's testicles and released through the penis during ejaculation. Sperm are about a hundred times smaller than the female egg and have three parts – a head containing the genes, a middle section which provides energy and a tail for swimming. On average, sperm can live for five days inside a woman's body, but in the right conditions, they may live for longer.

So, if a couple has intercourse in the days immediately before ovulation, the sperm will have time to travel up the fallopian tubes and be ready when the egg is released from the ovary. Home tests that identify when the woman is ovulating allow couples to plan intercourse to maximise their chances of conception.

How common is infertility?

Infertility is the term used when a couple is having difficulty conceiving a baby despite having regular, unprotected sexual intercourse. According to NHS Choices, around one in six couples may be affected – that's approximately 3.5 million people in the UK.

For every 100 couples trying to have a baby, 20 will conceive within one month, 70 within six months, 85 within a year and 95 within two years. However, for couples who have been unsuccessfully trying for more than three years, the likelihood of getting pregnant within the next 12 months is 25 per cent or less.

The important message to take from this is that infertility affects many people, but help is available. In general, couples should see a GP if they have not conceived after one year of trying.

Women over 36 and anyone who is aware that they may have fertility or health issues should see a GP after six months of trying.

Common causes of infertility

Infertility can be caused by many different factors. In general, about a third of infertility cases can be linked to a problem with the woman and another third to problems with her male partner. In some, multiple factors may be to blame or an exact cause may never be found.

● Infertility in women

In women, infertility is most commonly linked to problems with ovulation – the release of the egg

The monthly cycle

A woman's fertility and her ability to conceive are related to the changes that occur during her reproductive cycle – changes that are controlled by various hormones.

A typical menstrual cycle lasts about 28 days, but may vary between 21 and 40 days. Day one of a woman's cycle is the day she starts her period. At this point, a number of eggs start to develop in the ovaries because of a hormone called follicle stimulating hormone (FSH).

As her cycle progresses, the eggs continue to grow and one (or occasionally more) will reach a point where it's mature enough to be released. Meanwhile, levels of the hormone oestrogen are rising and this causes the lining of the uterus (the endometrium) to thicken in anticipation of a pregnancy.

Regardless of the length of a woman's monthly cycle, ovulation – when the egg is

from the ovary. Polycystic ovary syndrome (PCOS) is one common cause, where hormonal imbalances interfere with normal ovulation. Another possible cause is primary ovarian insufficiency (POI), when a woman's ovaries stop working normally before she is 40. Thyroid problems can also prevent ovulation.

Some women suffer from blocked fallopian tubes as a result of pelvic inflammatory disease or a previous ectopic pregnancy. There may also be physical problems with the uterus or the presence of fibroids – non-cancerous clumps of tissue on the walls of the uterus.

Women with any of the following should talk to a GP:

- Irregular or missed periods
- Very heavy or painful periods
- Endometriosis
- Pelvic inflammatory disease
- Previous ectopic pregnancy
- More than one miscarriage.

● **Infertility in men**

Male infertility is usually linked to the number or quality of the sperm produced, or to physical issues that may reduce sperm mobility.

A low sperm count, reduced sperm mobility or a high percentage of abnormal sperm are all possible factors. Any condition that affects or damages the testicles can also cause problems, as can abnormally low levels of the male sex hormone testosterone.

Men who know they have a history of any of the following should seek medical advice before starting a family:

- Testicular cancer
- An infection of the testicles
- Surgery or injury involving the testicles
- A congenital defect affecting the testicles or when the testicles have not descended into the scrotum.

● **Lifestyle factors**

In addition to the medical conditions mentioned above, lifestyle factors may also affect a person's fertility.

● **Weight**

Being overweight or obese reduces male and female fertility and, in women, being significantly underweight can affect regular ovulation. Women undergoing rigorous athletic training may notice that their monthly periods become irregular or they may miss a month.

● **Infections**

In men, mumps can lead to inflammation of the testicles and reduced sperm count. In women, certain sexually transmitted infections (STIs) can damage the fallopian tubes.

