

Information for you

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Ovarian hyperstimulation syndrome

About this information

This information is for you if you are undergoing treatment that carries a risk of ovarian hyperstimulation syndrome (OHSS) or have developed OHSS. It may also be helpful if you are a relative or friend of someone who is in this situation.

What is OHSS?

Ovarian hyperstimulation syndrome is a potentially serious complication of fertility treatment, particularly of in vitro fertilisation (IVF).

What are the symptoms of OHSS?

It is normal to have some mild discomfort after egg collection. If you are worried or develop any of the symptoms below, you should seek medical advice.

OHSS can range from mild to severe:

- **Mild OHSS** – mild abdominal swelling, discomfort and nausea.
- **Moderate OHSS** – symptoms of mild OHSS, but the swelling is worse because of fluid build-up in the abdomen. This can cause abdominal pain and vomiting.
- **Severe OHSS** – symptoms of moderate OHSS with extreme thirst and dehydration. You may only pass small amounts of urine which is dark in colour and/or you may experience difficulty breathing because of a build-up of fluid in your chest. A serious, but rare, complication is formation of a blood clot (thrombosis) in the legs or lungs. The symptoms of this are a swollen, tender leg or pain in your chest and breathlessness. You should report any unusual symptoms to your doctor.

What causes OHSS?

Fertility drugs, usually gonadotrophins, are used to stimulate the ovaries during IVF treatment to make eggs grow. Sometimes there is an excessive response to these drugs, leading to OHSS.

Overstimulated ovaries enlarge and release chemicals into the bloodstream. Fluid from the blood vessels leaks into your abdomen and in severe cases into the space around the heart and lungs. OHSS can affect the kidneys, liver and lungs. A very small number of deaths due to OHSS have been reported.

Who gets OHSS?

Mild OHSS is common in women having IVF treatment; affecting as many as 33 in 100 women (33%). However, just over 1 in 100 women (1%) will develop moderate or severe OHSS.

The risk is higher in women who:

- have polycystic ovaries
- are under 30 years old
- have had OHSS previously
- get pregnant in the same IVF cycle as they get their symptoms, particularly if this is a multiple pregnancy (more than one baby).

How long does it last?

Most of your symptoms should resolve in 7–10 days. If your fertility treatment does not result in a pregnancy, OHSS usually gets better by the time your next period starts. If you become pregnant, OHSS can get worse and last up to a few weeks or longer.

What should I do if I have mild OHSS?

If you have mild OHSS, you can be looked after at home. Ensure that you drink fluids at regular intervals depending on how thirsty you feel. If you have pain, take paracetamol or codeine (no more than the maximum dose). You should avoid anti-inflammatory drugs (aspirin or aspirin-like drugs such as ibuprofen), which can affect your kidneys. It is advisable to remain active to reduce the risk of thrombosis.

When should I call for medical help?

Call for medical help if you develop any of the symptoms of OHSS, particularly if the pain is not getting any better or if you start to vomit, have urinary problems or chest pain or have difficulty breathing.

You should have the details of your fertility unit to call for help and advice.

If you are unable to contact your fertility clinic, contact:

- the A&E department at your local hospital or
- your general practice or
- the NHS on 111.

What may happen at the hospital?

Your doctor will ask you to describe your symptoms and will examine you. In addition, your doctor may:

- ask about how much urine you are passing and whether it is darker than normal (concentrated)
- measure your blood pressure, pulse rate and breathing rate
- take an initial measurement of your waistline and check your weight to see whether the fluid is building up or reducing

- arrange an ultrasound scan to measure the size of your ovaries and to check whether there is any fluid build-up in your abdomen
- take blood tests to measure how concentrated your blood is and how well your kidneys are working.

A diagnosis is made on the basis of your symptoms, the examination findings and the results of your tests. If you are well enough to go home, you may be advised to attend for regular check-ups.

When will I need to stay in hospital?

Many women can be managed as outpatients but you may need admission if:

- your pain is not helped by pain-relieving medications
- you have severe nausea and vomiting
- your condition is not getting better
- you will be unable to attend hospital easily for monitoring and follow-up.

If you are vomiting, you may need a drip to replace the fluids you have lost. The fluid will help to keep you hydrated and may contain sugar and carbohydrates (for energy), and minerals and chemical elements (for regulating and maintaining the organs in your body).

It is important that, if you are admitted to a hospital which is not the one where you had your fertility treatment, your care is discussed and coordinated with a specialist in this condition.

What is the treatment for OHSS?

Although there is no treatment that can reverse OHSS, it will usually get better with time. Treatment is to help symptoms and prevent complications.

This includes:

- pain relief such as paracetamol or codeine
- anti-sickness drugs to help reduce nausea and vomiting
- an intravenous drip to replace fluids
- support stockings and heparin injections to prevent thrombosis (a blood clot in the leg or lungs). Heparin injections for blood thinning should be continued for 7 days from cure of your symptoms if you are not pregnant or until the end of the 12th week of your pregnancy.

If your abdomen is tense and swollen because of fluid build-up, you may be offered a procedure known as a paracentesis. This is when a thin needle or tube is inserted under ultrasound guidance into your abdomen to remove fluid. You may be offered a local anaesthetic for this procedure. This treatment helps relieve discomfort and improve kidney function and your breathing. Rarely, advice may be sought from a more specialist team which may involve anaesthetists and/or intensive care doctors.

Are there any ongoing concerns if I have had OHSS and become pregnant?

- To lower the risk of developing a blood clot in your legs or lungs, you will be advised to continue wearing support stockings and taking heparin (blood-thinning) injections until 12 weeks of your pregnancy.
- You may be at increased risk of developing pre-eclampsia or giving birth to your baby prematurely. However, there are no known risks to your baby's development as a result of OHSS.

Is there anything else I should know?

- Your fertility clinic should provide you with full written information about your fertility treatment, including the risk of OHSS and a 24-hour help number.
- If you develop OHSS, your ovaries will be enlarged and painful. You should avoid having sex or doing strenuous exercise to avoid injury to the ovaries.
- A few women develop OHSS as an after-effect of other fertility treatment or even in a normal conception but this is very rare.

Key points

- OHSS is a potentially serious complication of fertility treatment, particularly of IVF.
- It can range from mild to severe. Mild OHSS is common and usually gets better with time. More severe cases require specialist care and hospital admission.
- It is important to make contact with your fertility unit if you develop symptoms of OHSS.

Making a choice

Shared Decision Making

If you are asked to make a choice, you may have lots of questions that you want to ask. You may also want to talk over your options with your family or friends. It can help to write a list of the questions you want answered and take it to your appointment.



Ask 3 Questions

To begin with, try to make sure you get the answers to three key questions if you are asked to make a choice about your healthcare.

1. What are my options?
2. What are the pros and cons of each option for me?
3. How do I get support to help me make a decision that is right for me?

* Ask 3 Questions is based on Shepherd HL, et al. Three questions that patients can ask to improve the quality of information physicians give about treatment options: A cross-over trial. Patient Education and Counselling, 2011;84: 379-85

Useful organisations

Human Fertilisation and Embryology Authority (HFEA)

10 Spring Gardens
London SW1A 2BU
Tel: 020 7291 8200
Website: www.hfea.gov.uk

Infertility Network UK

Charter House
43 St Leonards Road
Bexhill on Sea
East Sussex TN40 1JA
Tel: 01424 732361
Website: www.infertilitynetworkuk.com

Sources and acknowledgements

This information has been developed by the RCOG Patient Information Committee. It is based on the RCOG Green-top Clinical Guideline *The Management of Ovarian Hyperstimulation Syndrome* which you can find online at: www.rcog.org.uk/en/guidelines-research-services/guidelines/gtg5.

This leaflet was reviewed before publication by women attending clinics in St Mary's Hospital, Liverpool Women's Hospital, Queen's Medical Centre, Queen Elizabeth Hospital, King's College London School of Medicine, University Hospital of Leicester NHS Trust, St Mary's Hospital and private practice (Loughborough), by the RCOG Women's Network and by the RCOG Women's Voices Involvement Panel.

The RCOG produces guidelines as an educational aid to good clinical practice. They present recognised methods and techniques of clinical practice, based on published evidence, for consideration by obstetricians and gynaecologists and other relevant health professionals. This means that RCOG guidelines are unlike protocols or guidelines issued by employers, as they are not intended to be prescriptive directions defining a single course of management.

A glossary of all medical terms is available on the RCOG website at: www.rcog.org.uk/en/patients/medical-terms.

A final note

The Royal College of Obstetricians and Gynaecologists produces patient information for the public. The ultimate judgement regarding a particular clinical procedure or treatment plan must be made by the doctor or other attendant in the light of the clinical data presented and the diagnostic and treatment options available. Departure from the local prescriptive protocols or guidelines should be fully documented in the patient's case notes at the time the relevant decision is taken.

All RCOG guidelines are subject to review and both minor and major amendments on an ongoing basis. Please always visit www.rcog.org.uk for the most up-to-date version of this guideline.