● **Age**

As mentioned earlier, infertility in women is linked to age. For instance, according to NHS



Home pregnancy tests give fast, reliable results, up to several days before a woman's period is due

Choices, among women who are 35 years of age, about 95 per cent will get pregnant after three years of regular, unprotected sexual intercourse. For women who are aged 38, that number drops to 75 per cent.

● **Alcohol**

Drinking too much alcohol can damage the quality of a man's sperm and increase a woman's risk of infertility. Couples should follow guidelines and limit their alcohol intake to three or four units a day for men and two to three units for women.

● **Stress**

Day-to-day stresses can contribute to a loss of libido (sex drive) and, in severe cases, can even affect fertility.

● **Smoking**

In addition to all of the other detrimental effects of smoking, research suggests that it may also adversely affect fertility.

● **Medicines and drugs**

Some prescribed medications, such as those used for chemotherapy, can affect ovulation and sperm production. In women, antipsychotic medicines can sometimes cause missed periods, while in men, long-term use of anabolic steroids can affect sperm count and mobility. Illegal drugs also have detrimental effects.

● **Environmental factors**

Exposure to certain hazardous chemicals can cause fertility issues.

● **Pre-conception planning**

Pre-conception care involves adopting a healthy lifestyle before trying to have a baby.

If the woman and her partner are fit, active and eating a healthy diet, they can increase their chances of having a successful pregnancy.

Women who are looking to start a family should see a GP to check they're up to date with vaccinations, particularly against German measles (rubella) and chickenpox, as these can cause problems during pregnancy. The GP can also review her family's medical history to see if there is a need for genetic screening.

Some conditions are caused by gene abnormalities and may be passed from parent to child. Examples include cystic fibrosis, sickle-cell anaemia and Huntington's disease. Also, if a woman suffers from an existing medical condition (e.g. diabetes, epilepsy, thyroid disease or asthma), a GP may need to ensure that the condition is controlled before she becomes pregnant. Some medicines are not recommended during pregnancy and alternatives may be required.

● **Focus on folic acid**

Folic acid (folate) is a B vitamin that helps the body make healthy new cells, including blood cells. It occurs naturally in leafy vegetables, citrus fruits, beans and whole grains. It is also added to some manufactured foods, such as flour and cereals.

Everybody needs a supply of folic acid in their diet, but it is especially important for pregnant women and those who may become pregnant. Folic acid helps prevent neural tube defects such as spina bifida, where the baby's spinal column does not close properly, leaving the spinal cord exposed. Women who may become pregnant need to take 400mcg of folic acid every day, even if they are not

self-care tips

- Take 400mcg of folic acid daily until the 12th week of pregnancy. Green, leafy vegetables are a good dietary source
- Don't smoke, and drink sensibly
- Eat a healthy diet rich in fruit and vegetables, whole grains, lean protein and low fat dairy
- Men and women should maintain a BMI of between 18.5 and 24.9
- Have unprotected sex every two to three days
- Keep testicles cool – avoid tight underwear and hot showers
- Women should be up to date with all health checks, including cervical smears
- Visit a sexual health clinic if there's a risk of previously contracting an STI
- Be aware that not all prescription and OTC medication is suitable for use during pregnancy.

planning a family at this time. This is because folic acid has benefits in the very early stages of pregnancy, often before the woman knows she's expecting.

If a woman has already had a pregnancy affected by a neural tube defect such as spina bifida, her doctor may prescribe a daily dose of 5mg of folic acid.

Home ovulation tests

Assuming a couple does not have any obvious or significant health issues that may affect their fertility, using a home ovulation test can help to identify the time in the woman's monthly cycle when she is most likely to conceive.

According to a UK study, while 91 per cent of women understand what ovulation is, more than a third are not confident that they know exactly when they ovulate. In addition, a 2011 survey by Procter & Gamble (manufacturer of the Clearblue brand) suggested that half of all couples could be trying for a baby at the wrong time.

Easy-to-use home ovulation kits can help to determine when a woman is at her most fertile. Products include Clearblue Digital Ovulation Test and First Response Easy-Read Ovulation Test. These kits work by detecting the body's production of LH, levels of which surge rapidly and peak 24 to 36 hours before ovulation.

Packs contain a number of testing strips to be used on consecutive days around the middle of the woman's cycle. The exact days of testing may vary depending on the usual length of her monthly cycle, therefore all test

instructions should be read carefully.

A test should be done once a day, using the first urine after sleep, starting from between day five and day 20 of a woman's cycle (the actual start day will depend on her known cycle length).

Advances in new technology

Typically, home ovulation tests detect levels of LH. However, the latest offering from Clearblue also monitors oestrogen and indicates a wider fertility window (four days in total instead of just two days).

Levels of oestrogen rise a few days before ovulation and can be detected in a woman's urine. These are identified as her days of 'high' fertility, whereas the surge in LH that occurs just before ovulation is when a woman's fertility is at its peak.

Confirming a pregnancy

The most obvious symptom of being pregnant is missing a period, but women may also experience the following:

- Nausea and/or vomiting – it is quite often termed 'morning sickness' but nausea and/or vomiting can occur at any time of the day or night
- Tender or swollen breasts
- Increased urination, especially at night
- Tiredness
- Food aversions or cravings
- Mood swings
- Constipation
- Increased vaginal discharge.

Home pregnancy tests

Home pregnancy tests are convenient, private and easy to use. Used correctly, they can give fast, accurate results – some as early as four days before the woman's period is due. Available tests include First Response Early Result and Clearblue Digital Pregnancy Test.

All tests work on the same basic principle – they detect levels of human Chorionic Gonadotrophin (hCG), the hormone produced when a fertilised egg implants into the wall of the uterus.

While it's possible to detect hCG even before a woman's period is due, levels rise with each day of the pregnancy, so the later the test is taken the more reliable it will be.

If a woman tests early and gets a negative result but still does not get her period, she may need to take a second test a few days later.

All tests come with written instructions that should be closely followed. There is usually a helpline to call if the user has any questions about the test or the result. Advise customers to read the instructions carefully and not to use tests past their expiry date.

More information

- Infertility Network UK: 0800 008 7464 / www.infertilitynetworkuk.com
- Human Fertilisation and Embryology Association: 020 7291 8200 / www.hfea.gov.uk
- National Childbirth Trust (NCT): 0300 330 0700 / www.nct.org.uk
- Miscarriage Association: 01924 200799 / www.miscarriageassociation.org.uk

assessment questions: ovulation and pregnancy testing

For each question, select one correct answer. Discuss your answers with your pharmacist.

1. Which of the following statements is TRUE?

- a) Women today are having their children younger than a decade ago
- b) A woman's age does not determine her fertility
- c) The menstrual cycle begins the day a woman starts her period
- d) Peak fertility occurs at exactly the same time every month and is easy to calculate

2. Which of the following statements is FALSE?

- a) Sperm cannot live longer than a few hours inside a woman's body
- b) 85 per cent of couples will conceive within one year of trying
- c) Sometimes it is unclear what the cause of infertility is
- d) Couples should visit a GP if they have not conceived after a year of trying

3. Men with a known history of which of the following conditions should be advised to see a doctor before trying to start a family?

- a) Testicular cancer
- b) An infection of the testicles
- c) Surgery or injury involving the testicles
- d) All of the above

4. Which of the following lifestyle changes will NOT benefit couples trying to start a family?

- a) Maintaining a healthy weight and eating a balanced diet
- b) Learning to manage everyday stresses
- c) Following the Government's guidelines on daily alcohol consumption
- d) Stopping all forms of exercise

5. Which of the following statements is FALSE?

- a) Ovulation tests should be done once a day using the first urine after sleep, between day five and 20 of a woman's cycle
- b) Home ovulation tests are convenient to use and can help identify when a woman's fertility peaks
- c) Pre-conception planning involves being fit, active and eating a healthy diet
- d) All medication is suitable during pregnancy

6. Which of the following statements is TRUE?

- a) Folic acid 400mcg should be taken daily by all women who may become pregnant
- b) Folic acid is only important in the late stages of pregnancy
- c) During early pregnancy, women will only ever experience nausea/vomiting in the morning, hence the term 'morning sickness'
- d) Levels of the hormone hCG are constant throughout the entire pregnancy